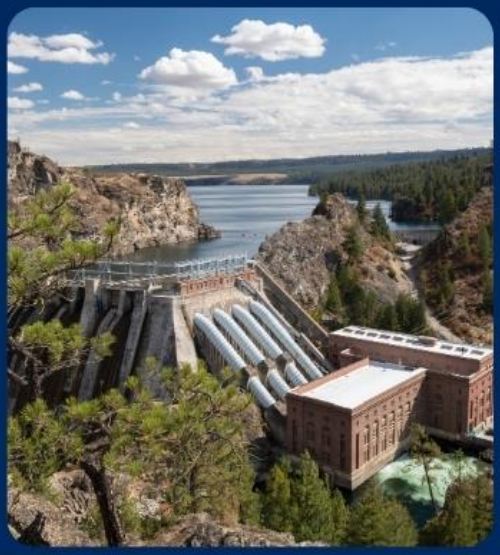

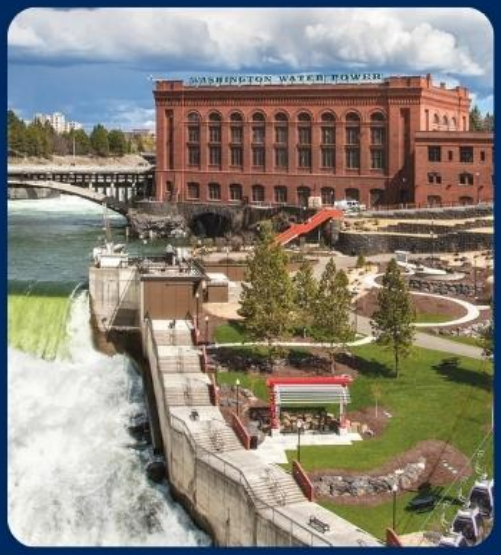

2025

CLEAN ENERGY IMPLEMENTATION PLAN

myavista.com/CEIP

October 2025

Safe Harbor Statement

This document contains forward-looking statements. Such statements are subject to a variety of risks, uncertainties and other factors, most of which are beyond the Company's control, and many of which could have a significant impact on the Company's operations, results of operations and financial condition, and could cause actual results to differ materially from those anticipated.

For a further discussion of these factors and other important factors, please refer to the Company's reports filed with the Securities and Exchange Commission. The forward-looking statements contained in this document speak only as of the date hereof. The Company undertakes no obligation to update any forward-looking statement or statements to reflect events or circumstances that occur after the date on which such a statement is made or to reflect the occurrence of unanticipated events. New risks, uncertainties and other factors emerge from time to time, and it is not possible for manag5.5%ement to predict all of such factors, nor can it assess the impact of each such factor on the Company's business or the extent to which any such factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statement.

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1. Executive Summary

Through the Clean Energy Transformation Act (CETA), and the required Clean Energy Implementation Plan (CEIP) submittals every four years, Washington state is advancing the equitable delivery of clean energy to electric utility customers. Avista's 2025 CEIP is informed by the Company's 2025 Electric Integrated Resource Plan (IRP) and 2025 Clean Energy Action Plan (CEAP). It outlines activities over the 2026-2029 implementation period in the areas of public participation, Named Communities, Customer Benefit Indicators (CBIs), and supports clean energy objectives by serving customers with renewable energy sources, and reducing demand through energy efficiency and demand response programs. Avista will implement additional Company actions to support the clean energy transition in the areas of transmission expansion, American Indian relations, community microgrids and resiliency stations, and supplier diversity. Additionally, the Company proposes an investment goal with the Named Community Investment Fund (NCIF) and aspirational goals in five of Avista's six CBI benefit areas.

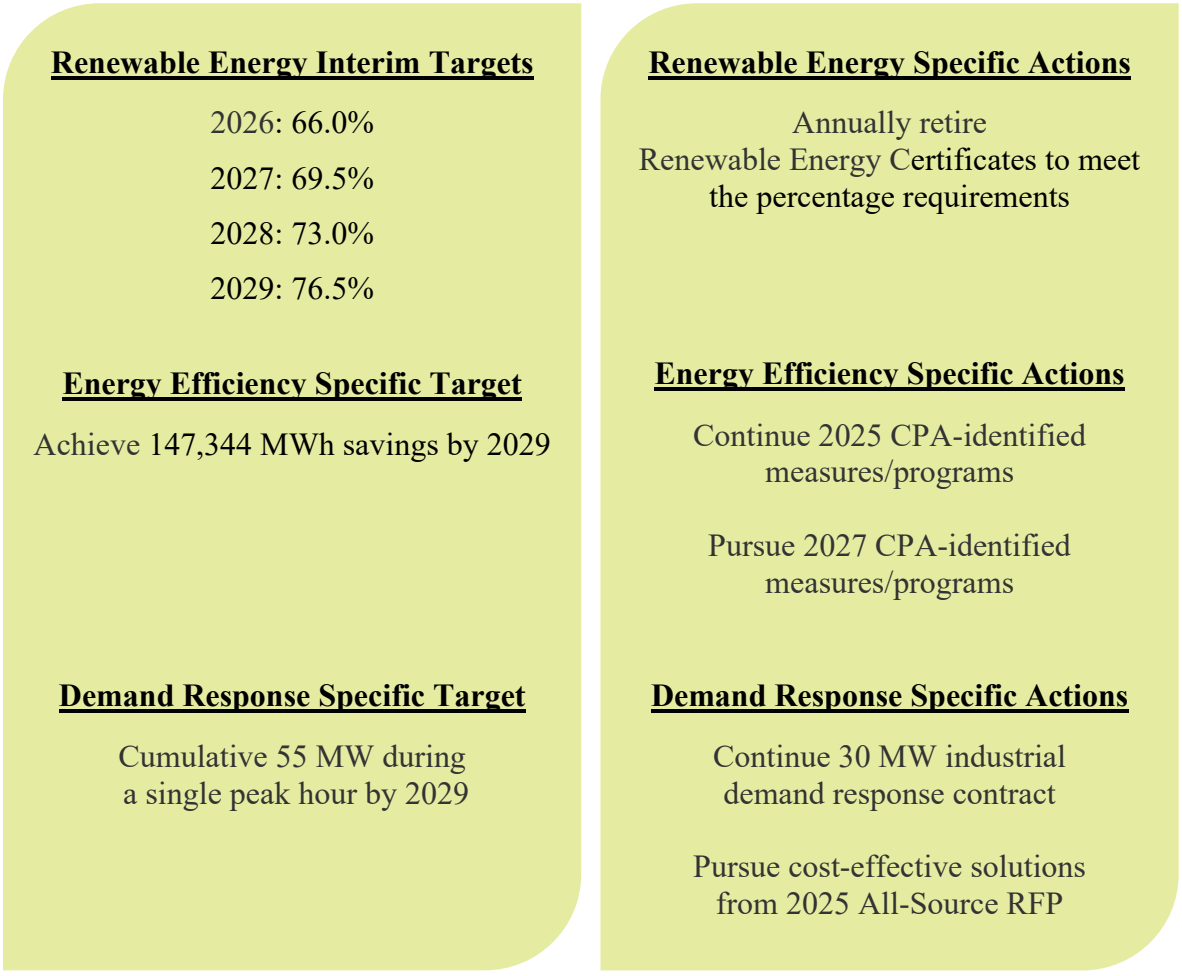
To support public participation and increase customer engagement, the 2025 Public Participation Plan (2025 PPP) outlines strategies Avista will continue and highlights the Mutli-Language Strategy (MLS) and Community Partnerships for future development. This also includes engaging with Avista's numerous advisory groups to identify customer needs and, where appropriate, incorporate their feedback in Company actions, plans and programs.

Through public engagement and Avista's advisory groups, vulnerable customer segments or Named Communities are identified to ensure they equitably benefit from the transition to cleaner energy. Under the 2025 CEIP, Avista's Named Community population increases from 44% to 58% across its Washington electric service territory. To address this population's needs, Avista will consult with its various advisory groups to determine components that contribute to and compound multiple burdens and implement actions to support these customers.

Measuring the clean energy transition impact for all customers, and the equitable distribution of benefits and burdens for Named Communities, is supported through CBIs. Avista proposes reductions from its 2021 CEIP in regard to CBIs and introduces the desired directionality of improvement or reduction for CBIs.

The clean energy transition includes increasing the delivery of renewable energy to customers, while also increasing energy efficiency and demand response savings through interim and specific targets, and specific actions. As listed in Figure No. 1.1 below, Avista will continue to increase delivery of clean energy to customers through the annual retirement of Renewable Energy Certificates (RECs), continue to deliver and pursue cost-effective energy efficiency programs as identified by the Conservation Potential Assessments (CPA) and increase its demand response strategies by acquiring cost-effective programs through its 2025 All Source Request for Proposal (RFP) process.

Figure No. 1.1: 2025 CEIP | Interim/Specific Targets & Specific Actions



In addition to these specified targets and actions, Avista outlines further measures in Figure No. 1.2 below to address energy capacity requirements, enhance solar and battery energy storage systems (BESS) benefits for income-qualified customers, advance demand response initiatives,

and implement other company-wide efforts. These initiatives are designed to demonstrate continued progress toward meeting the mandated carbon neutrality goal by 2030 and achieving carbon-free operations by 2045.

Figure No. 1.2: 2025 CEIP | Additional Company Actions Summary

Renewable Energy

Issue 2025 All-Source RFP
Qualifying Capacity: Winter 105 – 415 MW | Summer 135 – 425 MW
Annual Clean Energy: 0 – 200 aMW

Pursue Washington State's SSHB1814
Community Solar Program & Public Utility Tax Incentive:
Project 1: Up to 1.6 MW Solar & 1.5 MW BESS
Project 2: TBD MW Solar & TBD MW BESS

Demand Response

Time of Use Rate & Peak Time Rebate Pilots
Electric Vehicle Time of Use Rate
Northwest Energy Efficiency Alliance End-Use Load Flex Project

Company

Transmission Expansion Projects
Connected Communities
American Indian Relations & the Spokane Tribe Resilience Station
Martin Luther King, Jr. Community Center Resilience Hub
Transportation Electrification Plan
Nondiscriminatory Hiring & Employment Practice Commitment
Supplier Diversity Program

As shown in Figure No. 1.3 below, the Company proposes aspirational goals and actions to improve CBI metrics and support Named Communities investments in energy efficiency improvements and various community-initiated projects and initiatives.

Figure No. 1.3: 2025 CEIP | Company Goals & Actions

Company Goals	Company Actions
Five aspirational CBI metrics by 2029 Invest up to $5 million annually in Named Communities	Actions per aspirational CBI metric Named Community Investment Fund

In planning the 2025 CEIP, Avista calculated the Company's four-year cost cap available under CETA at $157.2 million. Avista's incremental costs associated with the 2025 CEIP are estimated at $68 million over the 2026-2029 implementation period.[1]

[1] Incremental cost impacts may change based on actual customer load growth and actual costs.

2. Planning the 2025 CEIP

Background

In 2019, the Washington state Legislature passed CETA, requiring electric utilities to serve 100% of Washington retail load with renewable and non-emitting electric generation by 2045, with the following intermediate clean energy requirements:

- Prohibit the sale of coal-fired energy generation to Washington retail customers after December 31, 2025.
- Require retail sales of electricity to Washington customers to be carbon-neutral between January 1, 2030, and December 31, 2044, with at least 80% of generation from renewable and non-emitting electric sources. Up to 20% may be met with alternative compliance options, including alternative compliance payments, unbundled Renewable Energy Credits (REC), or investing in energy transformation projects.
- Require 100% of retail sales of electricity to Washington customers be met with renewable and non-emitting electric generation on and after January 1, 2045.

Planning for CETA compliance is done through the Company's Integrated Resource Plan (IRP) conducted every four years with an update every two years, and CETA's requirement of a 10-year CEAP updated every four years. Results from these planning documents lay the foundation for the four-year CEIP, with clean energy targets and specific actions for renewable or non-carbon emitting energy, energy efficiency, and demand response. Avista also includes a section for additional goals, targets and actions that further support the equitable transition to clean energy.

The law also requires the equitable distribution of clean energy benefits and reduction of burdens for customers who may have disproportional health or economic disparities as identified by the Washington State Department of Health's (DOH) Environmental Health Disparities Map.[2] These customers can be classified as Highly Impacted Communities or Vulnerable Populations and are collectively referred to by Avista as Named Communities. To measure the impacts of the clean energy transition for all customers, and specifically the impact on Named Communities, the Company is required to adopt CBIs across a variety of required benefit areas. Additionally, a

[2] https://doh.wa.gov/data-and-statistical-reports/washington-tracking-network-wtn/washington-environmental-health-disparities-map.

Public Participation Plan is required to invite inclusive public engagement in the creation of the CEIP and throughout the implementation period.

The Company submitted its first CEIP on October 1, 2021, which was conditionally approved by the Washington Utilities and Transportation Commission (WUTC or Commission) on June 16, 2022, with 38 conditions.[3] On November 1, 2023, the Company submitted its 2023 Biennial CEIP Update and included progress towards all 38 conditions, which was approved by the Commission on March 22, 2024,[4] resulting in the modification of one condition and the addition of one new condition, bringing the total to 39. Throughout the 2022-2025 implementation period, Avista satisfied all applicable conditions, and proposes modifications to various conditions as discussed in the 2021 CEIP and 2023 Biennial Conditions chapter.

Federal Funding Opportunities & the CEIP

Avista is aware of the Commission's expectations regarding the incorporation of the 2021 Infrastructure Investment and Jobs Act (IIJA) and the 2022 Inflation Reduction Act (IRA) funding opportunities in the CEIP.[5] The January 2025 transition to the new presidential administration brought a significant pause in the distribution of federal grant funding, particularly within the Department of Energy (DOE). This stems from the administration's "Unleashing American Energy" Executive Order, which directed a department-wide review of all funding activities to ensure alignment with the new administration's priorities. As a result, many grants previously authorized under the IRA and IIJA are temporarily halted and under further review.

Prior to the 2025 federal administration transition, Avista applied for 30 grants across federal and state organizations. These grant applications were broad in utility focus but primarily supported grid resiliency and wildfire mitigation efforts. As of 2021, as either primary or sub-recipient, Avista has received access to more than $100 million in federal and state grant awards. However, most awards have yet to be contracted. See Appendix A for grant applications and their funding status.

[3] Docket UE-210628 Order 01.
[4] Docket UE-210628 Order 02.
[5] Docket U-240013, Policy Statement issued May 3, 2024, addressing the Federal Inflation Reduction Act and the Infrastructure Investment and Jobs Act in utility planning.

As listed in Table No. 2.1 below, and according to the Commission's IRA/IIJA Policy Statement, there are six general areas of the CEIP, and each area is required to contain information related to the grant funding opportunities. As of January 2025, federal grant funding is no longer available and not applicable for planning Avista's 2025 CEIP. However, Avista has provided information where applicable on requested related topics. Avista's grant funding opportunities are in the Company Initiatives | Additional Actions section and are not classified as a specific action to support a specific target. These additional actions support transmission expansion, grid resiliency, and electric transportation, and reference applicable grants.

Table No. 2.1: 2025 CEIP & Federal Funding Opportunities

CEIP Area	Requirement	2025 CEIP
Targets	Funding assumptions for targets	N/A
CBI Metrics	Justice 40/WA DOH comparison	See Named Communities
Specific Actions	Projects identified for funding	See Company Initiatives | Additional Actions
Cost	Range of net benefits	N/A
Public Participation	Advisory group education	See EEAG in Public Participation Advisory Group Collaboration section
Reporting	State & federal grant inventory	See Appendix A

CEIP Advisory Group Collaboration

Avista organized a 2025 CEIP-focused advisory group with monthly meetings to discuss the components of the Company's 2025 CEIP, bringing transparency and collaboration to the planning process. In November 2024, an email invitation was sent to existing Avista advisory groups, including those in the Equity Advisory Group (EAG), Energy Efficiency Advisory Group (EEAG), Energy Assistance Advisory Group (EAAG), Distribution Planning Advisory Group (DPAG) and IRP Technical Advisory Committee (TAC). As listed in Table No. 2.2 below, the Company received interest from a variety of parties, such as Commission Staff, regional utility professionals, consumer, and environmental advocacy groups, and interested customers.

Table No. 2.2: 2025 CEIP Advisory Group Participating Organizations

Organization	
Cascade Natural Gas	Renewable Northwest
Form Energy	Spokane Neighborhood Action Partners
Grant County Public Utility District	Spokane Regional Clean Air Agency
HDR, Inc.	The Energy Project
Northwest Energy Coalition	WA Department of Commerce
Northwest Gas Association	WA State Office of the Attorney General
Northwest Laborers' Employers Cooperation & Education Team (LECET)	WA Utilities & Transportation Commission
Northwest Power & Conservation Council	General public members

As indicated in Table No. 2.3 below, various CEIP topics were addressed each month, providing ample opportunity for discussion and clarification. Avista conducted virtual public meetings in May and August 2025 to discuss the various components of the 2025 CEIP. Meeting slide presentations were made available online three business days prior to the meetings, and recordings, along with notes, were posted following each meeting.[6] Public meeting awareness was widely promoted to customers through various digital and physical communication methods, including targeted social media ads, emails, physical flyers, in-person promotion at community events, and through community partners. Many of these promotional communications were translated into Spanish.

The Company records and addresses feedback from the monthly CEIP Advisory Group meetings in a comment matrix detailing member input and Avista's responses or planned actions. This matrix, included in Appendix B, promotes transparency and regulatory compliance by demonstrating how feedback shaped the plan or why it was not included in the plan.

Table No. 2.3: 2025 CEIP Advisory Group & Public Meetings

Audience	Meeting Date	Agenda
CEIP Advisory Group	January 14, 2025	2021 CEIP Review Summary
CEIP Advisory Group	February 18, 2025	2025 CEIP Targets & Specific Actions
CEIP Advisory Group	March 18, 2025	2025 Public Participation Plan Named Communities Designation
CEIP Advisory Group	April 22, 2025	Customer Benefit Indicators
CEIP Advisory Group	May 20, 2025	Additional Company Initiatives: Aspirational Equity Metric Goals

[6] See CEIP Advisory Group section at the bottom of https://www.myavista.com/about-us/washingtons-clean-energy-future/clean-energy-implementation-plan.

		Named Communities Investment Fund
Virtual Public Meeting	May 28, 2025	2025 CEIP Customer Benefit Indicators
CEIP Advisory Group	June 23, 2025	Load Forecast Update & Incremental Costs
CEIP Advisory Gorup	July 15, 2025	Q & A Listening Session
Virtual Public Meeting	August 27, 2025	2025 CEIP Preview Summary

Avista includes additional information regarding EAG participation in the modification of CBIs and identification of Vulnerable Populations in the Public Participation section below.

Avista extends its gratitude for the valuable contributions and time commitments made by each advisory group member throughout this process. The Company would like to formally acknowledge and thank the organizations and members who participated in the development of this 2025 CEIP.

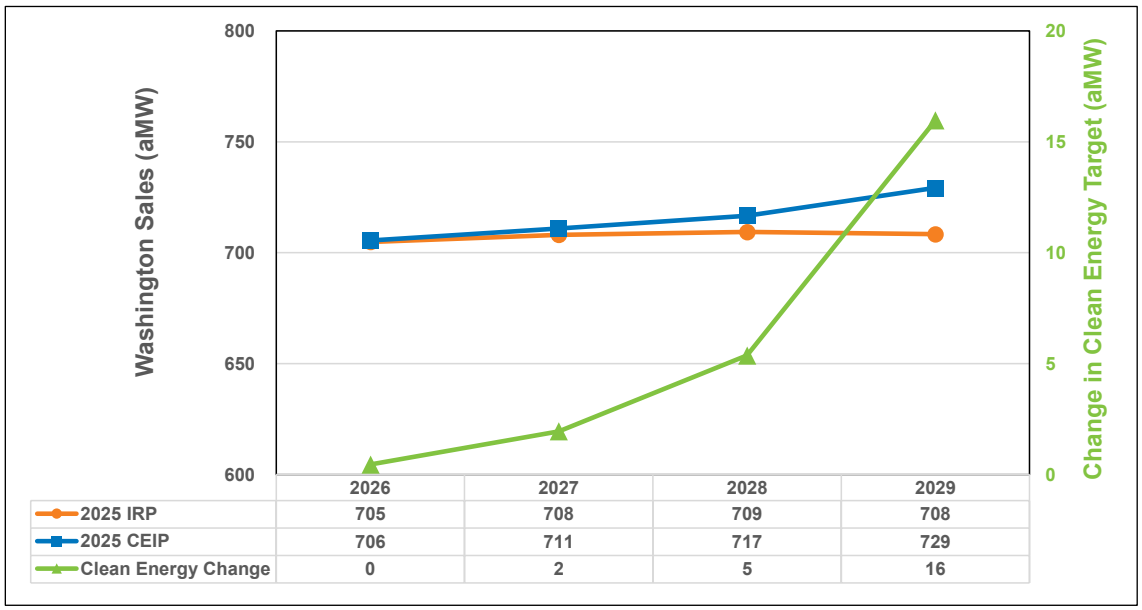
Updated Portfolio Analysis for 2025 CEIP

Avista's 2025 Electric IRP Preferred Resource Strategy (PRS) provided the foundation for the 2025 CEAP and a starting point for the 2025 CEIP. The PRS informs this CEIP's renewable energy, energy efficiency, and demand response targets, and proposes a variety of resource options to meet the targets throughout the 2026-2029 implementation period. However, the assumptions in the 2025 IRP were developed 18 months prior to the 2025 CEIP planning horizon and are not reflective of current conditions and assumptions. To address this, specific assumptions in the 2025 PRS portfolio were updated resulting in a new resource strategy for the 2025 CEIP period. This updated strategy reflects changes to the load forecast, existing resource capacity contributions (Qualifying Capacity Credit or QCC), new resource availability, and resource costs for both generation and demand response. These changes increase the demand response target, while the renewable energy and energy efficiency targets remain unchanged. The assumption changes also caused the model to select different resources to meet peak-load resource shortfalls, however, actual resources to meet the targets will be determined through the Company's 2025 All-Source RFP process, which is concurrent with the drafting of this Plan.

One of the most significant changes in the 2025 CEIP resource strategy is reflected in the load forecast. Figure No. 2.1 below demonstrates the updated forecast as compared to the 2025 IRP, where the 2025 CEIP's forecast is 21 aMW higher and results in a 16 aMW increase for renewable

energy generation. This forecasted increase is based on expected higher commercial and industrial demand growth. In addition to the updated energy forecast, a new peak load forecast was also completed. This forecast is largely centered on growth and was informed by actual winter weather events over the last three winters. Conversely, Avista's summer peak loads have recently seen a flattening of demand growth. Meeting peak load or solving resource adequacy challenges was the primary short-term need in the 2025 IRP, where an additional 55 MW for winter and 33 MW for summer capacity were identified by 2030 to maintain Avista's planning margin targets. With Avista's new higher peak load forecast and updated QCC values provided by the Western Resource Adequacy Program (WRAP),[7] the updated resource adequacy needs for Avista's system reflect 101 MW for winter and 131 MW for summer. Avista issued an All-Source RFP in May 2025 to identify both supply and demand programs to fulfill these projected resource adequacy shortfalls.

Figure No. 2.1: Energy Load & Clean Energy Requirement Forecast Update



	2026	2027	2028	2029
2025 IRP	705	708	709	708
2025 CEIP	706	711	717	729
Clean Energy Change	0	2	5	16

For this CEIP, and primarily due to the updated load forecast, Avista updated its assumptions and methodology within its resource portfolio expansion model. This update provides information for the new 2025 CEIP PRS and determines if any 2025 IRP PRS previously identified specific actions should be changed. Updates to the CEIP specific portfolio analysis include:

[7] https://www.westernpowerpool.org/about/programs/western-resource-adequacy-program.

- Change the capacity expansion model's (PRiSM) optimization routine to avoid selecting resources for an individual jurisdiction until 2035. This change was made due to the fact Avista does not have an individual resource jurisdiction allocation. Any resource Avista adds to the system in the near future will be split by the Production Transmission (PT) ratio. While it is possible Avista will have state-specific resources as envisioned in the IRP, there is no plan to divide the resources between states at this time.

- Updated the WRAP provided QCC values for existing Avista-controlled resources, thus reducing summer QCC values for Avista's existing resource portfolio. These QCC values are updated annually and Avista incorporated the latest capacity accreditation information.

- Updated capital resource cost assumptions for demand response, wind, solar, BESS, and natural gas combustion turbines (CT). This update is based on new information, including internal analysis for demand response, National Renewable Energy Lab (NREL) cost assumptions for wind, solar, BESS, and the Northwest Power and Conservation Council (NPCC) cost assumptions for natural gas turbines. Avista chose to update these cost assumptions due to significant price changes due to inflation and supply chain constraints.

Although Avista updated these third-party resource cost assumptions, the Company is concerned they fail to reflect current price increases and is not confident they reflect future transactional prices. To address this, Avista's 2025 All-Source RFP will provide actual transactional pricing to inform resource decisions. Furthermore, with the passage of the federal tax bill and expedited sunsetting of renewable energy and storage federal tax credits, Avista's previous concern reflected in the IRP's assumption of continuing these credits for certain resources, also reflected in the CEIP PRS, remains valid. This discontinuation of tax credits will delay early acquisition of renewable energy projects and transfer the cost responsibility of complying with CETA to Washington customers rather than federal taxpayers. This may impact resource decisions as noted in the original 2025 IRP scenario analysis.

Using the modeling changes and updates described above, Avista conducted a CEIP-focused portfolio analysis, resulting in a 2025 CEIP PRS for 2026 through 2030, to determine if near-term resource decisions for renewable energy or demand response would differ with those identified in

the 2025 IRP. As a result of the analysis, the CEIP reflects changes to demand response resources, while generating resources remain unchanged (but are shown for informational purposes).

Avista's analysis identified resource results as provided in Table No. 2.4 for demand response during the four-year CEIP implementation period and supply-side resources through 2029 within Table No. 2.5. Demand response savings increases by 17.2 MW[8] largely due to higher and nearer term capacity needs and a lower cost projection for some programs. Although the amounts shown in Table No. 2.4 are for the 2025 CEIP implementation period, sustaining these programs through 2045 would result in an estimated total peak reduction of 43 MW.

Table No. 2.4: 2025 IRP vs 2025 CEIP | Demand Response Load Reduction (MW)

DR Program	2025 IRP – MW Winter	2025 CEIP – MW Winter
Customer BESS	1.0	1.0
Behavioral	0.0	2.1
Third Party Contracts	0.0	10.8
Time of Use (TOU) Rates (Opt-in)	0.0	2.2
Electric Vehicle TOU	0.8	0.8
Peak Time Rebate	0.0	4.8
Variable Peak Pricing	2.6	0.0
Total	**4.4**	**21.6**

The 2025 IRP focused on solving the first major long-term resource capacity deficit beginning in 2030. As listed in Table No. 2.5 below, the updated CEIP analysis satisfies this need differently by avoiding selection of a natural gas CT in favor of increased solar, BESS, and wind resources to meet capacity deficits (in both scenarios with and without federal tax incentives). These resource selection changes are due to the model avoiding resource selection by each individual state. In the 2025 IRP, a 90 MW natural gas-fired CT was selected for the Idaho jurisdiction. Avoiding jurisdictional allocation and using the social cost of greenhouse gas (SCGHG) pricing for Washington's share of resources has identified batteries and additional wind to meet the capacity need – reflecting the SCGHG economic burden on the natural gas plant. However, Avista is not

[8] Avista's model also selected similar demand response programs for Idaho, but timing is different due to AMI deployment.

required to use SCGHG pricing in its acquisition of actual resources, so new resource selections for resource adequacy[9] may differ from the CEIP and the IRP modeling.

Further, Avista is concerned with the future pricing of wind and batteries estimates, as prices are expected to be materially higher than modeled. To understand this impact, Avista conducted tests suppressing the federal Production Tax Credit (PTC) and Investment Tax Credit (ITC), resulting in higher pricing. Based on this change, the model indicated less wind selection and more energy storage. However, absent SCGHG pricing requirements of the CEIP, natural gas could be the preferred selection as shown in Idaho's section of the 2025 IRP.[10]

Table No. 2.5: 2025 IRP vs 2025 CEIP | System Resource Selection through 2030 (MW)

Resource	2025 IRP	2025 CEIP	2025 CEIP w/o PTC/ITC
Community/Distributed Solar	2.3	6.5	8.5
Battery Energy Storage System	0.0	36.8	80.0
Wind	400.0	505.9	206.0
Natural Gas CT	90.0	0.0	0.0
Total	**492.3**	**549.2**	**294.5**

Avista is preparing this 2025 CEIP while concurrently conducting the 2025 All-Source RFP process, with actual resource selection planned to conclude in the fourth quarter of 2025 – after the CEIP filing on October 1, 2025. The actual selection of resources will be made in the RFP process and will follow the statutory process for resource acquisition. Due to the uncertainty of the RFP resource selection, Avista does not include acquiring any utility-scale generating resources (supply-side) as specific actions, nor does it include these unknown resource costs within any incremental cost analysis. Avista is only using this analysis to develop the demand response target and includes acquiring RFP cost-effective resources as an additional Company action to meet future resource capacity requirements. Actual resources acquired through the 2025 RFP process will be discussed in the 2027 Biennial CEIP. Avista's updated CEIP PRS/portfolio analysis does not reflect changes to 2025 IRP identified energy efficiency targets for 2025-2026. Updated energy efficiency targets for the 2027-2029 biennium will be reflected in the 2027 IRP.

[9] CBI metrics as they relate to resource adequacy can be found in Appendix C, Avista's 2025 CEAP.
[10] See Avista's 2025 Electric IRP Chapter 2 Preferred Resource Strategy: https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/2025/2025-avista-electric-irp.pdf

3. Public Participation

Overview

Avista submitted its 2025 PPP to the Commission on May 1, 2025.[11] The 2025 PPP demonstrates Avista's commitment to informing and educating its customers about clean energy requirements and the Company's initiatives, including energy assistance and energy efficiency programs, emphasizing equitable access to clean energy benefits. It highlights Avista's efforts to reduce participation barriers for customers with a particular focus on supporting those in Named Communities. The 2025 PPP outlines the schedule, methods, and goals for public participation and education, both during the development of the CEIP and throughout its implementation. Additionally, the plan includes details about Avista's advisory group meetings and schedules, the establishment of CBI metrics, the identification of Vulnerable Populations, and barriers to participation with mitigation strategies.

While Avista continues to enhance its outreach strategies and address barriers to participation, customers may or may not provide input through the various channels available for feedback. Avista receives comments through public meetings, emails, and the comment form on its website. Appendix B contains actionable comments pertinent to the development of the CEIP, accompanied by the Company's responses. Notes and recordings are available on Avista's website for the EAG meetings[12] and the CEIP Advisory meetings,[13] while the meeting recordings are available for Avista's quarterly public meetings.[14]

Advisory Group Collaboration

Advisory groups were integral to the development of Avista's 2025 CEIP, offering independent expertise and community-informed perspectives that support equitable decision-making in energy planning, sustainability initiatives, and customer engagement strategies. Advisory groups were consulted in the development of the 2025 CEIP's interim targets and specific actions, identification of CBI metrics, public participation perspectives and recommendations. They also collaborated

[11] 2025 Public Participation Plan in Docket UE-250308.
[12] https://www.myavista.com/about-us/washingtons-clean-energy-future/equity-advisory-group.
[13] See the CEIP Advisory Group meeting section at the bottom of https://www.myavista.com/about-us/washingtons-clean-energy-future/clean-energy-implementation-plan.
[14] https://www.myavista.com/about-us/washingtons-clean-energy-future/public-participation-meetings.

with Avista to identify Vulnerable Populations. Special emphasis was given to EAG input in accordance with WAC 480-100-655(1)(b).

Equity Advisory Group

Avista's EAG plays a critical role in reviewing, consulting, and advising the Company on equity-related matters across various aspects of the CEIP and the PPP. The EAG is composed of a diverse group of individuals, including advocates for social and environmental justice, public health professionals, tribal representatives, and customers who either reside in or work with agencies that support Named Communities. A list of Avista's current EAG members is provided in Appendix D.[15] To provide transparency and manage expectations, Avista incorporates the International Association for Public Participation's (IAP2) Public Participation Spectrum[16] into its EAG meetings. This approach helps foster a culture of trust and credibility in understanding where the Company is informing or consulting the audience on a topic versus inviting involvement and seeking collaboration.

In addition, the EAG provides strategic guidance on Avista's public outreach efforts, ensuring that customers have access to educational CEIP materials, public meetings, information on how to engage with the Company, as well as various ways to enroll in energy assistance and energy efficiency programs. Moreover, the EAG played a crucial role in incorporating Named Communities and CBI metrics into Avista's Equitable Business Planning Framework.[17]

In addition to the 2025 PPP strategies, during the May 2025 Equity Lens Session, the EAG focused on strategies to enhance participation from customers in Named Communities. They identified barriers and proposed solutions across several key themes as described below.

- **Communication Methods:** Utilize trusted community leaders and diverse media channels to disseminate information effectively, including printed materials in common areas and attending local events to increase visibility.

- **Inclusion & Accessibility:** Provide safe and comfortable meeting spaces, allowing adequate time for feedback. It's important to respect cultural values and avoid technical jargon, and provide necessary information in advance.

[15] Additionally, an up-to-date list of all active EAG members is maintained on Avista's website: https://www.myavista.com/about-us/washingtons-clean-energy-future/equity-advisory-group.
[16] https://iap2.org.au/wp-content/uploads/2020/01/2018_IAP2_Spectrum.pdf.
[17] Docket UE-220053 et. al., filed December 20, 2024.

- **Convenience:** Offer incentives for participation such as gift cards and food, and provide flexible participation options, including virtual engagement. Meetings should be brief and scheduled at convenient times to encourage attendance.

- **Survey Quality:** Design surveys that are straightforward and brief, accessible in multiple languages, and free of bias. Clearly communicate the purpose of demographic questions to encourage honest responses**.**

Additionally, the EAG has contributed to the development of a prioritization methodology for the NCIF awards and has offered input on the Company's MLS.

Advisory Groups

In addition to the previously discussed EAG and CEIP advisory groups, Avista engages several other advisory groups that offer guidance on a broad range of topics. These advisory groups are routinely consulted within their respective areas of expertise. Additional advisory groups include:

- **Energy Assistance Advisory Group:** The EAAG monitors and explores ways to improve Avista's Low-Income Rate Assistance Program (LIRAP). This includes discussing potential program modifications, collaboratively troubleshooting challenges, and examining alternatives that may better serve Washington customers. The EAAG is guided by four primary goals including keeping customers connected to their energy service, increasing assistance to more customers than are currently served, lowering the energy burden of LIRAP participants, and ensuring that LIRAP has appropriate data to assess program effectiveness. In March of 2023 and March 2024, Avista discussed IRA/IIJA opportunities with the EAAG in terms of education about the grants, how Avista approached grant applications and highlighted successful grant applications.

- **Energy Efficiency Advisory Group:** The EEAG advises Avista on conservation issues, including, but not limited to, conservation programs and measures, updates to the Company's evaluation, measurement, verification framework, and modifications of existing or development of new evaluation, measurement, and verification methods. Additionally, they provide independent third-party evaluation of portfolio-level biennial conservation achievement, development of conservation potential assessments, the methodology, inputs, and calculations for cost-effectiveness, the data sources and values used to develop and update supply curves and helps determine the need for tariff modifications or mid-biennium program corrections.

- **Distribution Planning Advisory Group:** The DPAG was established in compliance with Condition 13 of the Company's 2021 CEIP, as provided below. The DPAG works with the Company on its 10-year distribution investment plan and evaluates non-wires alternatives for major transmission and distribution projects.

> *"Avista will initiate its Distribution Planning Advisory Group (DPAG) no later than the end of 2022, and it must invite all existing advisory groups to participate in the new group. Avista acknowledges that stakeholders have limited resources and will consult between existing advisory groups and stakeholders regarding streamlining."*

While the DPAG was established in 2022 with its first meeting occurring in 2023, the Company resonates with the sentiment provided in the original condition pertaining to limited resource availability. As such, Avista proposes to combine the DPAG process with the Company's existing Electric IRP TAC process in place of standalone DPAG meetings.[18] This will allow for a more wholistic and inclusive planning process while limiting potential resource constraints.

- **Electric and Gas IRP Technical Advisory Committees:** The Electric and Gas IRP TACs help Avista in its 20-year resource planning process by providing guidance for identifying and meeting its resource needs with the lowest reasonable cost mix of conservation and efficiency, generation, distributed energy resources (DERs), and delivery system investments to ensure the utility provides energy to its customers that is clean, affordable, reliable, and equitably distributed.

Each of these advisory groups contributes to Avista's clean energy objectives and initiatives. Through collaborative discussions, Avista collected comments, feedback, and program input regarding its CEIP, IRP, and energy assistance and efficiency programs. The Company also provided presentations to its EAAG about IRA/IIJA grant opportunities. These presentations included information on the IIJA and IRA, Avista's approach to grants, and details on outcomes and lessons from the grant process. Avista plans to maintain communication with its advisory groups for ongoing education and consultation with interested parties.

2025 Public Participation Plan

Public Participation Strategies

Several of the planned engagement strategies outlined in Avista's 2025 PPP build upon the success of Avista's 2023 PPP. Avista will mature current engagement approaches that have proven effective and maximize the impact of existing efforts. This section highlights two of Avista's key strategies, including its multi-language translation efforts and plans to increase community partnerships. Table No. 3.1 below provides a list of the 2025 PPP's identified barriers and strategies to address participation barriers.

[18] Avista will continue the planned 2025 DPAG meetings.

Table No. 3.1: 2025 Public Participation Plan Strategies & Barriers

Strategy	Barrier to Overcome
Multi-Language Strategy	Language
Monthly EAG Meetings	Economic
CEIP Customer Survey	Other factors[19]
Educational Videos	Economic and other factors
Quarterly Meetings & Newsletter	Other factors
Community Events	Cultural and other factors
CETA/CEIP Webpages	Other factors
CEIP Public Comment Form	Other factors
Frequently Asked Questions	Other factors
Biennial CEIP Survey	Language
Enhance Technological Accessibility	Other factors
Social Media & Strategic Communications	Language, Other factors
Community Partnership Program	Other factors

Multi-Language Strategy

A major advancement in the 2025 PPP includes Avista's efforts to formalize an MLS. The MLS addresses language barriers and ensures broader, more equitable access to information and participation opportunities, especially for customers in Named Communities. Avista established a structured approach to multi-language access, moving beyond ad hoc translation to a more consistent and proactive model. In October 2024, Avista consulted the EAG regarding the MLS, including research pertaining to Avista's Washington service territory language demographics, completed MLS projects, and a framework for prioritizing future language-access projects. Avista's first project included providing Spanish translation on its website. Efforts are currently underway to provide Russian translation for Avista's website and intends to add other languages in the future. Additionally, the MLS includes enhanced accessibility to customers through translated printed materials, multilingual social media outreach, and updates to the CEIP webpage to make information easier to navigate and understand.

Community Partnerships

The 2025 PPP highlights Avista's collaboration with Desautel Hege (DH), a Spokane-based social impact agency, to advance a community-centered design approach directed at increasing public participation, engagement, and education. This partnership plays a key role in implementing the

[19] Other factors as identified by the EAG include accessibility, inclusion, convenience, preferred communications methods.

company's educational videos and Community Partnerships Program. The Community Partnership Program strategy emphasizes Avista's commitment to deepening partnerships with trusted local organizations to enhance equitable engagement and outreach. Avista recognizes community-based organizations (CBOs) as essential partners in reaching and engaging its customers, including those who are most difficult to reach. These organizations bring cultural competence, community trust, and localized knowledge that helps bridge gaps in access, participation, and understanding. Recognizing the significant role community partners play within their communities, Avista is committed to deepening these partnerships as a foundational element of an equitable transition to clean energy. DH's planning process will include conversations with the EAG. It's anticipated DH will provide a proposed framework by the second quarter of 2026 for Avista's consideration and possible implementation.

Public Participation Milestones

The following timeline reflects the key components for public engagement efforts throughout 2025 and 2026 and allows time to review and incorporate feedback from public engagement efforts into the Company's 2025 CEIP and 2027 Biennial CEIP Update. It will also be necessary to conduct additional outreach throughout 2025 and 2026, including advisory group meetings, distribution of communication materials, and additional community outreach in order to engage with the diverse populations the Company serves. The engagement efforts represented in Figures No. 3.1 and 3.2 are not intended to provide an exhaustive list, but rather an overview of the Company's proposed engagement activities quarterly during the 2025 PPP implementation period.

Figure No. 3.1: 2025 Engagement Timeline

Figure No. 3.2: Proposed 2026 Engagement Timeline

Additionally, in accordance with the Equity Policy statement issued in Docket A-230217 on May 12, 2025, Avista updated its CEIP webpage[20] to include links to its CEIP filing on the Commission's website, a description of its CEIP filing, and a timeline for when and how public comments will be received. The policy statement encourages utilities to publish a list of its advisory groups along with the member organizations that participate in each, which Avista already provides on its website and will continue to maintain regularly.

Avista's 2025 third quarter virtual public participation meeting highlighted the primary components of the Company's 2025 CEIP with an email invitation to all Washington electric customers. To further customer accessibility and awareness, the email invitation included a video message[21] personalizing the concepts of CETA and Avista's 2025 Plan, and a link to the Spanish version of the 2025 Plan's executive summary.[22] The Company also distributes fliers at community events with quick response codes for meeting details to increase awareness. The draft 2025 CEIP in English and a Spanish executive summary will be available on the Company's CETA webpage[23] for customer comment prior to the virtual public meeting. Furthermore, in accordance with WAC 480-100-655(3), Avista will provide written and electronic notification in English and Spanish to

[20] https://www.myavista.com/about-us/washingtons-clean-energy-future/clean-energy-implementation-plan.
[21] https://www.youtube.com/watch?v=ayWoTuSI7yM&feature=youtu.be
[22] https://www.myavista.com/-/media/myavista/content-documents/about-us/ceip/2025-ceip-exec-summary-for-translation.pdf
[23] www.myavista.com/ceta

all Washington electric customers within 30 days of filing its 2025 CEIP. The email notification will include hyperlinks to the English and full Spanish versions of the 2025 Plan.

Through strategic partnerships, inclusive communication strategies, and a strong emphasis on community-based collaboration, the 2025 PPP demonstrates how Avista is embedding equity, accountability, and accessibility into its communication practices. By formalizing its MLS and strengthening relationships with CBOs, Avista is not only meeting regulatory expectations under CETA, but is also building a more inclusive and responsive energy future for all customers, especially those in Named Communities.

4. Named Communities

Overview

The equitable distribution of benefits and reduction of burdens for Named Community populations is a key focus of CETA. As Avista transitions to a 100% clean generation by 2045, it is important to identify communities impacted by adverse socioeconomic conditions, pollution, and climate change, as well as those who may experience a disproportionate cumulative risk of environmental burdens. Identifying Named Communities allows the Company to leverage existing programs or create new ones to deliver equitable benefits where they are needed most. This chapter provides information about Avista's Vulnerable Populations identification and methodology, updates to the geographic display of Named Communities, and identifying compounding burdens for Named Community customer segments, with programs to address needs and tracking of metrics.

2025 Named Community Summary

2023 Biennial CEIP Condition 39

Under condition 39 of the Company's 2023 Biennial CEIP Update[24] Avista agreed to the following:

> *"In its 2025 CEIP, Avista will include a description of the work it completed between its 2021 CEIP and 2025 CEIP to expand its Vulnerable Populations, including an overview of all actions and evaluations completed, as well as summaries of discussion and input from its advisory groups. Further, it will specify the methodology used to identify Vulnerable Populations in its 2025 CEIP and a comparison of Vulnerable Populations between the 2021 and 2025 CEIP."*

This section, in its entirety, outlines the actions taken by Avista to comply with this condition. CETA provides the following definitions[25] for Highly Impacted Communities and Vulnerable Populations, jointly referred to as Named Communities.

[24] Appendix A to Order 02 in Docket UE-210628.
[25] Definitions provided in WAC 480-100-605.

Highly Impacted Communities: communities designated by the department of health based on the cumulative impact analysis required by RCW 19.405.140 or a community located in census tracts that are fully or partially on "Indian country," as defined in 18 U.S.C. Sec. 1151.

Vulnerable Populations: communities that experience a disproportionate cumulative risk from environmental burdens due to: (a) adverse socioeconomic factors, including unemployment, high housing and transportation costs relative to income, access to food and health care, and linguistic isolation; and (b) sensitivity factors, such as low birth weight and higher rates of hospitalization.

While the definition of Highly Impacted Communities is prescribed by the law, Vulnerable Population designations are identified in collaboration with the Company's EAG and other advisory groups. Table No. 4.1 below illustrates the Company's collaborative approach since filing its 2021 CEIP in determining the characteristics that define Vulnerable Populations, and resulting outcomes, throughout Avista's Washington electric service territory.

Table No. 4.1: Named Communities & Vulnerable Populations Discussions

Date	Topic	Audience	Outcome
January 2022	Named Communities	EAG, EAAG, EEAG	Identified greater Spokane, WA mappable locations of Peaceful Valley and the Northeast Spokane neighborhood
April 2023	Biennial CEIP Update	Public	
July 2023	Vulnerable Populations	EAAG	
April 2024	Vulnerable Populations	EAG	
October 2024	Vulnerable Populations	EAG, EEAG	Identified elderly populations, Takesa Village in Mead, WA, populations with high energy burden, populations with disabilities, citizenship status
November 2024	Vulnerable Populations	EAAG	Agreement with EAG members about the October 2024 Vulnerable Populations updates

Date	Topic	Audience	Outcome
March 2025	Named Communities	EAG, CEIP Advisory Group	
August 2025	2025 CEIP	Public	TBD

Avista is committed to reviewing its Vulnerable Population characteristics with the EAG on an annual basis and will provide updates, as necessary. A summary of comments received pertaining to Vulnerable Populations can be found in Appendix B.

Vulnerable Populations Methodology

In accordance with WAC 480-100-655(1)(b), in the Company's 2021 CEIP, Avista's EAG and other advisory groups assisted Avista in determining Vulnerable Population designations using the Washington State DOH socioeconomic factors and sensitive population themes with a score of 9 or higher. Beyond inclusion of those indicators, additional collaboration with its EAG members resulted in the identification of incremental traits that could be considered in Avista's Vulnerable Population definition. Table No. 4.2 below details the defining characteristics for Vulnerable Populations as established in the Company's 2021 CEIP.

Table No. 4.2: 2021 CEIP Vulnerable Populations Characteristics

Washington DOH – Socioeconomic & Sensitive Population Factors	
▪ No high school diploma (%) ▪ People of color (race/ethnicity) ▪ Population living in poverty <=185% of Federal Poverty Level ▪ Primary language other than English	▪ Unemployment ▪ Death from cardiovascular disease ▪ Low birth weight ▪ Unaffordable housing (>30% of income) ▪ Transportation expense
2021 Equity Advisory Group Identified Characteristics	
▪ American Indian and Alaska Native (on/off the reservation) ▪ Black, Indigenous, People of Color (BIPOC) ▪ Eastside of Spokane ▪ Fossil fuel industry workers ▪ Houseless populations ▪ Individuals who do not read ▪ LBGTQIA2S+ ▪ Low-income ▪ Migrant workers ▪ Monolingual (no written languages) ▪ Northeast Spokane households ▪ Neighboring communities and states ▪ Non-English speakers (e.g., Spanish Marshallese, Russian/Slavic)	▪ Older homes with older infrastructure ▪ People who fall between the cracks ▪ People with disabilities ▪ Populations outside of Avista's service territory who are affected by fossil fuel infrastructure and production ▪ Religious and spiritual people ▪ Rural populations ▪ Specific indigenous languages ▪ Tenants (renters) ▪ Under documented individuals ▪ Youngest generation (high school, college) ▪ Youth (some help families navigate resources)

These characteristics, which may or may not be available through data sources for geographical mapping, aided the development of the Company's 2021 CBIs, and were established in recognition of procedural equity. This Vulnerable Population methodology was conditionally approved,[26] contingent upon the incorporation of additional conversations, to identify additional Vulnerable Population characteristics by Avista, its EAG, and EAAG. After the conditional approval, the Company continued Vulnerable Population discussions internally and with its advisory groups.

In Avista's 2023 Biennial CEIP Update, the Company proposed to increase the Vulnerable Population designation by integrating data from the federal government's Justice40 Initiative's

[26] Docket No. UE-210628.

Climate and Economic Justice Screening Tool[27] (CEJST) to highlight additional energy-related disparities within its service territory, resulting in the following additions to the Vulnerable Populations characteristics outlined in Table No. 4.3.

Table No. 4.3: 2023 Additions to Vulnerable Populations Characteristics

Federal Climate & Economic Justice Screening Tool[28] (CEJST) Factors	
▪ Climate change	▪ Health
▪ Legacy pollution	▪ Water and wastewater
▪ Energy factors	▪ Housing
▪ Transportation	▪ Workforce development
2023 Advisory Group Identified Characteristics	
▪ North Central neighborhood, Spokane, WA	▪ Peaceful Valley, WA

Avista continued its discussions pertaining to Vulnerable Populations with its advisory groups throughout the third quarter of 2024 and with its EAG and the 2025 CEIP Advisory Group in March of 2025 regarding updating to the Washington DOH map version 2.0 and incorporating the CEJST data for the 2025 CEIP. Table 4.4 below reflects the enhancements made to the Company's Vulnerable Population characteristics as a direct result of the advisory group discussions throughout 2024.

Table No. 4.4: 2024 Additions to Vulnerable Populations Characteristics

2024 Advisory Group Identified Characteristics	
▪ Aging populations	▪ Takesa Village Mead, WA
▪ Resiliency (community/personal)	▪ High energy burden

As listed in Table No. 4.1 above, Avista discussed the Vulnerable Population designation during its third quarter 2025 public participation meeting.

Vulnerable Populations

Avista recognizes that many advisory group characteristics identified in Tables 4.2 through 4.4 are not available as a data point or to map geographically, such as "people who fall between the cracks," the "youngest generation (high school, college)," and "religious and spiritual people." However, these characteristics were identified with thoughtful and inclusive EAG input. The

[27] Avista recognizes the CEJST map is no longer operational yet also provides value in identifying additional populations to recognize under the CEIP and in the Company's equitable business planning requirements.
[28] For a breakdown of CEJST factors, see Figure No. 10.1 in the Company's 2023 Biennial CEIP Update which can be found here: https://www.myavista.com/about-us/washingtons-clean-energy-future/clean-energy-implementation-plan.

Company considers these characteristics when planning outreach strategies, event attendance, or when designing customer-facing programs. For example, although the Company is not able to geographically map the "youngest generations," this information is helpful when deciding to attend an event or job fair at a local high school or college. Additionally, the Company discusses how to support customers who "fall between the cracks" of program eligibility – those at the end of the bell curve. All characteristics of Vulnerable Populations identified by the advisory group are regarded as meaningful. Avista is committed to integrating these characteristics into geographic mapping and reporting for CBIs where feasible, and applying them to outreach, engagement initiatives, and program design as appropriate. For ease of reference, a complete list of all 2025 Vulnerable Population characteristics is provided in Figure No. 4.1 below.

Figure No. 4.1: 2025 Vulnerable Population Characteristics

WA DOH – Socioeconomic & Sensitive Factors

- No high school diploma
- People of color
- Population living in poverty <=185% of the Federal Poverty Level
- Primary language other than English
- Unemployment
- Death from cardiovascular disease
- Low birth weight
- Unaffordable house >30% of income
- Transportation expense

Federal Justice 40 Factors

- Climate Change
- Legacy Pollution
- Energy Factors
- Transportation
- Health
- Water and Wastewater
- Housing
- Workforce Development

Equity Advisory Group Identified Characteristics

- American Indian and Alaska Native (on/off reservation)
- BIPOC
- Eastside of Spokane
- Fossil fuel industry workers
- Houseless populations
- Individuals who do not read
- LBGTQIA2S+
- Low-Income
- Migrant workers
- Monolingual (no written languages)
- Northeast Spokane households
- Aging populations
- Resiliency (community & personal)
- Takesa Village, Mead, WA
- Religious and spiritual people
- Rural
- High energy burden
- Neighboring communities and states
- Non-English speakers
- Homes with older infrastructure
- People who fall between the cracks
- People with disabilities
- Populations outside of Avista's service territory who are affected by fossil fuel infrastructure and production
- North Central neighborhood, Spokane, WA
- Peaceful Valley, WA
- Youngest generation (high school, college)
- Youth (some help families navigate resources)
- Tenants (renters)
- Undocumented individuals
- Specific indigenous languages

Named Communities Geographic Representation

In its 2021 CEIP, the Company incorporated data from the Washington DOH map (version 1.0 released January 2019), resulting in approximately 105,867 customers or 44% of its Washington electric service territory customers designated as a Named Community.[29] Based on 2024 metric calculations conducted in the first quarter of 2025, the Company has 245,564 Washington residential electric customers. In its 2025 CEIP, the Company plans to incorporate Washington's updated DOH map (version 2.0 released January 2022) and the CEJST data (version 2.0 released December 2024)[30] in 2025. With those combined and updated data sets, it is estimated Avista's 2025 CEIP Named Community designation, which includes both Highly Impacted Communities and Vulnerable Populations, will increase to 143,013 or 58% of its Washington residential service territory (see Table No. 4.5 below). Through a recognition justice lens, mapping the Named Communities provides insight into factors which may lead to disproportional outcomes and ensure CBI metrics are built upon an understanding of what is most important to its customers.

Table No. 4.5: 2021 vs. 2025 CEIP | Named Community Household Comparison

Source	Version	Community	2021 CEIP	2025 CEIP
WA DOH	2019	Highly Impacted Community	15,157	
	2019	Vulnerable Populations	43,010	
	2019	Both Highly Impacted & Vulnerable	47,700	
WA DOH	2022	Highly Impacted Community		34,767
	2022	Vulnerable Populations		49,977
	2022	Both Highly Impacted & Vulnerable		49,632
CEJST	2024	Vulnerable Populations		8,637
		Total Households	**105,867**	**143,013**

Figure No. 4.2 below represents Avista's Washington electric service area under the updated 2025 Named Community designations with DOH's version 2.0 Highly Impacted Communities shaded in pink, DOH's version 2.0 Vulnerable Populations shaded in blue, and CEJST version 2.0 shaded in brown, with some areas of the service territory overlapping in all three categories. Figure 4.3 provides DOH's version 2.0 Highly Impacted Communities and incorporates CEJST version 2.0 populations inside the DOH's version 2.0 Vulnerable Populations for the final 2025 CEIP Named

[29] Based on metrics calculated in the first quarter of 2021 with a Washington electric residential customer count of 238,026.

[30] Identification of Highly Impacted Communities or Vulnerable Populations between the 2019 vs. 2022 versions of the Washington's DOH Environmental Health Disparities Map is additive. Communities identified in 2019 have not been removed even if their relative risk in 2022 would place them below the identification threshold.

Communities map. See Appendix E for additional 2025 CEIP Named Community map information.

Figure No. 4.2: Incorporating DOH & CEJST Designations

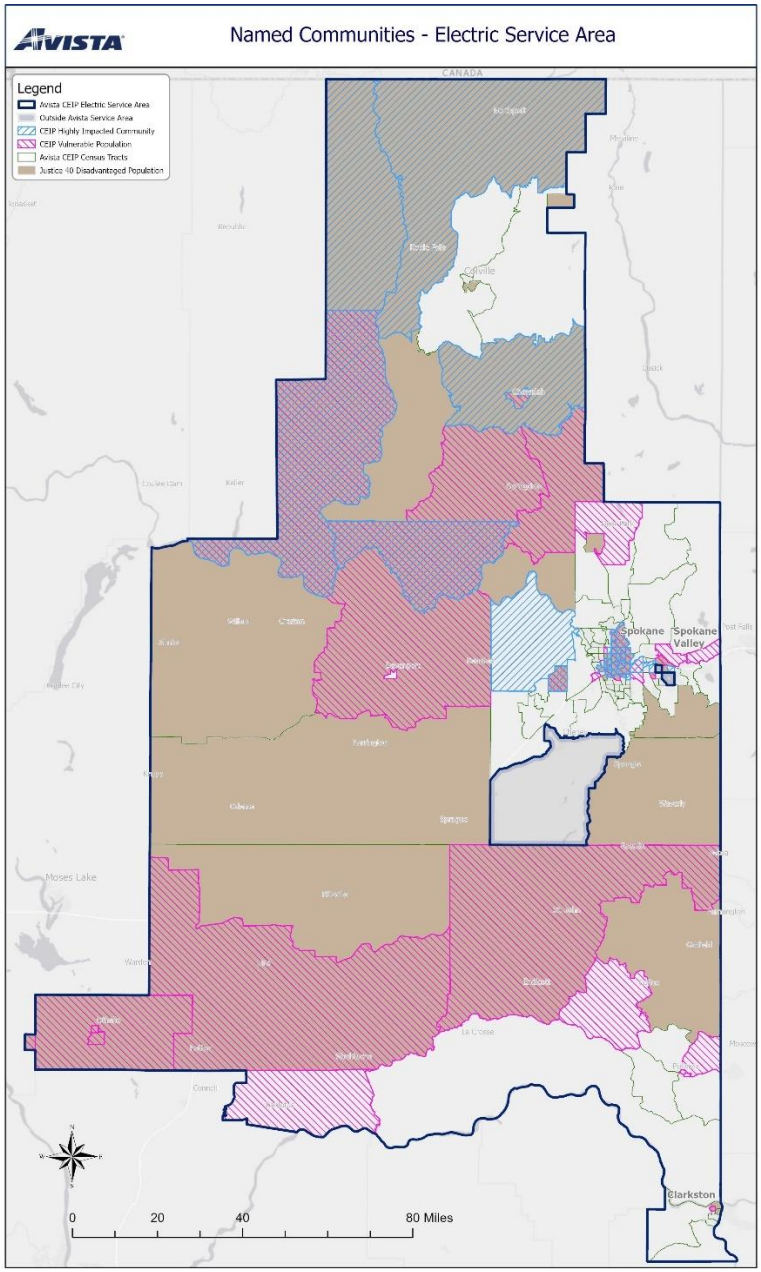
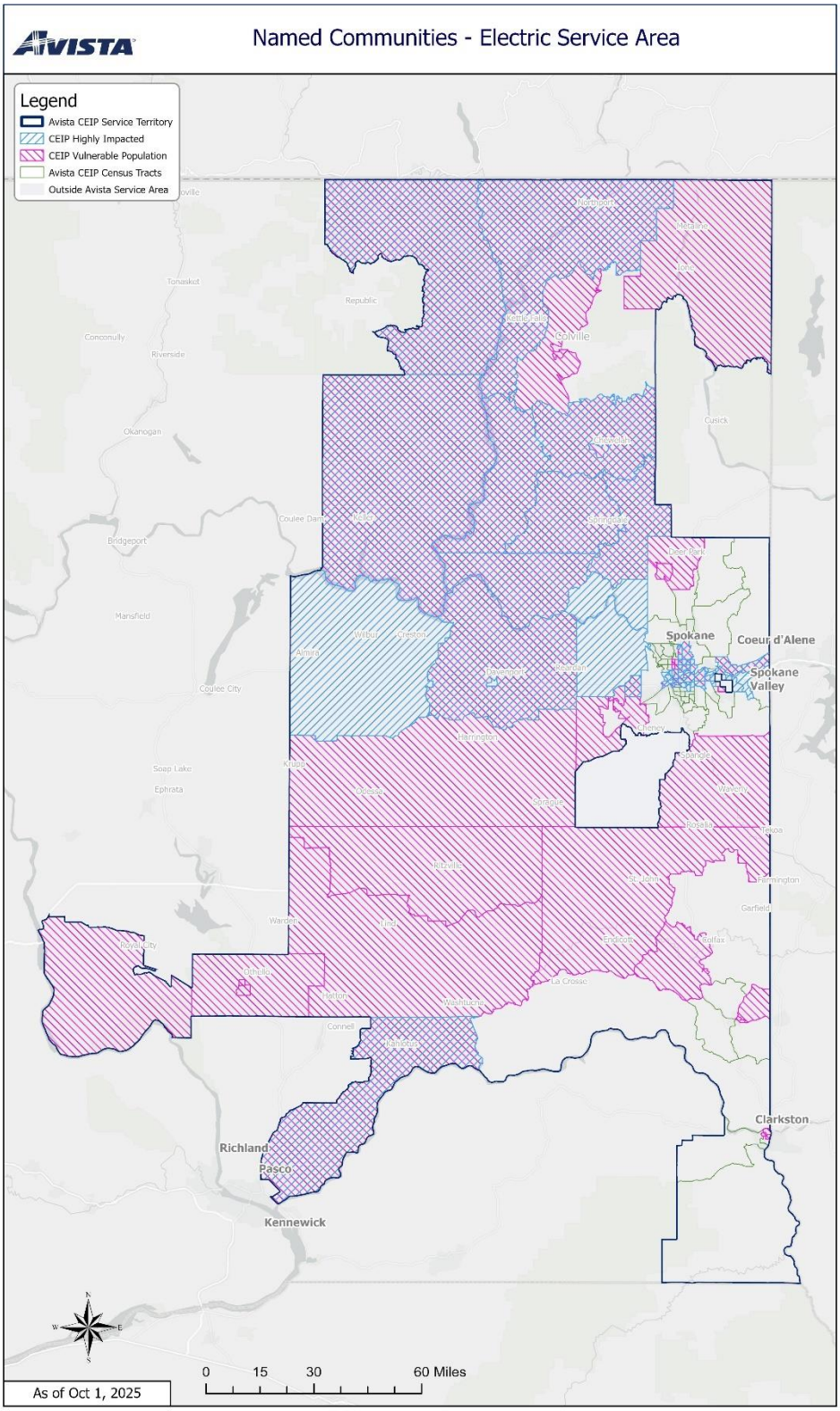


Figure No. 4.3: Final 2025 CEIP Named Communities Map



Identifying Additional Burdens

With the significant increase in the number of customers included in Avista's Named Community population described above, the Company recognizes the importance of reaching customers with diverse and compounding needs. The Company is in the preliminary stages of identifying attributes that contribute to, and compound, multiple burdens and implement actions to support this Named Community segment. Avista will work with its advisory groups to formalize an identification methodology throughout 2026 with an update in its 2027 CEIP Biennial. It is the Company's belief that a collaborative and thorough approach with its advisory groups is essential to develop impactful methods for identifying and supporting these Named Communities with compounding burdens. Instead of the Company making this determination independently, and on an expedited timeline in order to include it within the 2025 CEIP, Avista proposes to provide a thorough methodology in its 2027 Biennial CEIP Update.

Avista recognizes customers have unique circumstances affecting their personal finances, living situations, and employment opportunities, amongst others. To support these customers, the Company has developed programs to address these burdens. The following sections highlight how the Company considers various customer burdens and programs to reach those with additional burdens.

My Energy Discount (MED)

An electric utility customer is considered to have a high energy burden if their annual utility bills consume more than 6% of their gross annual income.[31] Avista's MED program is designed to reduce a customer's utility energy burden to no more than 6% of their annual income by providing an income-qualified monthly discount. This model supports customers through a tiered discount approach based on income levels, ensuring customers with lower incomes receive a greater monthly discount. Using this distribution methodology, Avista identifies customers with the greatest financial need and ensures they receive an equitable discount.

[31] Electric only and dual fuel customers are considered energy burdened at greater than 6%, while natural gas only customers are burdened if greater than 3%.

2021 CEIP Condition 38:

In the 2021 CEIP, the Commission required Condition 38 as proposed by WUTC Staff:

> *"Avista must choose at least two of its current CBIs which it will track for at least five subsets of named communities, at a granularity to be determined by agreement with Staff, stakeholders, and the Company's Equity Advisory Group. Avista will incorporate relevant updates in its 2023 Biennial CEIP update."*

Metrics tracked under the 2021 CEIP for Condition 38 did not provide actionable data nor provide value for program design and/or enhancements. As a result, the Company does not propose retaining these metrics for the 2025 CEIP. However, the Company recognizes the desire for more granular data for subsets of Named Community customers. For the 2025 CEIP, the Company proposes to measure energy burden at a granular level with the MED program as calculated within the annual LIRAP report: the average energy burden before and after energy assistance, for each MED discount tier by Named Community and Non-Named Community segments. In addition, the Company will calculate average excess burden (i.e., the average dollar amount above the high energy burden threshold) for each MED discount tier, by Named Community and Non-Named Community before and after energy assistance.

According to Avista's CEIP customer survey responses, affordability is the top priority for customers. Measuring energy burden at this granular level informs MED program design and may reveal areas where customers may benefit from additional programs, such as energy efficiency. As of the 2023/2024 LIRAP report,[32] Avista began calculating and including energy burden by service type and MED discount tier, as shown in Table No. 4.6 below.[33]

[32] LIRAP reporting is by program year from October 1, 2023, through September 30, 2024.
[33] For the LIRAP report, gas only customers were also included, but have been removed in the CEIP as it is focused only on electric customers. Dual fuel customers are included as they receive both electric and gas service from the Company.

Table No. 4.6: Energy Burden by Discount Tier for Duel Fuel & Electric Only Customers

MED Discount Teir	Energy Burden by Discount Tier (Dual Fuel)			Energy Burden by Discount Tier (Electric)		
	Without MED	With MED	MED + Additional EA	Without MED	With MED	MED + Additional EA
15%	5.55%	4.75%	4.70%	4.29%	3.67%	3.53%
20%	7.81%	6.33%	6.11%	6.24%	5.06%	4.73%
35%	12.04%	8.33%	7.74%	9.37%	6.60%	5.76%
75%	26.16%	9.85%	8.47%	20.61%	8.29%	6.51%
94%	390.47%	87.65%	68.20%	298.22%	71.92%	48.07%
Average	**8.38%**	**6.01%**	**5.77%**	**7.35%**	**5.14%**	**4.67%**

In the Company's 2024/25 LIRAP report to be filed in the first quarter of 2026, it will expand on this granular energy burden data as discussed above. Avista will also include this information in its 2027 Biennial CEIP and in its 2030 Clean Energy Compliance Report. For consistency across report types, the data reported in the CEIP, and compliance report will mirror that of the LIRAP report, which is calculated by program year as opposed to calendar year.

Additionally, while discussing Avista's version of a Deepest Need with its EAG throughout 2026, the Company will also discuss granular metrics – or Named Community subsets – that may or may not be applicable or may or may not result in Company actions to influence the metric. If actionable metrics are identified, and in support of Avista's version of Deepest Need, the Company will adopt additional metrics for the 2025 CEIP.

Energy Efficiency

To address the significant challenges faced by customers with high energy consumption, the Company has implemented an insulation program that emphasizes the installation of low-or no-cost insulation solutions and air sealing measures, as appropriate. Avista will give priority to low-income customers to help alleviate their energy burden and enhance overall home efficiency. Please see the Company's energy efficiency programs supporting Named Communities for addition information.

Named Community Investment Fund

Additionally, Avista is supporting customers with the greatest financial and housing burden need through its NCIF program funding. One example of how the NCIF is supporting those with a greatest housing burden need is through the Dignified Workday program. Avista provided an NCIF

grant award to fund a labor and training program for community members who are unhoused. In 2024 this program provided 20,000 work hours and $400,000 in wages to 55 participants. Of those participants, six went on to receive full time employment, 22 transitioned into permanent housing, and six entered treatment programs.[34]

Avista is dedicated to working closely with its advisory groups to enhance its methodology for identifying customers who experience the greatest burden. As previously stated, Avista will provide a formal methodology inclusive of meaningful advisory group input in its 2027 CEIP Biennial Update.

[34] NCIF stories can be found at www.myavista.com/ncif.

5. Customer Benefit Indicators

Overview

In accordance with WAC 480-100-610(4)(c) the Company developed CBIs to measure the equitable transition to cleaner energy for all customers. It also requires an equitable distribution of energy and non-energy benefits, and a reduction of burdens for Named Communities. Under the law, these CBIs include methods to measure the equitable transition in the following eight benefit areas: reduction in cost, reduction of burden, non-energy, energy, energy resilience, energy security, environmental, and public health. For ease of presenting CBI information externally with advisory group members and customers, the Company summarizes metrics under six Avista benefit areas as shown in Figure No. 5.1 below: affordability (combines reduction in cost and reduction in burden benefit areas), accessibility (non-energy benefit area), energy resilience, energy security (includes energy benefit area), environmental affects, and public health.

Figure No. 5.1: 2025 CEIP | CBI Benefit Areas

After approval of the 2021 CEIP, with CBI-related conditions,[35] the Company agreed to 14 CBIs and 84 metrics across six benefit areas. In preparation for the 2025 CEIP and provided in Table No. 5.1 below, CBIs and the associated metrics were discussed and revised with Avista's EAG and other advisory groups, and with customers through public participation meetings. Avista's CBIs hold equal significance; accordingly, the Company assigns weighting factors solely to relevant metrics during resource selection processes. Where applicable and in accordance with the CETA law, a metric will be measured for Named Communities as compared to all customers.

Assumptions & Methodology

The following sections explain Avista's rationale for the proposed 2025 CBI metrics with background regarding alignment with Performance Based Regulation (PBR) metrics, advisory

[35] 2021 CEIP CBI Conditions 18, 19, 21, 22, 24, 26, and 38.

group collaboration and customer involvement, data source availability, classification of energy and non-energy metrics, and proposed 2025 metric baseline and reporting timelines.

Metric History & Advisory Group Collaboration

The Company began planning CBI metrics for the 2021 CEIP in 2020. In the Company's 2022 General Rate Case (GRC), the Commission approved electric and natural gas PBR metrics for Avista. These two metrics types had numerous redundancies, variances in report timing, variance in measurement cadence (quarterly or annually), and variance in customer segments (all customers, known-low income, Named Communities, and natural gas vs. electric customers). In the Company's 2024 Washington GRC, it proposed an overall reduction in PBR metrics to reduce administrative burden and reporting redundancy across various Commission-required filings – the CEIP included. The Commission's approval of the 2024 GRC[36] in December 2024 resulted in 33 PBR measures with 60 metric calculations (electric and natural gas), as compared to 95 PBR measures with 278 metric calculations required in the 2022 GRC. In addition, the Commission declined to require metrics that involved too many factors outside Avista's control.

In November 2023, the Company began planning for the 2025 CBIs through conversations with its EAG, reviewing existing metrics, understanding equity principles, considering the root causes of inequities, and identifying populations that could be adversely affected by the transition to cleaner energy. As shown in Table No. 5.1 below, CBIs were discussed in 2024 at the April, May, June and July Equity Lens Sessions with an expectation that additional metric conversations would occur in 2025 after the 2024 GRC concluded. No additional CBIs were identified throughout the 2024 and 2025 advisory group conversations. However, the advisory groups supported removing CBIs that were beyond Avista's control pertaining to regional greenhouse gas emissions (GHG) and outdoor air quality.

The Company further revised its proposed 2025 CBIs to better align with new PBR metrics as a result of the Commission's 2024 policy statement regarding PBR metrics, and in accordance with the 2024 Washington GRC Order.[37]

[36] Docket UE-240006 et. al., Exhibit SJB-5T starting at page 39 line 2.
[37] Final Order 08 in Docket UE-240006 et. al.

Table No. 5.1: 2025 CEIP | CBI Discussions

Date	Topic	Audience
November 2023	2021 CBIs & Clean Energy Benefits	EAG
June 2023	2021 CBIs & CEIP Condition Discussions	EAG, EAAG, EEAG, Public
February 2024	Determinants of Equity	EAAG
April 2024	CETA/CEIP Overview & 2025 CBI Discussion	EAG (in person)
May 2024	2025 CBIs & Resource Selection Metrics - Continued	EAG
June 2024	2025 CBIs & Resource Selection Metrics in Preparation for 2025 IRP - Continued	EAG
July 2024	2025 Proposed CBI Summary	EAG
October 2024	2025 Proposed CBI Summary	EEAG (in person)
November 2024	2025 Proposed CBI Summary	EAAG
April 2025	2025 Proposed CBI Summary*	EAG, CEIP Advisory Group
May 2025	2025 Proposed CBI Summary*	Public
July 2025	2025 Proposed CBI Summary*	EAAG
August 2025	2025 Proposed CBI Summary*	EEAG

*Included updated information based on 2024 GRC, Attachment A Final Order 08 in Docket UE-240006

Table No. 5.2 below provides a summary of 2025 CBI changes compared to the Company's 2021 CEIP approved CBIs. Please see Appendix F for a summary of 2025 CBI changes as compared to the 2021 CEIP.

Table No. 5.2: Number of 2021 CBIs vs 2025 CBIs | Change Summary

Item	2021 CEIP	2025 CEIP
Benefit Areas	6	6
CBIs	14	13
Metric Measurements	84	60
2021 to 2025 Metric Change Summary		
Retain 2021 Metric without Change		29
Retain 2021 Metric with Modification		7
Remove 2021 Metric		47
Add New 2025 Metric		24

Data Source Availability

Avista uses a variety of data sets that are derived from 1) the Company's internal customer applications, 2) publicly available no-cost data sets, and 3) purchased third-party data sets to support the calculation of CBI metrics. In addition, the Company incorporates external third-party reporting from CBOs or federal/state agencies and various internal spreadsheets. Examples of internally available data sets include customer usage data, marketing and communications data,

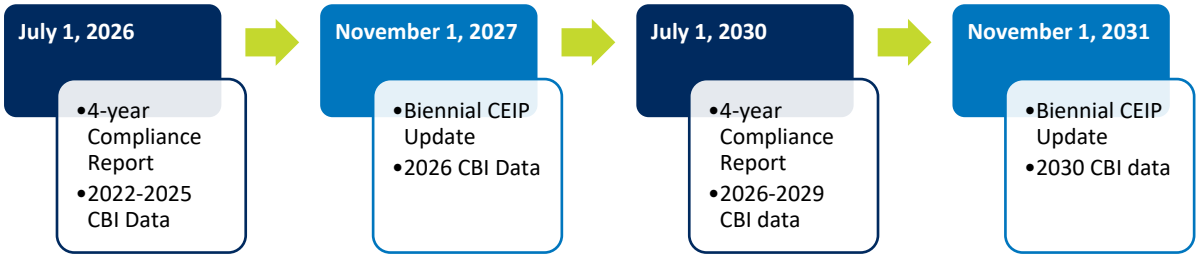
physical asset data, reliability data, wholesale marketing data, and field activity data. Examples of publicly available data Avista incorporates include Washington DOH data, Washington Department of Ecology data, federal CEJST data, federal census data, and Federal Environmental Protection Agency data. To gain access to non-utility customer data, Avista purchases third-party data from Acxiom to understand customer demographics including income level, homeowner vs renter status, age of the home, etc.

Although Avista makes efforts to ensure data accuracy, discrepancies still exist. This can be evident when attempting to match internal data sets with external third-party data to determine various characteristics – some well beyond traditional utility operations such as income or residential dwelling status. Even though Avista strives to collect accurate data for reliable metric reporting purposes and it validates external data accuracy and collection processes, gaps may still exist.

2025 Metric Baseline & Reporting

Avista provided a 2021 baseline using data from 2016-2020 to calculate each metric known at the time of the 2021 CEIP filing and to provide a comparison against future reporting. Although Avista's internal customer count varies annually, other data sets used to calculate the 2021 baseline remained constant to ensure consistency for valid metric result comparisons. As discussed in the Named Communities Geographic Representation section, the Washington DOH Health Disparities map is a key data source for metric calculation when updating Named Community populations. In addition, Avista intends to incorporate federal CEJST data to further identify Vulnerable Populations. In 2025, the Company will incorporate updates from the DOH's data set (version 2.0 released January 2022) and integrate the CEJST's data set (version 2.0 released December 2024) in the calculation of a 2025 CBI metric baseline. Throughout the 2026-2029 CEIP period, Avista intends to keep versions of data sources consistent to support annual metric comparison.

Figure No. 5.2: CBI Metric Reporting | Proposed Timeline



In accordance with WAC 480-100-650 (1)(e)(i), the Company will include actual CBI metric values for the prior four years (i.e., 2021 CEIP) in the Clean Energy Compliance Report due July 1, 2026, and every four years thereafter. In addition, applicable interim year values will also appear in each biennial CEIP update. Figure No. 5.2 above shows Avista's planned reporting dates and CBI data sets.

CBI Classification

As it pertains to CEIP specific actions, the Company must identify and measure energy and non-energy benefits for renewable energy, energy efficiency, and demand response.[38] Avista considers its existing CBIs appropriate for this requirement, with a classification of either providing an energy or non-energy benefit. For actions relating to energy savings, the Company's ability to provide energy, and those related to emissions, Avista classifies those CBIs as energy benefits. Of Avista's 13 CBIs, 10 relate to energy benefits and three support non-energy benefits, including Outreach & Communication, Employee Diversity and Supplier Diversity.

2025 CBI Summary

Table No. 5.3 below and the following narrative provides the statutory benefit area with Avista's benefit areas noted in parentheses. In addition, Named Communities is abbreviated to NC.

Table No. 5.3: 2025 CEIP CBIs[39]

Benefit Area	Directionality	CBI	Metric Measurement
Reduction in Cost (Affordability)	Improve	Participation in Company Programs	▪ Participation in weatherization and energy assistance[40] programs for all customers & NC ▪ Saturation percentage of energy assistance for all customers & NC

[38] Specific Targets: WAC 480-100-640 (3)(a)(i, ii, iii).
[39] Metrics with an asterisk indicate it is also a PBR.
[40] Energy assistance refers to the direct financial assistant for paying utility bills.

Reduction in Burden (Affordability)	Reduce	Energy Burden	▪ Average energy burden after energy assistance by census tract for all & NC* ▪ Number and percentage of high energy burden after energy assistance by census tract for all & NC*
Non-Energy (Accessibility)	Improve	Outreach & Communication	▪ Number of outreach contacts ▪ Number of marketing impressions ▪ Number of translation services ▪ Number of unique languages translated
	Improve	Transportation Electrification	▪ Number of Electric Vehicle (EV) trips provided by CBOs ▪ Number of EV miles driven provided by CBOs ▪ Number of charging stations in NC
	Improve	Investments in Named Communities	▪ Number and percentage of NC enrollments in DER programs: energy efficiency, electric transportation, net metering, demand response* ▪ Percentage of utility spend in NC for DER programs: energy efficiency, electric transportation, net metering, demand response* ▪ Incremental spending each year in NC* ▪ Number of customers and/or CBOs served
Energy	Improve	Generation Location	▪ Percentage of generation located in Washington or connected to Avista's transmission system
Energy Resilience	Improve	Energy Availability	▪ Average outage duration without major-event days for all customers & NC ▪ Frequency of outages for all customers & NC ▪ Generation reserve margin for winter and summer
Energy Security	Reduce	Disconnections for Nonpayment	▪ Percentage of disconnects for nonpayment by month by census tract for all customers & NC
Environmental Affects	Improve	Outdoor Air Quality	▪ Avista-owned generation plant air emissions

	Reduce	Greenhouse Gas Emissions	▪ Avista generated and purchased greenhouse gas emissions
Public Health	Not Applicable[41]	Employee Diversity[42]	▪ Percentage of executive employees, senior management and employees who identify as a person of color and/or a woman or non-binary* ▪ Percentage of total employees that opt out from providing information either through human resource data or surveys*
	Improve	Supplier Diversity	▪ Percentage of supplier diversity spend
	Improve	Indoor Air Quality	▪ Rank the causes of indoor air quality for all customers & NC ▪ Percentage of indoor weatherization air quality measures for all customers & NC

Benefit Area: Reduction in Cost (Affordability)

Under the Reduction of Cost benefit area, or what Avista classifies as Affordability, the Company proposes the following:

1. **CBI – Participation in Company Programs | Improve**
   - Participation in weatherization and energy assistance programs for all customers and Named Communities.
   - The saturation percentage of energy assistance for all customers and Named Communities.

This CBI reports the number of customers benefiting from energy efficiency improvements and those receiving financial assistance to reduce energy usage and improve affordability. Insights gained from these data sets may reveal opportunities to reach additional customers.

[41] Directionality for the Employee Diversity CBI has been removed per federal guidance: https://www.mwe.com/insights/doj-guidance-on-unlawful-discrimination-implications-for-dei-practices-in-the-private-sector/?utm_campaign=EMP%20%7C%202025%20%7C%20OTS%3A%20DOJ%20guidance%20on%20unlawful%20discrimination%3A%20Implications%20for%20DEI%20practices&utm_medium=email&utm_source=Eloqua

[42] Due to changes in the federal guidance as of July 29, 2025, and after the CEIP Advisory Group process concluded, the Company modified its Employee Diversity CBI metrics to align with the 2024 GRC-required PBR metric. Additionally, the Company was made aware of the updated federal guidance after publishing the draft 2025 CEIP, thus modification to this metric is provided in this final 2025 CEIP.

Benefit Area: Reduction of Burden (Affordability)

Under the Reduction of Burden benefit area, or what Avista classifies as Affordability, the Company proposes the following:

2. **CBI – Energy Burden | Reduce**
   - Average energy burden after energy assistance by census tract for all customers and Named Communities.
   - Number and percentage of high energy burden after energy assistance by census tract for all customers and Named Communities.

This CBI monitors the average financial energy burden[43] after energy assistance offerings, such as MED or Arrearage Management and Forgiveness are applied. Additionally, it may assist the Company in identifying customers who have a high energy burden[44] that are not currently benefiting from the Company's energy assistance and efficiency programs.

Benefit Area: Non-Energy (Accessibility)

Under the Non-Energy benefit area, or what Avista classifies as Accessibility, the Company proposes the following:

3. **CBI – Outreach and Communication | Improve**
   - Number of outreach contacts.
   - Number of marketing impressions.
   - Number of translation services.
   - Number of unique languages translated.

These metrics are supported through the actions in Avista's 2025 PPP and through company-wide efforts with its MLS team to increase customer outreach and provide written and digital communications in multiple languages.

4. **CBI – Transportation Electrification | Improve**
   - Number of EV trips provided by CBOs.
   - Number of EV miles driven provided by CBOs.
   - Number of charging stations in Named Communities.

See Avista's Transportation Electrification Plan (TEP) for more information.

[43] Defined in WAC 480-100-605 as, "the share of annual household income used to pay annual home energy bills."
[44] "High" energy burden is based on the "Guidelines for Energy Assistance for Low-Income Households (RCW.19.405.120)", issued March 9, 2020, by the Department of Commerce (Commerce). This document states that in setting the threshold energy assistance need, Commerce chose a 6% energy burden, as "This definition comes from a widely accepted principle that total shelter costs should not exceed 30 percent of income and that utility costs should not exceed 20 percent of those shelter costs, leading to the conclusion that an affordable energy burden should be at or below six percent of household income (20% x 30% = 6%)."

5. CBI – Investments in Named Communities | Improve

- Number and percentage of Named Communities enrollments in DER programs: energy efficiency, electric transportation, net metering, demand response.
- Percentage of utility spend in Named Communities for DER programs: energy efficiency, electric transportation, net metering, demand response.
- Incremental spending each year in Named Communities.
- Number of customers and/or CBOs served.

See Avista's NCIF section for additional information regarding NCIF activities that support this CBI. Additionally, see the Energy Efficiency, Demand Response and Electric Transportation Plan sections, which provide additional Company actions supporting this CBI.

Benefit Area: Energy (Energy Security)

Under the Energy benefit area, the Company proposes the following:

6. CBI – Generation Location | Improve

- Percentage of generation located in Washington or connected to Avista's transmission system.

To support energy security, the Company tracks the percentage of generating resources Avista owns or controls that are in Washington state and those directly connected to Avista's transmission system. Resources that are directly interconnected with the Avista transmission system, regardless of whether they are situated in Washington or another state, enhance the probability of reliable energy delivery.

Benefit Area: Energy Resilience

Under the Energy Resilience benefit area, the Company proposes the following:

7. CBI – Energy Availability | Improve

- Average outage duration without major-event days for all customers and Named Communities.
- Frequency of outages (CEMI0 – Customers Experiencing Multiple Interruptions greater than zero) for all customers and Named Communities.
- Generation reserve margin for winter and summer.

In addition to the metrics above, the Company takes significant steps to ensure energy availability. Avista monitors weather forecasts and active weather patterns to anticipate and plan for system needs while providing reliable service to its customers. In addition, Avista continuously prepares for major events by performing an annual simulation event to test and modify the structure of its Emergency Operating Procedures (EOP). Furthermore, the Company conducts significant

planning and implementation efforts to support wildfire resiliency in rural and urban landscapes. Through Avista's Wildfire Resiliency Plan,[45] Avista studied each of its customer segments to determine what level of support may be needed in the event of a sustained outage. For Avista-identified customers who require medical life support equipment, backup batteries with solar panels and air conditioning units were provided at no cost to the customer. Additionally, the Company has mutual aid agreements in places with several neighboring utilities where bidirectional support is provided in the event of major events.

The details above provide a very high-level overview of some resiliency actions the Company takes to support resiliency for Avista and its customers and is not intended to provide an exhaustive list of the Company's resiliency actions.

Benefit Area: Energy Security

Under the Energy Security benefit area, the Company proposes the following:

8. **CBI – Disconnections for Nonpayment | Reduce**
   - Percentage of disconnects for nonpayment by month by census tract for all customers and Named Communities.

Avista works closely with its customers to establish payment arrangements and to enroll them in energy assistance programs when needed. This metric may provide additional insights into customer segments that may benefit from additional energy assistance program outreach.

Benefit Area: Environmental Effects

Under the Environmental Effects benefit area, the Company proposes the following:

9. **CBI – Outdoor Air Quality | Improve**
   - Avista-owned generation plant air emissions.

Avista conducts periodic plant-level emission testing. Results are verified by qualified testing staff as well as local air quality agencies for both accuracy and against limits set for plan compliance. Amongst the variety of pollutants that are analyzed during each test, four pollutants are used to compare emissions among each plant. These include Sulfur Dioxide (SO_2), Nitrogen Oxides (NO_X), Mercury (Hg), and Volatile Organic Compounds (VOC). These pollutants

[45] Docket UE-240836.

(amongst others) directly impact local air quality around each respective generation facility and the surrounding community.

10. CBI – Greenhouse Gas Emissions | Reduce

- Avista greenhouse gas emissions.

To support a healthy outdoor environment, the Company complies with all clean air and pollutant regulations established by local, state, and federal air quality-regulating agencies. This metric highlights the emissions generated by Avista's owned, contracted, and purchased generation. In the 2025 CEIP implementation period, the Company intends to use the Climate Commitment Act (CCA) calculation for this metric.

Benefit Area: Public Health

Under the Public Health benefit area, the Company proposes the following:

11. CBI – Employee Diversity | Not Applicable

- Percentage of executive employees, senior management and employees who identify as a person of color and/or a woman or non-binary
- Percentage of total employees that opt-out from providing information either through human resource data or surveys

Due to recent changes in federal guidance, the Company has modified its Employee Diversity CBI to align with 2024 GRC-required PBR metrics.[46] See Avista's Nondiscriminatory Hiring and Employment Practice Commitment for additional information.

12. CBI – Supplier Diversity | Improve

- Percentage of supplier diversity spend

Avista has a Supplier Diversity Program designed to implement strategies for developing partnerships that promote inclusive economic growth within its service areas. Avista's supplier diversity efforts positively impact the community and economy by increasing transparency and collaboration, fostering innovation and competition, and promoting the inclusion of historically underrepresented and underserved businesses. This metric tracks the percentage of spend of suppliers that self-identify as people of color, women, veteran, and other marginalized groups.

[46] Appendix A to Final Order 08 as issued in Docket UE-240006 et. al.

13. CBI – Indoor Air Quality | Improve

- Rank the causes of indoor air quality for all customers and Named Communities.
- Percentage of indoor weatherization air quality measures for all customers and Named Communities.

Clean indoor air quality is measured through several energy efficiency measures and upgrades provided through Avista's weatherization partnership with the Spokane Neighborhood Action Partnership (SNAP). These metrics track the measures and upgrades which improve indoor air quality within the homes where they are installed.

6. Renewable Energy | Interim Targets & Specific Actions

Overview

To establish incremental progress toward meeting CETA's 2030 carbon neutrality requirement and the 2045 renewable or non-emitting requirement, Avista proposes interim renewable energy targets and specific actions for the 2026-2029 implementation period. These annual renewable targets are informed by historic hydro performance (under median water conditions)[47] and reflect Avista's effort to meet CETA requirements in a cost-effective manner. The targets are informed by updates to the Company's 2025 electric IRP and the requirements of RCW 19.280.030. As listed in Figure No. 6.1 below, the Company proposes annually increasing the amount of renewable energy provided to customers between 2026 and 2029. The targets are a continuation of the approved 2021 CEIP's clean energy targets and represent a gradual annual increase to meet the 80% primary compliance requirement in 2030. These targets are supported by retiring RECs equivalent to the annual clean energy target and will be met with generation from Avista's existing qualifying resources, through resources acquired through the 2025 All-Source RFP, or from resources acquired through Washington state's Second Substitute House Bill (SSHB) 1814[48] utility tax incentive program. In compliance with Condition 5 of the 2021 CEIP, the Company provides quantitative (cost-based) and qualitative (equity or CBI considerations) within this chapter and the Incremental Cost chapter of this CEIP.

Figure No. 6.1: Renewable Energy | Interim Targets & Specific Actions Summary

Interim Targets	Specific Actions
2026: 66.0% 2027: 69.5% 2028: 73.0% 2029: 76.5%	Annually retire Renewable Energy Certificates to meet the percentage requirements over the four-year period.

[47] Median water conditions are the mid-point of all water years where half of the different hydro years are above, and the other half are below.

[48] https://lawfilesext.leg.wa.gov/biennium/2021-22/Pdf/Bills/House%20Passed%20Legislature/1814-S2.PL.pdf?q=20220701103859https://lawfilesext.leg.wa.gov/biennium/2021-22/Pdf/Bills/House%20Passed%20Legislature/1814-S2.PL.pdf?q=20220701103859.

As Avista expects to control more renewable energy than the proposed interim targets require, any excess renewable energy will be used to benefit customers by selling RECs or to satisfy energy sales under the CCA. When selling power within Washington state, renewable energy can be used to meet CCA requirements and offset the need for a carbon allowance.[49]

Although not required to meet clean energy requirements throughout the 2026-2029 implementation period, Avista proposes additional renewable energy actions to 1) acquire resources from its 2025 All-Source RFP, and 2) seek SSHB 1814's utility tax incentives to fund two solar generation and BESS projects. Resources acquired through the RFP process may meet CETA compliance requirements beyond 2029. The main purpose of the RFP is to seek resources to meet system peak capacity needs, however it is possible resources could meet both requirements. As listed in Figure No. 6.4 in the Company's Renewable Energy | Additional Actions section, the 2025 All-Source RFP seeks to secure cost-effective qualifying winter and summer capacity resources. If the RFP produces favorable project pricing, or a renewable project satisfies peak load with qualifying capacity, Avista may also acquire renewable energy.

Renewable Energy | Interim 2026 – 2029 Targets

Target Assumptions & Methodologies

Avista's renewable energy interim targets are informed by Avista's 2025 Electric IRP and the 2025 CEAP. These targets maintain the incremental progress established by the approved 2021 CEIP, supporting advancement toward the 100% carbon-neutral objective set for 2030. The Company's PRS, reflected in the 2025 IRP and CEAP, represents the lowest reasonable cost resource plan given societal costs[50] and Washington's requirement to deliver clean energy to customers while maintaining reliability. Throughout 2024, Avista developed its plans to meet the capacity, energy, and clean energy needs for both Washington and Idaho in conjunction with its IRP TAC. The Company's 2025 CEAP identifies the Washington portion of Avista-owned or contracted resources to comply with CETA and informs the annual interim targets for this 2025 CEIP. The following sections provide additional information about the target details, describe Avista's available generation supply, and the methodology for resource allocation by jurisdiction.

[49] WAC 173-446-230(2)(d)(iii) and WAC 173-446-040(1)(a)(i).
[50] Societal costs include costs related to the direct and indirect impact of greenhouse emissions, and the associated indirect cost impacts to safety, air emissions and the local economy.

Generation Supply & Jurisdictional Allocation

After 2025, Avista's generation mix will be a combination of renewable resources, natural gas resources, and wholesale market transactions. Avista serves retail electric loads in Idaho and Washington and controls its own generation resources as a cohesive system serving all customers regardless of location. Given the differing state energy policies, this creates unique challenges for resource generation and cost allocations. Avista does not separate its resources between states when serving customer load but does allocate system costs by state using each state's historical load ratios. This methodology is referred to as the PT ratio. In 2024, this ratio was 65.15% to Washington and 34.85% to Idaho. Absent any other agreed upon methodology for this CEIP, Avista will continue to use this methodology for assigning the resources serving each state.

Although the financial benefits from REC sales are allocated by the PT ratio, Avista may use the RECs allocated to either state as long as compensation is made to the other jurisdiction for the share it does not have allocated rights to. This compensation practice is based on historically acquiring certain resources to satisfy Washington's desired energy policies and further supported by the precedent that any renewable resource on the system may qualify for meeting renewable energy requirements in Washington (specifically compliance with the Energy Independence Act (EIA)). Absent a negotiated agreement between Avista and its two electric jurisdictions for how resources should be allocated and paid for, Avista will continue accounting for renewable energy using the following criteria for compliance with CETA's primary[51] compliance targets:

[51] Primary compliance refers to the 80% clean energy target by 2030 that will increase to 100% by 2045. The methodology does not apply to resources or attributes used for alternative compliance.

- Allocate Avista-owned and contracted qualifying generation resources by the PT ratio.
- Allow for the purchase of Idaho's share of RECs at market-based prices for the following resources: Palouse Wind, Kettle Falls Generating Station, Rattlesnake Flat Wind, Columbia Basin Hydro, Chelan Public Utility District (PUD) Hydro Generation acquired after 2019, Clearwater Wind or any other new qualifying resource acquired after 2019.
- Barring low hydro conditions or major mechanical failure, avoid using Bonneville Power Administration (BPA) energy purchases.
- Barring low hydro conditions or major mechanical failure, avoid purchasing Idaho's share of existing or legacy hydro energy, including the Clark Fork and Spokane River Hydro resources, and shares of the Mid-Columbia PUD generation under contract prior to 2019.

Avista's planned qualifying renewable energy is detailed in Table No. 6.1 below, which provides the estimated energy available to Idaho and Washington by the PT ratio for generation resources within the year under normal conditions. This includes median hydro conditions and the average historical generation from variable energy resources such as wind and solar.

The top section of Table No. 6.1 specifies the proportion of renewable energy allocated to Washington customers, represented as a percentage of Washington's retail load. This indicates sufficient estimated clean energy generation to meet the Company's proposed targets. The bottom portion of Table No. 6.1 includes Idaho's portion of renewable energy that's available for purchase at market prices to comply with CETA's interim targets. In total, 23,644,501 MWh are available over the four-year period, which equates to 97.3% of the retail load estimate for the same period. Given this estimate, barring low energy production or unexpected changes in the "use" rules, Avista already controls enough clean energy resources to meet the proposed targets.

Table No. 6.1: Renewable Energy | Available Qualifying Energy Resources

Clean Resources Allocated to Washington	(MWh)					(aMW)			
Facility	2026	2027	2028	2029	2026-2029	2026	2027	2028	2029
Clark Fork River	1,806,637	1,805,859	1,810,424	1,813,116	7,236,036	206	206	206	207
Spokane River	703,320	705,937	708,860	698,712	2,816,829	80	81	81	80
Mid-Columbia PUD Contracts	1,143,652	1,143,067	1,147,751	1,116,525	4,550,995	131	130	131	127
Columbia Basin Hydro	275,344	341,933	342,241	343,480	1,302,998	31	39	39	39
Kettle Falls	205,257	206,323	206,419	207,611	825,609	23	24	23	24
Palouse Wind	220,306	220,098	221,009	220,722	882,134	25	25	25	25
Rattlesnake Flat Wind	252,068	252,001	253,601	253,141	1,010,811	29	29	29	29
Clearwater Wind	247,305	247,239	247,823	248,357	990,725	28	28	28	28
Boulder Park Solar	352	352	352	353	1,409	0	0	0	0
Adams Neilson Solar	-	27,897	27,992	28,023	83,913	-	3	3	3
Boulder Park Solar II	-	905	1,582	1,587	4,074	-	0	0	0
Future Community Solar	-	-	-	909	909	-	-	-	0
Total WA Allocated Clean Resource	**4,854,242**	**4,951,610**	**4,968,054**	**4,932,537**	**19,706,443**	**554**	**565**	**566**	**563**
Percent of WA Retail Load	**81.6%**	**82.0%**	**81.4%**	**79.6%**	**81.1%**	**81.6%**	**82.0%**	**81.4%**	**79.6%**

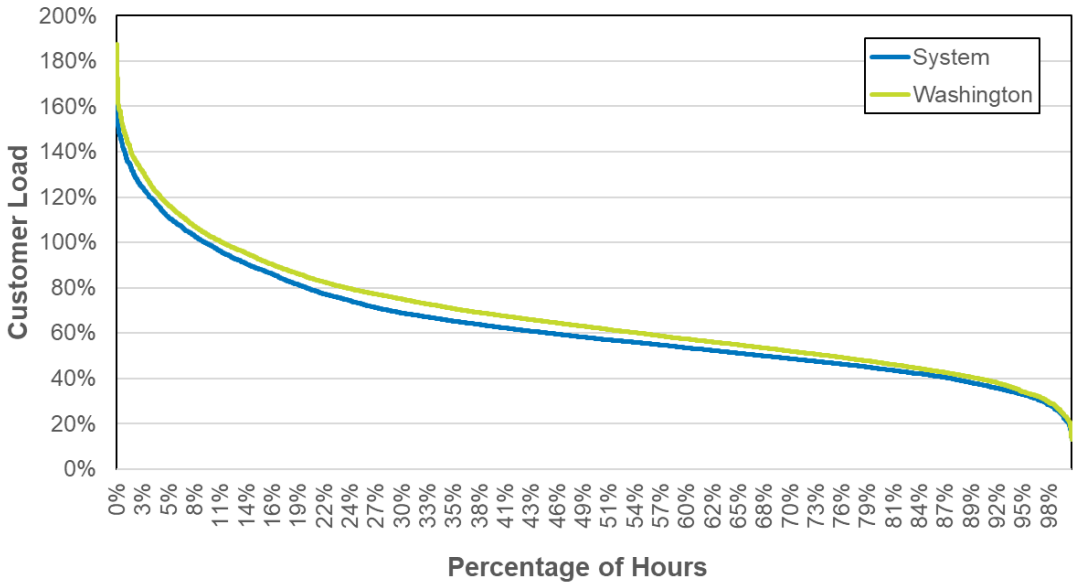
Clean Resources Allocated to Idaho, but Available for Purchase for Washington Primary Compliance	(MWh)					(aMW)			
Facility	2026	2027	2028	2029	2026-2029	2026	2027	2028	2029
Kettle Falls	107,166	107,807	107,574	107,057	429,604	12	12	12	12
Palouse Wind	115,023	115,005	115,178	113,817	459,023	13	13	13	13
Rattlesnake Flat Wind	131,607	131,674	132,163	130,535	525,979	15	15	15	15
Clearwater Wind	129,120	129,186	129,152	128,068	515,526	15	15	15	15
Chelan PUD	321,276	321,462	321,718	318,635	1,283,091	37	37	37	36
Columbia Basin Hydro	143,759	178,665	178,358	177,119	677,901	16	20	20	20
Boulder Park Solar	184	184	184	182	733	0	0	0	0
Adams Neilson Solar	-	14,577	14,588	14,451	43,615	-	2	2	2
Boulder Park Solar II	-	473	825	818	2,116	-	0	0	0
Future Community Solar	-	-	-	469	469	-	-	-	0
Total of ID Allocated Clean Resourc	**948,136**	**999,033**	**999,739**	**991,150**	**3,938,058**	**108**	**114**	**114**	**113**
Total Clean Energy Available	**5,802,378**	**5,950,643**	**5,967,793**	**5,923,687**	**23,644,501**	**662**	**679**	**679**	**676**
Percent of WA Retail Load	**97.5%**	**98.5%**	**97.7%**	**95.6%**	**97.3%**	**97.5%**	**98.5%**	**97.7%**	**95.6%**

Renewable Generation Compliance

Within this CEIP implementation period, Avista assumes all controlled and generated clean non-carbon emitting energy, regardless of production timeframe, meets CETA's clean energy standard and is available for compliance. The clean energy "use" rules regarding how the energy may comply with the standards of RCW 19.280 are still under consideration by the Commission. Due to the intermittent nature of renewable energy, renewable energy generation and the delivery of renewable energy to meet customer load is often misaligned. In 2024, Avista's system had control of 687 aMW, making clean energy generation production 61.5% of native load. To illustrate the hourly misalignment, Figure No. 6.2 below provides the percentage of renewable generation each hour compared to system load as a duration curve. In 9.2% of the hours (or 11.2% for Washington's

share), Avista's system had more renewable generation than its native load. The resolution of clean energy "use" rules will determine how this excess generation will be treated and inform how Avista should plan for meeting future compliance targets when renewable generation is greater than load. As Avista serves two states, it can buy RECs from Idaho to shift more clean energy to satisfy Washington clean energy requirements. This opportunity is shown in Figure No. 6.2 reflecting the higher percentage of clean energy for Washington as compared to the system. This figure also demonstrates the future challenges in meeting the 100% clean energy targets, as only 24% of the hours were met with 80% or more clean energy. To attain 100% clean energy delivery, Avista not only needs to increase the amount of clean energy available but would also need to increase the delivery of clean energy in approximately 91% of the hours as measured in 2024.

Figure No. 6.2: Renewable Energy | 2024 System & Washington Share of Load



Target Forecasted Distribution of Costs & Benefits

By January 1, 2030, utilities must ensure all electric retail sales to Washington customers are greenhouse gas neutral. CETA regulations use the term "retail load" as the targeted amount of energy to be greenhouse gas neutral. Retail load is defined as the annual megawatt hours delivered to customers net of the megawatt hours from eligible direct customer renewable energy purchases where the energy is bundled with RECs, such as Avista's Solar Select program.[52] Further, energy

[52] Avista's Solar Select program ends December 11, 2026, upon which the generation will be considered a system resource allocated by the PT ratio.

from generation under contract in Washington identified as PURPA[53] is also excluded. Examples of PURPA generation include purchased energy from the City of Spokane's Upriver Dam and Waste-to-Energy facilities.

Table No. 6.2 shows Avista's estimated retail load during the 2026-2029 implementation period, and the required renewable energy needed to meet the proposed targets. The table begins with Washington's share of the native load forecast. Once delivery losses are removed, the remaining energy is classified as expected retail sales. Retail sales reflect the energy directly consumed by retail customers. Retail sales volume is further reduced for demand response programs, PURPA generation, and the Solar Select program to determine Avista's "retail load." Over the four-year compliance window, Avista's clean energy target includes retiring 17,325,848 MWh of bundled RECs or 71.3% of its estimated retail load. If the estimated customer load forecast shown does not materialize, Avista will continue to meet the clean energy percentage targets shown in Table No. 6.2 for each calendar year.

Table No. 6.2: Renewable Energy | Annual Interim Targets by Retail Load

Item	(MWh)					(aMW)			
	2026	2027	2028	2029	2026-2029	2026	2027	2028	2029
Native Load (WA share)	6,457,711	6,506,402	6,576,773	6,672,118	26,213,005	737	743	749	762
T&D Losses	(277,164)	(279,215)	(281,682)	(284,127)	(1,122,188)	(32)	(32)	(32)	(32)
Retail Sales	**6,180,548**	**6,227,187**	**6,295,091**	**6,387,991**	**25,090,817**	**706**	**711**	**717**	**729**
Demand Response	(4,593)	(4,649)	(5,649)	(7,511)	(22,402)	(1)	(1)	(1)	(1)
WA PURPA	(182,049)	(182,049)	(182,644)	(182,049)	(728,790)	(21)	(21)	(21)	(21)
Solar Select	(42,474)	0	0	0	(42,474)	(5)	0	0	0
Retail Load	**5,951,432**	**6,040,490**	**6,106,797**	**6,198,431**	**24,297,150**	**679**	**690**	**695**	**708**
Clean Energy Target (%)	**66.0%**	**69.5%**	**73.0%**	**76.5%**	**71.3%**	**66.0%**	**69.5%**	**73.0%**	**76.5%**
Clean Energy Target	**3,927,945**	**4,198,141**	**4,457,962**	**4,741,800**	**17,325,848**	**448**	**479**	**508**	**541**

As listed in Table No. 6.3 below, it is anticipated that increasing the renewable energy targets through 2029 with the retirement of RECs will have an impact on all customers in terms of increasing energy costs with the benefit of reducing GHG. See the Incremental Cost section for additional information.

[53] PURPA stands for Public Utility Regulatory Policies Act.

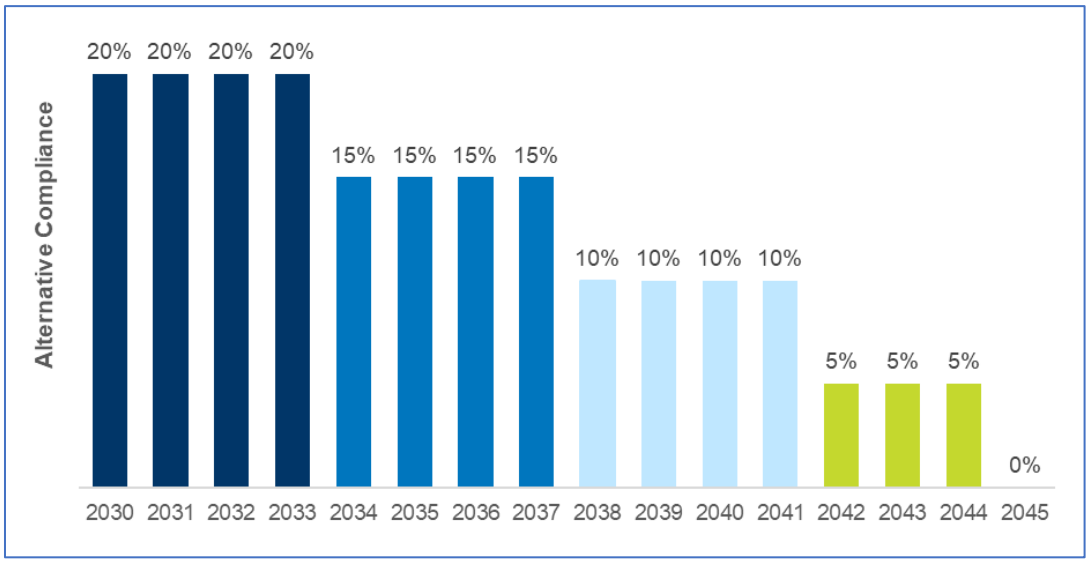
Table No. 6.3: Renewable Energy | Forecasted Costs & Benefits of Specific Targets

Target	Type	Energy	Non-Energy
2026: 66.0%	Cost	$10.1 million	N/A
	Benefit	CBI: GHG Emissions	N/A
2027: 69.5%	Cost	$11.6 million	N/A
	Benefit	CBI: GHG Emissions	N/A
2028: 73.0%	Cost	$12.0 million	N/A
	Benefit	CBI: GHG Emissions	N/A
2029: 76.5%	Cost	$13.0 million	N/A
	Benefit	CBI: GHG Emissions	N/A

Renewable Energy | 2030 – 2045 Targets

To meet the 2045 standard (WAC 480-100-610(3)), Avista's interim targets will be determined in a future CEIP after the final "use" rules are approved for compliance. However, preliminary targets limiting the amount of alternative compliance used between 2030 and 2045 are shown in Figure No. 6.3 below. If Avista needs to use alternative compliance from 2030 to 2033, the Company will limit alternative compliance to 20% or less of its four-year net retail load, in accordance with CETA. Avista proposes to continue to reduce its reliance on alternative compliance by lowering its projected alternative compliance allowance by 5% in each four-year period until the use of 100% clean energy is required in 2045. This proposal may be revisited once "use" rules are established for the 2030 to 2044 standard.

Figure No. 6.3: Renewable Energy | 2030 to 2045 Alternative Compliance Limits



Beginning in 2030, Avista's Washington electric retail sales must be greenhouse gas neutral, with 80% being met through delivering renewable or non-emitting energy, and up to 20% may be met with alternative compliance to offset the GHG emissions.[54] There are four main types of alternative compliance:

- Compliance payments
- Unbundled RECs
- Investments in transformation projects
- Using energy from a municipal solid waste facility[55]

To make progress toward the 2045 target, Avista assumes the amount of alternative compliance allowed will decrease each compliance period with 20% allowed for the 2030-2033 period and 15% for the 2034-2037 period. Avista plans to use unbundled RECs, or the excess clean energy it controls, to meet the 2030 standard. Avista has access to three types of unbundled RECs:

- RECs from excess energy beyond what will count toward primary compliance under the final clean energy "use" rules,
- Renewable energy Avista owns, or controls allocated to Idaho customers, and
- RECs purchased on the open market.

Avista does not anticipate using the Idaho share of its hydro resources acquired prior to 2019 for primary compliance. Barring any Idaho clean energy requirements in the future, these resources' RECs are available for purchase to satisfy Avista's alternative compliance or other in-state utility's compliance needs.

Transformation projects could be used for alternative compliance if the project was cost-effective as compared to the price of unbundled RECs. To date, the transformation project requirements and accounting of the benefits toward alternative compliance are unknown. The last alternative compliance option is energy from a municipal solid waste facility, but this option has challenges. Under a PURPA agreement through 2037, Avista currently purchases energy from a municipal

[54] RCW 19.405.040 (1)(b).

[55] Using electricity from an energy recovery facility using municipal solid waste as the principal fuel source, where the facility was constructed prior to 1992, and the facility is operated in compliance with federal laws and regulations and meets state air quality standards. An electric utility may only use electricity from such an energy recovery facility if the department of ecology determine that electricity generation at the facility provides a net reduction in greenhouse gas emissions compared to any other available waste management best practice. The determination must be based on a life-cycle analysis comparing the energy recovery facility to other technologies available in the jurisdiction in which the facility is located for the waste management best practices of waste reduction, recycling, composting, and minimizing the use of a landfill.

solid waste facility. As a PURPA resource, it is deducted from retail load and excludes it from being used for alternative compliance.

Renewable Energy | Specific Actions

Specific Actions | Benefits, Burden & Risk Assessment

Avista's compliance with clean energy standards has a monetary impact on its customers. Based on previous resource acquisitions, Avista's current control of renewable resources helps mitigate financial impacts on customers to meet CETA obligations. Based on those previous acquisitions, the only action needed to comply with the clean energy interim targets is to retire the associated RECs from its generation resources. The retirement of RECs ensures that the environmental attributes of the energy are not sold or claimed by other parties.

As Avista manages these resources, the related costs and benefits of this action illustrate the scenario without clean energy targets. If CETA's renewable targets did not exist, RECs available after meeting EIA requirements would be available to sell. Once sold, Avista would lose its right to claim lower GHG emissions, or its use of clean energy to serve load, but would generate significant revenue benefiting customers by lowering electric rates. Table No. 6.4 below estimates the amount of potential revenue lost through REC retirements in compliance with the CEIP targets.

CETA compliance results in higher customer rates due to the inability to mitigate the costs of Avista's renewable portfolio through REC sales. Past resource acquisitions may have led to higher, long-term customer costs due to compliance with CETA legislation. These resource decisions will have a lasting customer bill impact but are absent from the CETA cost analysis. While these choices contribute to increased customer costs, they also provide customer benefits in controlling resources with a lower GHG emission intensity.

Table No. 6.4: Renewable Energy | Specific Actions Detail

Action	Location	Timing	Estimated Cost (millions)	Benefit Population	Measurement
Retire 2026 RECs	N/A	Annually	$10.1	All Customers	N/A
Retire 2027 RECs	N/A	Annually	$11.6	All Customers	N/A
Retire 2028 RECs	N/A	Annually	$12.0	All Customers	N/A

Retire 2029 RECs	N/A	Annually	$13.0	All Customers	N/A

Beyond reducing GHG emissions, which provides indirect benefit to all customers, Avista's clean energy situation (absent energy efficiency and demand response actions), does not provide an additional benefit to Named Communities. However, higher electricity costs lead to an increased energy burden. To assist with this burden and in support of CETA regulation, Avista offers income-based financial bill assistance[56] in compliance with Washington's 2021 Senate Bill 5295.[57] In addition, Avista proposes additional actions to assist Named Community customers. These actions include, 1) developing two SSHB1814 solar/energy storage facilities and 2) maintaining the NCIF.

Renewable Energy | Additional Actions

Additional Actions | Benefits, Burden & Risk Assessment

Compliance with Avista's 2025 CEIP interim renewable energy targets will be satisfied through the annual retirement of Avista-owned and contracted renewable resource RECs. However, the Company proposes additional actions in support of progress toward its 2030 carbon-neutral and 2045 carbon-free standards. As listed in Figure No. 6.4 below, the Company issued an All-Source RFP in May 2025 for up to 415 MW of additional winter capacity, up to 425 MW summer qualifying capacity, and up to 200 aMW of annual clean energy. It also proposes the installation of two solar and BESS projects to benefit low-income customers dependent upon Washington state utility tax-incentive funding under SSHB 1814. These actions are not related to satisfying the 2026 to 2029 clean energy requirements, but are required to either serve peak day requirements, identify below wholesale electric market priced renewable energy (for future compliance periods) and identify resources to serve potential new large customer loads.

[56] https://www.myavista.com/your-account/power-of-compassion/washington-assistance/my-energy-discount
[57] https://lawfilesext.leg.wa.gov/biennium/2021-22/Pdf/Bills/Senate%20Bills/5295-S.E.pdf?q=20250625080433

Figure No. 6.4: Renewable Energy | Additional Actions Summary

Additional Actions

Issue 2025 All-Source RFP:
Winter qualifying capacity 105 – 415 MW
Summer qualifying capacity 135 – 425 MW
Annual clean energy 0 – 200 aMW

Pursue Washington State's SSHB1814:
Community Solar Program & Public Utility Tax Incentive:
Project 1: Up to 1.6 MW solar & 1.6 MW BESS
Project 2: TBD | Up to 1.6 MW solar & 1.6 MW BESS

Table No. 6.5 below provides the expected timing, costs, benefiting population, and measurement standard for the Company's additional actions. Although RFP resource selection outcomes and cost impact will be unknown until the fourth quarter of 2025, all customers will benefit from increased resource capacity. The Company's proposed distributed solar and BESS projects have a unique funding mechanism. Under SSHB1814, and upon approval from Washington State University's (WSU) program administrator, authorized administrators, including utilities, nonprofit organizations, and tribal or local housing authorities, can seek project funding from the utility up to a law-determined annual amount. Upon energization and WSU certification of the project, the utility can deduct the project costs from that fiscal year's Washington public utility tax obligation. All customers will pay for the solar and storage value per Tariff Schedule 62 Qualifying Facilities Avoided Costs for solar plus a four-hour battery.[58] However, as required under SSHB1814, the benefits (bill assistance) from this project must be directed toward low-income customers for 10 years. Although these projects are subject to WSU approval and available funding, it is anticipated they will support the following CBIs: Participation in Company Programs, Energy Burden, Investments in Named Communities, and Disconnections for Non-Payment.

[58] Effective January 1, 2025: https://www.myavista.com/about-us/our-rates-and-tariffs/washington-electric.

Table No. 6.5: Renewable Energy | Additional Actions Detail

Action	Location	Timing	Estimated Cost	Benefit Population	CBI Measurement
Issue All-Source RFP	N/A	Contract by 2026 Online by 2030	TBD	All Customers	Energy Availability
SSHB1814 Project 1: 1.6 Solar & 1.6 BESS	Boulder Park, Spokane Valley, WA in a Vulnerable Population Census Tract	Online by Q4 2027	~ $5M	Low Income Customers	Participation in Company Programs Energy Burden Investments in Named Communities Disconnections for Nonpayment
SSHB1814 Project 2: Solar & BESS	TBD	Online by Q4 2029	TBD	Low Income Customers	Participation in Company Programs Energy Burden Investments in Named Communities Disconnections for Nonpayment

All-Source Request for Proposal

Avista's 2025 All-Source RFP seeks to evaluate all resource options to meet specific capacity deficits identified in its 2025 IRP. The needs identified in the RFP reflect updated load and resource needs since the 2025 IRP's publication. The RFP includes requirements to satisfy system peak load, while other capacity resources such as natural gas, energy storage, or demand response aggregation could be considered for meeting either the Washington or Idaho portion of system

load. With final acquisitions subject to change due to load and resource availability, the 2025 All-Source RFP seeks up to 415 MW of qualifying winter capacity, up to 425 MW of summer capacity, and up to 200 aMW of renewable clean energy. Table No. 6.6 below provides the 2025 All-Source RFP schedule.

Table No. 6.6: Renewable Energy | 2025 All-Source RFP Schedule

Action	Schedule
Issue All-Source RFP	May 30, 2025
Bidders Conference	June 6, 2025
Bidder Responses Due	June 30, 2025
Post Bid Summary	July 30, 2025
Short-listed Bids - Notification	September 1, 2025
Short-listed Bids - Full Proposals	October 6, 2025
Short-Listed Bids - Price Refresh	November 10, 2025
Final Selections	Late November 2025

Avista's interest in new clean energy resources, such as those identified in the 2025 IRP and those identified in this CEIP's Reasonably Available Portfolio, are speculative depending on actual resource pricing as compared to other alternatives to meet customer peak load requirements. Avista's main resource requirements are intended to satisfy summer and winter capacity needs for peak load events as the Company has sufficient non-carbon emitting resources to meet the CETA targets during the 2026-2029 implementation period. Although renewable resources may contribute to these needs, the driver of the RFP acquisition process is to identify the lowest cost resource portfolio to meet the capacity needs during peak load events, which may or may not include new renewable resources.

As resource acquisitions made through the All-Source RFP are intended to meet peak load requirements, all customers will benefit at minimal levels. If Avista is short resources during extreme peak load events (and is unable to secure generation within the region), some or all customers are at risk of losing power during either extreme cold or heat due to a lack of resource adequacy. Customers in Named Communities could be at greater risk as they may not have the ability to adapt to outages. Avista expects resource acquisitions will have a rate impact, however, Avista is unable to estimate this rate impact until the final resources are under contract. Furthermore, CETA rules are unclear about what Company actions should be described and

accounted for in the CEIP related to resource adequacy actions that do not lead to clean energy generation.

Potential New Large Load

Avista and other utilities across the country, are receiving requests to interconnect new large loads, specifically to serve data centers. These loads typically range between 200 and 500 MW, of which Avista has received over 3,000 MW of preliminary requests. Avista's all-time peak load is 1,981 MW.[59] Due to the size of these potential loads compared to existing loads (which developed over 136 years), any potential growth of this size will have significant impacts on the power supply, the transmission system, and ultimately, retail rates. Avista does not include speculative large loads within its load forecast. Instead, the load is included in the forecast once an agreement has been signed. Any large load agreement would include a power supply arrangement either by the load bringing its own resource or resources acquired by the utility. At this time, Avista has not finalized any large load or subsequent power supply agreements. Avista's 2025 IRP modeled impacts of a new 200 MW large load customer, and the results indicated an increased need in future resources for both capacity and clean energy. To support this possibility, the RFP provides pricing and resource discovery in the event an additional large load within Avista's Washington state service territory materializes. If a large load agreement were to be signed in the next year, resource submissions from the 2025 RFP process, if available at that time, would be considered. If the 2025 RFP submitted resources were not available or an agreement were reached after 2026, it's anticipated that Avista may need to issue another All-Source RFP. Depending upon the size of new loads, additional clean energy may or may not be needed to satisfy the proposed renewable energy targets in this CEIP period. Although, a new large load of any size will increase the long-term need for clean energy.

Avista is not including an additional utility-scale renewable resource action related to new large loads, as 1) it does not require additional energy to meet current known clean energy requirements for existing load; 2) it is unknown if acquiring clean energy ahead of the need is economic; and 3) it is uncertain if renewable energy will be the least cost resource to assist in meeting peak load requirements. Due to changes to the PTC/ITC, the likelihood that renewable energy will be economic ahead of the utility need is lower. However, Avista intends to meet the annual renewable

[59] This load occurred on January 13, 2024, and is adjusted for curtailed load. Actual delivered load was 1,869 MW.

energy percentages if a new large load materializes. If Avista is unable to meet this requirement, it will either provide an update in the 2027 Biennial CEIP or notify the Commission with a subsequent filing.

2021 CEIP Condition 6

In the 2021 CEIP, Avista agreed to the following condition:

> *"In its 2023 Biennial CEIP Update and in future CEIPs, Avista will include* ***quantitative and qualitative risk analysis, if risk is used to justify deviating from the lowest reasonable cost*** *solution that complies with CETA."*

As described above, Avista is planning on utilizing existing renewable energy and RECs to comply with its proposed targets and is not proposing to acquire additional resources to reduce portfolio risk. Avista finds retiring RECs from existing resources the lowest cost compliance mechanism. However, the 2025 All-Source RFP may lead to the acquisition(s) of renewable resources exceeding the clean energy requirements, if the resource is either cost-effective compared to the energy market or it helps meet the capacity needed for system peak load. At this time, Avista anticipates acquiring resources based on the lowest reasonable cost. Please see the 2021 CEIP & 2023 Biennial Conditions section, as Avista proposes the removal of Condition 6 for future CEIPs as this risk is undefined.

SSHB1814 Community Solar & Utility Tax Incentive

Solar & BESS Project 1

Avista's 2025 Electric IRP identified a cost-neutral opportunity for additional solar generation[60] utilizing public utility tax incentives under Washington SSHB 1814[61] and administered through WSU's Community Solar Expansion Program.[62] After conversations with WSU's program administrator supporting Avista's plan to pursue projects at economy of scale to maximize customer benefit, the 2025 CEIP proposes larger solar installations (as compared to the IRP) and the addition of a BESS. The Company proposes pursuing two projects within this four-year implementation period, although actual scope, schedule, budget, and fulfillment of either project is dependent on actual costs, Avista's interconnection process timing, SSHB1814 funding, and

[60] The 2025 IRP identified cost-neutral solar only projects at approximately 500 kW in 2027, 600 kW in 2028 and 2029, and 700 kW in 2029 with construction costs recouped under the SSHB1814 public utility tax incentive and some operating costs cover by the NCIF.

[61] https://lawfilesext.leg.wa.gov/biennium/2021-22/Pdf/Bills/House%20Passed%20Legislature/1814-S2.PL.pdf?q=20220701103859.

[62] https://www.energy.wsu.edu/RenewableEnergy/CommunitySolarProgram.aspx.

WSU funding allocation, while remaining cost-neutral to customers.[63] Absent securing this funding to deliver cost-neutral solar and BESS installations for low-income customers, Avista will **not** pursue these projects.

Avista's first project is proposed at its existing Boulder Park solar site in Spokane Valley, Washington. The project is estimated to be a 1.6 MW (AC) solar array and a 1.6 MW (6.6 MWh) BESS[64] and is located within an Avista-designated Vulnerable Population census tract. Based on the National Renewable Energy Laboratory's (NREL) solar and battery estimating tool, Avista's initial project cost estimate is $5.1 million for eight 199 kW fixed solar arrays, a 1.6 MW battery, a single inverter, and internal/external administration costs.[65] To estimate solar annual production, Avista used NREL's estimates in conjunction with actual solar production from Avista-owned solar sites and the Company's solar PPAs. It is estimated that each 199-kW array will produce 326 MWh annually for a combined annual production estimate of 2,613 MWh. Assuming the project is energized in the first quarter of 2029 and using Avista's Schedule 62 Qualifying Facilities Avoided Costs for solar plus a four-hour battery,[66] the Company will value the energy and capacity at $0.082 per kWh.[67] The project may anticipate up to $214,000 gross annual energy benefits. After the project's annual operations and maintenance costs, it is estimated that $184,000 will be available to distribute to low-income customers to address their energy burden and prevent disconnections for nonpayment.[68] The actual per kWh price will be determined when the project energizes per the applicable Schedule 62 rate.

Avista has a long-standing commitment to provide bill assistance to customers in financial need through the voluntary donation-based Project Share program and the required, customer-funded LIRAP. In partnership with CBOs, Avista offers a variety of financial programs including Emergency Share, MED, Arrearage Management, and Arrearage Forgiveness. The additional net

[63] WSU's Community Solar Expansion Program administers SSHB 1814's public utility tax incentive for applicants in Avista's service territory which is capped at $7.75 million per fiscal year (July 1 – June 30).
[64] Actual solar array and BESS size dependent on actual RFP costs and dependent on SSBH 1814/WSU funding.
[65] NREL estimates did not reflect current material costs, supply chain constraints and national tariff impacts.
[66] See Schedule 62 Tariff Sheet 62E, effective January 1, 2025: https://www.myavista.com/about-us/our-rates-and-tariffs/washington-electric.
[67] Per the January 1, 2025, effective Schedule 62 rate, the 2030 value is $0.085 per kWh.
[68] If the project energizes in 2028, the Company will value the energy and capacity at $0.084 per kWh (or the applicable Schedule 62 rate) and may anticipate up to $220,000 in gross annual energy benefits.

benefit from this solar and BESS project will be allocated to address customers' energy burden and those who may be at risk for electric service disconnection. The actual program design and implementation will be shaped collaboratively with Avista's EAAG and EAG, with an update provided in the Company's 2027 Biennial CEIP.

In early April 2025, Avista received written support from WSU's Community Solar Expansion Program administrator for this project and associated low-income customer benefits.[69] Avista issued an RFP for design and build of the project on July 2, 2025, with responses due September 8, 2025. Four companies responded with bids ranging between $8.3 to 11.2 million. As these costs are not within range of the initial estimate in WSU's written approval, Avista will review and discuss with WSU and consider its option. An update will be provided in the Company's 2027 Biennial CEIP.

Solar & BESS Project 2

Pursuing a second solar and BESS project within the implementation period is dependent on the successful delivery of the first project, and subject to the same scope, schedule and funding constraints as described for the first project, while remaining cost neutral to customers. An update on a possible second project will be provided in Avista's 2027 Biennial CEIP. For incremental cost estimates in Chapter 10, the Company assumes the capacity of the second project will be similar to the first project as described.

[69] WSU's April 2022 written approval does not qualify as project "pre-certification" as required by the Community Solar Expansion Program under SSHB 1814.

7. Energy Efficiency | Specific Targets & Specific Actions

Overview

Avista has a long-standing history of providing energy efficiency programs for customers to reduce energy usage, live more comfortably, operate business more efficiently and spend less on energy bills. Every two years, Avista files a Biennial Conservation Plan (BCP), identifying cost-effective measures or programs and forecasting an anticipated two-year MWh savings goal.[70] These plans are informed by a CPA and are consistent with Avista's IRP. Under CETA, the Company is required to propose targets that encompass all other energy efficiency and conservation targets and goals required by the Commission.

As illustrated in Figure No. 7.1 below, Avista proposes 147,344 MWh of energy efficiency savings by 2029, with savings target achievements over two distinct two-year periods. The 2026-2027 target of 73,672 MWh is informed by the 2025 CPA and planned for achievement under the draft 2026-2027 BCP, which is included as Appendix G within this CEIP and will be filed with the Commission by November 1, 2025.[71] The actual results will then be reported in the 2026-2027 Biennial Conservation Report (BCR), to be filed by June 1, 2028.

Figure No. 7.1: Energy Efficiency | Specific Targets & Specific Actions Summary

Specific Targets	Specific Actions
147,344 MWh savings by 2029: 73,672 MWh for 2026-2027* 73,672 MWh for 2028-2029**	Continue 2025 CPA-identified measures/programs Pursue 2027 CPA-identified measures/programs
*Based on the 2025 CPA & 2026-27 BCP **Subject to the 2027 CPA & 2028-29 BCP	

For purposes of the four-year CEIP planning process, the Company's proposed 2028-2029 target of 73,672 MWh utilizes the 2026-2027 target as a proxy. The actual target for this period, which will be determined during the 2027 IRP cycle and based on the 2027 CPA, will be established

[70] Targets established in accordance with RCW 19.285.040 and WAC 480-109-100.
[71] Avista's 2026/2027 BCP, as provided in Appendix G, was sent to its advisory groups for review on October 1, 2025 and is subject to modifications based on feedback received and overall documentation review processes.

within the 2028-2029 BCP, to be filed by November 1, 2027. The actual results of the second two-year period will be reported within the 2028-2029 BCR (June 2030). Avista supports the CEIP targets with specific actions or cost-effective programs[72] identified through the 2025 CPA and implemented in the 2026-2027 BCP, with additional specific actions or cost-effective programs for the Company to pursue to be identified by the 2027 CPA and implemented under the 2028-2029 BCP.

Energy Efficiency | Specific Targets

Target Assumptions & Methodologies

As part of the Company's 2025 IRP process, Avista contracted with Applied Energy Group (AEG) to conduct the 2025 CPA for cost-effective energy efficiency planning. This assessment identifies the 10-year potential for energy efficiency programs and savings and provides data on resources specific to Avista's service territory for use in the resource selection process and in accordance with the EIA energy efficiency goals. The 2025 CPA considers the impacts of existing programs, the influence of known building codes and standards, technology developments and innovations, changes to economic influences, and energy prices. The result of this study was the identification of 368 GWh of potential cost-effective conservation over the 10-year period, inclusive of low-income, residential, commercial, and industrial sectors.

Avista sets its conservation targets consistent with RCW 19.285.040, requiring the biennial target to be no lower than the utility's pro-rata share of the two-year period of its cost-effective conservation potential for the subsequent 10-year period. For 2026-2027, the result of this method is a pro-rata conservation amount of 73,672 MWh for the biennium. Avista further adjusts this amount to include an additional 5% commitment related to use of its decoupling mechanism for electric rates[73] and any identified distribution efficiency that will be implemented in the biennium.

In accordance with the Company's 2024-2025 BCP conditions,[74] Avista consulted with its EEAG in June 2025 to identify achievable conservation potential for the 10-year period of 2026-2035 and set annual and biennial targets for the 2026-2027 biennium. In August of 2025, Avista consulted with its EEAG again, to further refine the ten-year conservation potential, and the four- and two-

[72] With the exception of low-income programs, which are not often cost-effective.
[73] See Docket UE-140188, Order 05.
[74] See Docket UE-230897, Order 01 Attachment A, Condition 3.

year savings targets. Draft program details and budgets were also provided. A draft of the resulting 2026-2027 BCP is included as Appendix G to this CEIP, and final details and budgets will be included in the finalized BCP, to be filed with the Commission by November 1, 2025. Planning for the 2028-2029 biennium and subsequent targets will begin in late 2026 as the CPA for the 2027 IRP is established. Those targets will be discussed with the EEAG throughout 2027, culminating in the 2028-2029 BCP to be filed by November 1, 2027.

Target Forecasted Distribution of Costs & Benefits

Avista's electric energy-efficiency programs are funded by all Washington retail electric customers. As listed in Table No. 7.1 below, the Company estimates $52 million will need to be collected from customers to fund the energy efficiency program incentives and administration required to meet the energy savings goal of 73,672 MWh for the 2026-2027 biennium. Through the delivery of energy efficiency programs, all customers receive the benefit of conserving energy or avoided use. In turn, this decreased usage allows the Company to avoid or delay purchasing or building additional generation to serve electric load. Although cost-effectiveness tests required by the EIA already incorporate the associated benefits and burdens of any given energy efficiency measure, as well as the ongoing benefit of savings persistence over the life of a measure; Avista provides further benefits within the Specific Actions | Benefit, Burdens & Risk Assessment section below.

Table No. 7.1: Energy Efficiency | Forecasted Costs & Benefits of Specific Targets

Target	Estimated Cost (millions)	Benefit Population	Benefit Type	Benefit Measurement
2026-2027: 73,672 MWh	$52 million[75]	All Customers	Energy	CBI: Participation in Company Programs
				CBI: Investment in Named Communities CBI: Energy Burden
			Non-Energy	NEI: $/kWh per applicable measure
2028-2029:	$53.5 million[76]	All Customers	Energy	CBI: Participation in Company Programs

[75] See Docket UE-250417 for Avista's May 30, 2025, electric Tariff Schedule 91 filing.
[76] Estimated based on the 2026-2027 forecast with a 3% inflation adder; actuals will depend on customer throughput and will be filed in a future Tariff Schedule 91 adjustment.

73,672 MWh				CBI: Investment in Named Communities
				CBI: Energy Burden
			Non-Energy	NEI: $/kWh per applicable measure

While only customers who participate in energy efficiency programs receive the additional benefit of financial incentives or direct energy savings, the benefits of participation last for the life of the energy efficiency measure, which, in some cases, can have a duration of 50 or more years. In addition, qualified low-income customers[77] receive direct energy savings and an increased financial benefit when participating in energy efficiency programs, as the low-income weatherization program is fully subsidized. For the purposes of the CEIP, energy efficiency benefits will be measured by three of the Company's CBIs, including Participation in Company Programs, Investment in Named Communities, and Energy Burden. Where applicable, Avista will also measure non-energy impacts (NEI) through an investment per kilowatt calculation.

Table No. 7.1 above provides a broad view of the anticipated distribution of energy and non-energy costs and benefits. A detailed illustration of this forecasted distribution can be found within Avista's 2026 Washington Electric Energy Efficiency Annual Conservation Plan (ACP), which is provided as a part of the draft 2026-2027 BCP (Appendix G) to this CEIP. The ACP details the forecasted costs and benefits, including both energy and non-energy costs, for each energy efficiency program and sector. For the purposes of 4-year planning within the CEIP, the 2026 program year estimates will be filed with the BCP on November 1, 2025. All other program year estimates are proxied to equal the 2026 program year forecasts until they are updated in the respective annual conservation plans, filed annually on November 1.

Energy Efficiency | Specific Actions

Overview

All of Avista's energy efficiency programs help to support the Company's two specific energy efficiency actions of continuing 2025 CPA-identified measures and programs and pursuing any 2027 CPA-identified measures and programs. Within these specific actions, however, a multitude of activities occur at the program level to support the achievement of Avista's targets. Specific

[77] Not all low-income customers are in a Named Community designation, nor are all Named Community designations considered low income.

program savings projections are based on the results of the 2025 CPA and the upcoming 2026-2027 BCP. Table No. 7.2 below provides a further breakdown regarding the specific program offerings (actions) benefiting customers (residential, commercial, and industrial), as well as programs that specifically benefit Named Communities (residential only).

For ease of reference, each energy efficiency program has been consolidated into the appropriate grouping based on a common CBI or benefit population. Geographic location and proposed timing of each activity have been omitted from this table, as all actions listed below are ongoing for the foreseeable future (2026-2027, and assumed into 2028-2029, to be updated with the next cycle of biennial planning) and are applicable to the entire Washington electric service territory. See Avista's 2026-2027 BCP (Appendix G) for the 2026 ACP for a detailed breakdown of anticipated costs by breakdown.

Table No. 7.2: Energy Efficiency | Specific Actions Detail

Action	Benefit Population	CBI Measurement
Residential Rebate Programs	Residential Customers	Participation in Company Programs
Residential Midstream		
Home Energy Audit		
Home Energy Reports		
Commercial Midstream	Commercial Customers	
Commercial Site-Specific Program*		
Commercial Prescriptive Lighting*		
Commercial Prescriptive Non-Lighting*		
Business Partner Program	Small Business Customers	
Small Business Direct Install Program		
Building Operator Certification Program	Business Customers	Participation in Company Programs
		Investments in Named Communities
Low Income Weatherization Programs	Income Qualified Customers	Participation in Company Programs
		Investments in Named Communities
		Energy Burden

Home Insulation Program	Residential Customers & Named Communities	Participation in Company Programs
		Investments in Named Communities
		Energy Burden

*Industrial customers are also eligible.

As listed in Table No. 7.3 below, the Company plans to continue 11 cost-effective programs that benefit all Avista electric customers in Washington, and two programs that primarily benefit Named Communities. Both programs supporting Named Communities are exempt from cost-effectiveness requirements per the Company's approved electric energy efficiency tariff Schedule 90. For more information about non-cost-effective energy efficiency programs for Named Communities that are subsidized by the NCIF, see the Company Initiatives | Additional Goals & Actions section. Identification and implementation of additional programs will be considered throughout the four-year CEIP period and as a result of the 2027 CPA and 2028-2029 BCP. Information regarding each of these 13 programs, as they are all ongoing within Avista's existing energy efficiency portfolio, please refer to Avista's 2024 Annual Conservation Report (ACR).[78] Within the ACR, the Company also provides a current assessment of benefits for customers in Named Communities as a percentage of program energy efficiency savings as well as a percentage of program energy incentives distributed.

Table No. 7.3: Energy Efficiency Program Summary

Benefit Population	Program Status	Program Count
All Customers	Existing/Ongoing	11
Named Communities	Existing/Ongoing	2

Avista has a portfolio of well-established energy efficiency programs offered in compliance with the EIA, as well as programs that have been added to the portfolio in recent years as a result of CETA or the continuous adaptive management of Company programs. Programs are reviewed under Avista's Evaluation, Monitoring, and Verification (EM&V) framework. Adjustments to measures or offerings occur annually, with input from the Company's EEAG.

[78] Docket No. UE-230897.

Specific Actions | Benefit, Burdens & Risk Assessment

All Washington electric customers financially fund Avista's electric energy efficiency programs. The burden of funding efficiency programs is therefore distributed across all Avista customers on an electric rate schedule in Washington. Customers who participate in energy efficiency programs receive a financial incentive to offset the personal costs of energy efficiency upgrades; they also receive the benefit of annual energy savings over the life of the installed efficiency measure. Some measures, such as lighting, have a measure-life of 5-10 years; while other measures, such as windows or insulation, have measure-lives of 50 or more years. In addition to customers who benefit from actual participation, all customers and the Company benefit from less resources needed to serve electric load. When energy efficiency measures are adopted, the Company can avoid purchasing or building additional generation to serve electric load. Further, the very nature of Washington state's required cost-effectiveness test ensures customers benefit with the intent to alleviate energy burden. In accordance with RCW 19.285.040 and the Commission's current practices and policies,[79] Avista establishes the cost-effectiveness of its energy efficiency programs in Washington by using a modified Total Resource Cost (TRC) test. The modified TRC accounts for all benefits and burdens of energy efficiency programs by considering costs and benefits of energy efficiency programs for customers, for the utility, and for society into its calculation; this includes all quantifiable NEIs, a risk adder, and a 10% conservation benefit adder. As Avista's energy efficiency portfolio must pass this test by maintaining a ratio of at least 1.0,[80] a passing TRC, in part, is proof of holistic portfolio benefits. In 2024, Avista's electric energy efficiency portfolio had a TRC ratio of 1.44, indicating that its programs are highly beneficial for customers and the Company.

Mitigating Named Community Participation Risks

In an effort to assess the distribution of current benefits by location and population in accordance with WAC 480-110-640(6)(b), the Company offers the following heat maps of participation in energy efficiency programs by census tract for program year 2024. Figure No. 7.2 below shows energy efficiency projects per 1,000 residents in Named Communities for Avista's Washington electric service territory, while Figure No. 7.3 shows Spokane County.

[79] See RCW 19.285.040(1)(f) and Condition 8 of the Avista's most recently approved BCP, 2024-2025, Docket UE-230897, Attachment A.
[80] The benefits of the energy efficiency portfolio outweigh the costs or burdens of acquiring a different resource.

Figure No. 7.2: Washington State | Energy Efficiency Programs in Named Communities

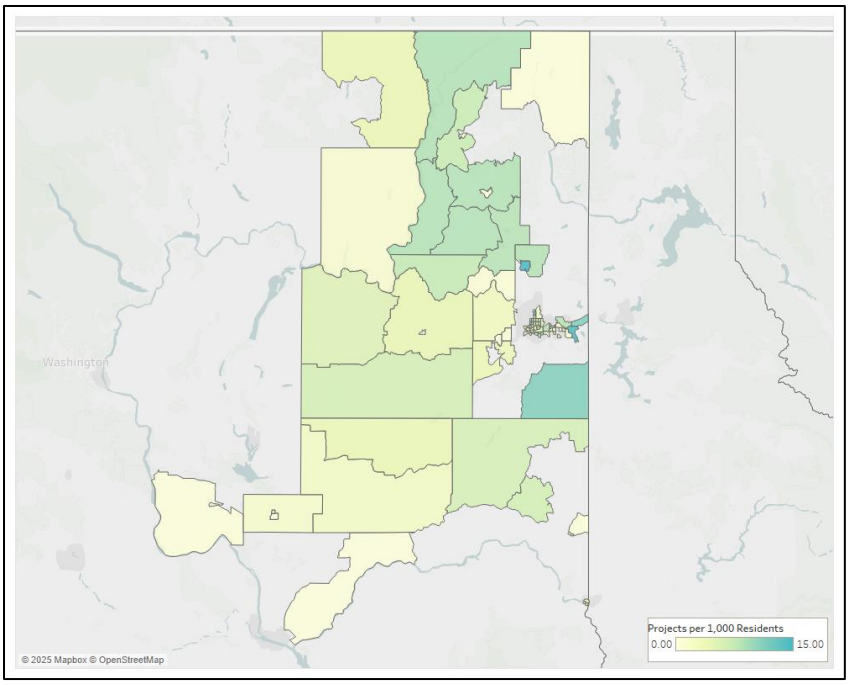
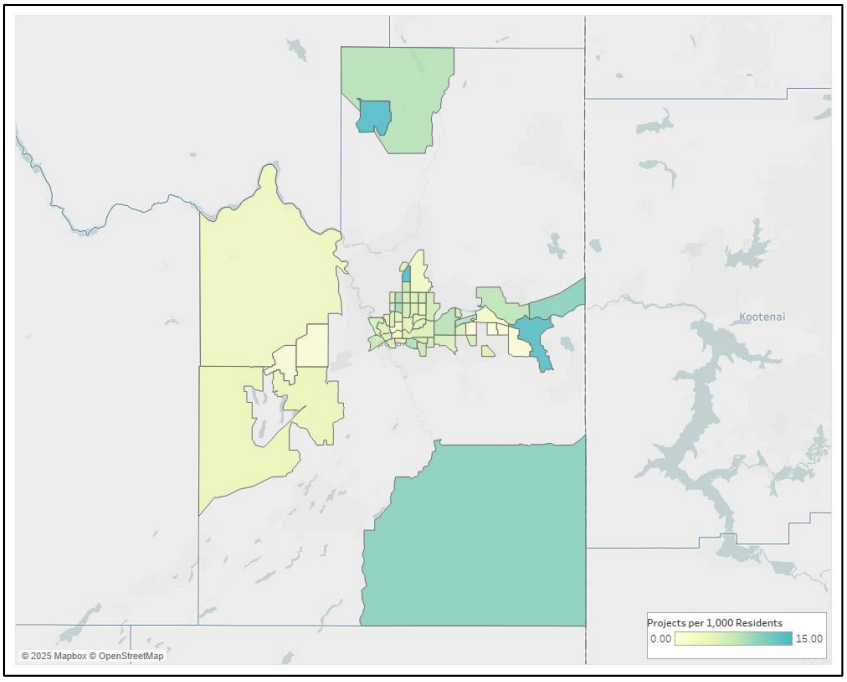


Figure No. 7.3: Spokane County | Energy Efficiency Programs in Named Communities



As illustrated in the maps above, the lighter shaded census tracts have had fewer projects per 1,000 residents than the darker shaded census tracts and are designated as Named Communities. In terms of energy efficiency, the primary risk to Named Communities is inequitable participation. To further the equitable distribution of benefits, and to mitigate the risk of inequitable participation in energy efficiency programs, Avista will identify potential community partners and prioritize energy efficiency outreach in these target outreach census tracts during the 2026-2029 CEIP implementation period. In addition, Avista will prioritize energy efficiency efforts with the Tribes and Spanish-speaking communities.

Tribal Outreach

Of the 86 census tracts within Avista's residential electric service territory identified as Named Communities, 13 census tracts intersect with Tribal lands and are designated as Highly Impacted Communities. Avista is initiating a tribal outreach initiative for energy efficiency programs within this planning period and will work with the Spokane and Colville Tribes to continue outreach efforts in Wellpinit, WA and Inchelium, WA, respectively, to ensure that Tribal members have awareness of all applicable energy efficiency programs. The Company will direct its third-party implementor for the Small Business Direct Install Lighting Program, as well as the newly launched Home Insulation Program, to prioritize outreach efforts for those programs in these two cities. The Company will track outreach efforts to these new areas and will also continue to partner with the Spokane Indian Housing Authority (SIHA) to offer no-cost weatherization services to income-qualified customers. For more information on Tribal support, please see American Indians Relations.

Spanish Language Outreach

As noted in the 2025 PPP's MLS section, Avista has undertaken projects to remove language barriers within its service territory. For energy efficiency, this includes the Spanish translation of program marketing materials, and, where possible, Spanish-speaking staff at outreach events. These efforts significantly increased program awareness among Spanish-speaking communities, including those who are members of Named Communities. Avista will continue to emphasize energy efficiency outreach for Spanish-speaking communities throughout the 2026-2029 CEIP implementation period.

Programs with Additional Named Community Risk Mitigation

Avista's Low Income Weatherization, Home Insulation, On-Bill Repayment, and Small Business Lighting Direct Install programs include elements that help mitigate Named Community participation risk**.** During the 2026-2029 implementation period, Avista will implement targeted outreach within census tracts to promote awareness of the following programs:

Low Income Weatherization Program

By eliminating out-of-pocket costs for energy efficiency upgrades, this program for income-qualified customers addresses a financial barrier that has historically inhibited participation. Customers participating in low-income weatherization programs often see a reduction in their energy usage, which may affect their energy burden, as well as health and safety benefits through weatherization-related repairs. An additional participation risk includes the limited capacity of Community Action Agencies (CAAs or Agencies) to perform weatherization services. Nationally, the weatherization field faces a shortage of trained professionals, which can result in reduced CAA capacity, and long wait times for income-qualified customers to be able to receive services. To address this barrier, Avista will continue its partnership with the Building Performance Center in Bellingham, Washington to conduct essential training sessions and provide support in Eastern Washington for weatherization professionals. This training, which is described in more detail in the 2026 ACP (draft 2026-2027 BCP, Appendix G to this CEIP) will improve workforce readiness for weatherization professionals, helping mitigate agency capacity limitations.

Home Insulation Program

This program offers a direct-installation model for home insulation. Customers in this program receive a free assessment to identify insulation needs, installation of low-to no-cost insulation measures, and air sealing measures where appropriate. The program alleviates a participation barrier by reducing or eliminating out-of-pocket costs for insulation upgrades for electric homes in Named Communities. Like the low-income weatherization program, customers who receive home insulation services often see a reduction in energy usage, which may reduce their energy burden.

On-Bill Repayment Program

The On-Bill Repayment (OBR) Program[81] is a partnership between Avista and Puget Sound Cooperative Credit Union (PSCCU). The program enables residential and small-business customers in Washington to access Energy-Smart Loans through PSCCU for their energy-efficiency projects. The OBR Program makes financing arrangements available to customers who may not otherwise access energy efficiency upgrades, as Avista subsidizes an interest rate reduction for customers with lower credit scores. Loan payments are integrated into their monthly Avista bill, thereby reducing an administrative participation burden. These upgrades may also qualify for rebates through the Prescriptive Residential Rebate Program and provide energy savings and reductions in energy burdens.

Small Business Lighting Direct Install Program

Small business customers on Avista's electric rate Schedules 11 and 12 are eligible to receive benefits through the Direct-Install Lighting Program, including a free lighting assessment to identify potential upgrades; installation of low-to-no-cost energy-savings measures (lamps, fixtures, and controls); and information for customer follow-up questions or feedback. For customers in Named Communities, the Company's NCIF is available to cover any delta between incentives and total project costs, ensuring that small business owners in Named Communities have access to this program.

[81] https://www.myavista.com/energy-savings/energy-smart-loans/wa-energy-efficiency-financing.

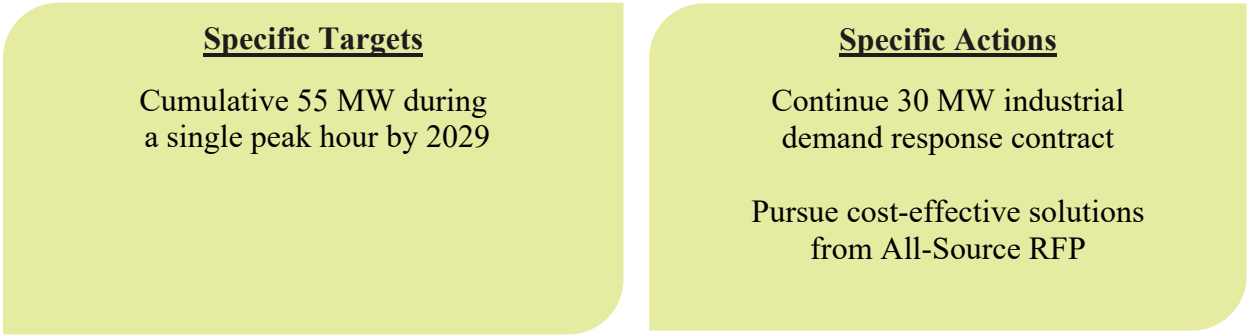
8. Demand Response | Specific Targets & Specific Actions

Overview

As customer loads and energy costs continue to increase, demand response programs designed to reduce or shift electricity usage during peak periods have become increasingly important. These programs support and maintain grid flexibility and reliability by balancing intermittent renewables, a value that grows as more renewable energy is added. Historically, demand response programs have not been cost-effective for Avista when compared with alternatives to meet customer load. However, Avista's 2025 IRP identified these programs to be cost-effective and informed the specific targets and actions for this CEIP.

As indicated in Figure No. 8.1 below, Avista established its demand response specific target to acquire an additional 25 MW of demand response capacity by 2029 in Washington state.[82] This will result in a cumulative total of 55 MW of demand response available for dispatch during periods of extreme peak load. This target is supported by the specific action of continuing the existing industrial demand response contract and pursuing cost-effective solutions from the 2025 All-Source RFP. The company intends to select all cost-effective solutions from the RFP and will increase the demand response target if cost-effective selections exceed 25 MW. As additional actions to support demand response, Avista will evaluate its pilot programs and EV TOU rates for future program scalability. Avista may also consider additional demand response programs for development and deployment during the 2026-2029 CEIP implementation period.

Figure No. 8.1: Demand Response | Specific Targets & Specific Actions Summary



[82] As the 2025 All Source RFP supports system needs, more than 25 MW may be acquired.

Demand Response | Specific Targets

Target Assumptions & Methodologies

The Company hired AEG to conduct the 2025 Demand Response Potential Assessment study[83] for the 2025 IRP. In planning for this study, multiple program components were considered and estimated, including cost, capacity reduction amounts, customer adoption and turnover rates, and total demand response event hours and seasonal applicability, amongst others. Assessment results were used as inputs for the 2025 IRP modeling process. As discussed in the Updated Portfolio Planning Analysis for the 2025 CEIP section, model assumptions were updated in June 2025, identifying 25 MW of demand response potential. Table No. 8.1 below reflects the updated model's potential programs and estimated seasonal savings through 2029.

Table No. 8.1: Demand Response | Updated 2025 IRP Potential (MW)[84]

Status	DR Program	2026	2027	2028	2029
RFP Dependent	Battery Energy Storage	0.0	0.1	0.2	1.0
RFP Dependent	Third Party Contracts	5.5	8.8	10.8	10.8
Not Implemented	Behavioral	-	-	1.3	2.1
Implemented	Electric Vehicle TOU Rates[85]	0.1	0.3	0.5	0.8
Pilot	TOU Rates	0.5	0.5	0.9	2.1
Pilot	Peak Time Rebate (PTR)	0.3	0.8	2.3	4.8
	Total Winter	**6.5**	**10.5**	**16.1**	**21.6**
	Total Summer	**8.8**	**13.3**	**18.8**	**24.8**

Avista expects the 2025 All-Source RFP to result in program acquisitions providing the same benefits as those identified through the IRP, but not necessarily the same programs, quantity of savings or costs. Of the six IRP-identified programs, two were identified for potential resource acquisition and include:

- **Battery Energy Storage**: Assumes customers own batteries as part of their own on-site electricity supply system (which may be charged by a renewable energy source) and are financially incentivized to allow the utility to discharge the battery during capacity-constrained periods.

- **Third-Party Contracts**: Assumes customers will reduce demand by a specific amount or to a pre-determined consumption level in exchange for fixed financial compensation. These programs are typically administered through a third party.

[83] https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/2025/appendix/appendix-f--der-study.pdf.
[84] Based on AEG's Demand Response Potential Study.
[85] Existing EV TOU rate program does not contribute measurable savings to demand response target.

The remaining four IRP-identified programs are in various stages of consideration and implementation. A behavioral demand response program relies on customers to voluntarily reduce energy use following a digital request, with no financial incentive. However, Avista currently lacks the necessary energy efficiency or peer comparison programs to support this approach. The Company currently offers two EV TOU rates, while the residential and small business TOU rates and a PTR program are in the piloting phase. Please see Avista's Demand Response | Additional Actions for information on those efforts.

Target Forecasted Distribution of Costs & Benefits

Following the 2021 IRP, Avista and a large-load customer signed a 30 MW demand response contract through 2031 as a specific action of the 2021 CEIP. Avista will also continue to offer two EV TOU rates. Avista anticipates receiving a range of demand response solution proposals through the 2025 All-Source RFP process, but the timing of the 2025 CEIP precedes the selection of these solutions. These proposals will be systematically evaluated for cost-effectiveness and operational viability, with the objective of informing program selection and design strategies that align with established seasonal capacity targets. Based on these uncertainties, and as indicated in Table No. 8.2 below, only the contract details for the current 30 MW demand response are available at this time. Metric calculations and measurement or verification protocols for any future demand response program acquisitions will be addressed in the 2027 Biennial CEIP.

Table No. 8.2: Demand Reponse | Target Program Summary

Program	Budget	Target Calculation	Measurement & Verification Protocol
Large Industrial DR Contract	Confidential	30 MW	Advanced Meter Infrastructure (AMI) meters
RFP Cost-Effective Programs	TBD	TBD	TBD

As shown in Table No. 8.3 below, based on the existing 30 MW demand response contract, all customers receive energy benefits, as discussed below and are measured through Avista's Energy Availability, Energy Burden, Outdoor Air Quality, and Greenhouse Gas Emission CBIs. Estimated costs and benefits for any new program will be discussed in the 2027 Biennial CEIP.

Table No. 8.3: Demand Response | Forecasted Costs & Benefits of Specific Targets

Program	Type	Energy	Non-Energy
Large Industrial DR Contract	Cost	Confidential	N/A
	Benefit	CBI: Energy Availability CBI: Energy Burden CBI: Outdoor Air Quality CBI: GHG Emissions	N/A
RFP Cost-Effective Programs	Cost	TBD	TBD
	Benefit	TBD	TBD

Demand Response | Specific Actions

Overview

As discussed above, Avista's specific actions to support the demand response target include the execution of the existing 30 MW demand response industrial contract and pursuing cost effective demand response programs from the RFP.

Specific Action | Benefits, Burden & Risk Assessment

Industrial Demand Response Contract

Under its 2021 demand response contract, Avista may initiate up to 25 demand response events annually, with each event requesting up to 30 MW. The Company must provide a one-day notice prior to the event and identify a specific four-hour block for energy reduction. These events must be mutually agreed upon between Avista and the industrial customer, with Avista providing financial compensation for each event.

Assessment of Current Benefit & Burdens for All Customers: All customers benefit from reduced energy consumption, which supports Energy Availability, Energy Burden, Outdoor Air Quality CBI, and GHG Emission CBIs. Although the industrial customer is compensated for the energy reduction, and customer rates are impacted by these costs, the compensation cost is assumed to be less than the market cost to serve their load.

Mitigate Risks for Named Communities: This contract does not have a direct mitigation of risk for Named Communities. However, indirectly, as demand response events help ensure reliability, customer outage frequency or duration may be reduced. As Named Communities may be at greater risk for outage occurrence or may have greater adverse effects resulting from an outage or poor air

quality, maintaining reliability, or improving air quality through demand response may help mitigate those risks.

Pursue Cost-Effective RFP Demand Response Programs

Programs selected from the 2025 All-Source RFP, along with program details, anticipated demand response savings, and implementation plans, will be discussed in the 2027 Biennial CEIP, as well as how these programs benefit all customers and mitigate risks for Named Communities.

Assessment of Current Benefit & Burdens for All Customers: Demand response programs are inherently customer and community centric. As such, Avista anticipates future selected programs may influence the following CBIs: Energy Availability, Energy Burden, Outdoor Air Quality, and Greenhouse Gas Emissions.

Mitigate Risks for Named Communities: Based on IRP cost-effective program selection, applicable risk mitigation for Named Communities will be discussed in the 2027 Biennial CIEP.

Demand Response | Additional Actions

Although Avista plans to satisfy most of the additional 25 MW of demand response resource acquisition through the 2025 All-Source RFP, Avista proposes additional demand response actions. As previously discussed, following the 2021 CEIP, Avista began multiple demand response actions, including two electric TOU rates, a PTR pilot for residential and commercial customers, and a partnership with the Northwest Energy Efficiency Alliance (NEEA) and other regional utilities to test grid-enabled CTA-2045 water heaters.[86] Results from the TOU and PTR pilots are expected by December 1, 2026, and will be used to inform future program design. In 2021, Avista also implemented two commercial EV TOU rates to help increase EV market adoption.

Time of Use & Peak Time Rebate Pilots

Effective June 1, 2024, Avista initiated three pilot programs, two TOU rates and one PTR offering, to a limited number of residential and small commercial customers over a two-year period. The TOU rate incentivizes customers to shift energy consumption from higher-priced on-peak hours

[86] According to the Customer Technology Association (CTA), the CTA-2045 standard is a modular communications interface to facilitate two-way communications with residential devices for energy management.

to lower-priced off-peak hours, while the PTR notifies customers a day in advance with a request to reduce their energy consumption for a specific time frame in exchange for bill credit. The pilots will be used to assess the value of these pricing structures to determine if these programs should be offered more broadly in Washington.

Although TOU and PTR programs are shown to be cost-effective in the next four-year period, Avista's version of these programs is in the pilot phase through June 1, 2026, and actual results are unknown. In compliance with Condition 11 of the Company's 2021 CEIP, performance results for these pilots, additional learning based on customer and utility input, along with EEAG consultation, are required before Avista implements system-wide TOU or PTR programs. Prior to program implementation, these pilots will also be reviewed by a third party to evaluate the impact and process and provide recommendations for program implementation. A report will be filed with the Commission by December 1, 2026, providing a comprehensive review of program metrics, program effectiveness, and recommendations for the continuation, changes, or termination of each program. Based on these report findings and inclusive of advisory group consultation, Avista may implement a TOU and PTR demand response program and provide an update in the 2027 Biennial CEIP.

EV Time of Use Rate

In 2021, Avista established two commercial TOU rates specifically for EV loads, designed to encourage off-peak charging and support broader EV adoption. Commercial customers can choose to participate in one of these program offerings if they separately meter their EV loads from their building load. In exchange for removing a variable demand charge, these programs offer a reduced off-peak price for charging and a more expensive rate for charging on peak. These TOU programs are generally implemented for customers who are increasing or adding new EV load. The 2024 Electric Transportation Report[87] indicates participation in commercial EV TOU offerings has grown steadily since their 2021 launch. Across all years, approximately 74% of energy use occurred during off-peak hours, demonstrating effective load shifting. The cost savings associated with removing the demand charge in favor of an on-peak charge makes this TOU program favorable and is a strong factor for customers investing in public direct current (DC) fast charging

[87] https://www.myavista.com/-/media/myavista/content-documents/energy-savings/evs/avista-2024-annual-te-report.pdf.

and fleet and workplace charging. Fleet customers also indicate Avista's TOU offering to be an essential part of the transition to EVs.

As a part of a broader transportation electrification (TE) effort, commercial TOU rate offerings play a strategic and enabling role in advancing EV adoption. To date, approximately 50% of Avista's public DC fast charging and workplace/fleet charging installations are located in Named Communities. The lower costs make it financially feasible for organizations in Named Communities to sustainably operate EV infrastructure.

Although this EV TOU program is identified as a demand response option in the 2025 IRP, current load shift savings from this program are not measurable and do not currently contribute to reportable demand response savings. This program was introduced to encourage EV adoption, as well as incentivizing peak load shifting to off peak, but it does not have an established baseline to measure load shift against. To address this, Avista will contract a third-party to determine if assumptions made in the demand response potential assessment for this program are valid. If the EV TOU program achieves measurable peak load reduction savings, these results will be reported in the 2027 Biennial CEIP and, if applicable, included in target achievement.

NEEA End-Use Load Flex Project

2021 CEIP Condition 12 Update

In the 2021 CEIP, Avista agreed to the following condition:

> *"When the Department of Commerce adopts a permanent standard for grid-enabled water heaters in WAC 194-24-180, Avista will develop a pilot demand response program. Avista will work with its EEAG on the pilot program implementation timing and how to incorporate results into its planning efforts."*

The Washington Department of Commerce (DOC) grid-enabled electric water heater standard became permanent for all electrically heated water heaters manufactured after January 1, 2023 (WAC-194-24-180). All new electric water heaters sold in Washington after January 1, 2023, have the ability to be connected and responsive to grid requests for services, however the standards for how to connect, report, and respond to the grid signals are being developed. In 2024, Avista joined NEEA's End Use Load Flex (EULF) project, a two-year initiative focused on accelerating the adoption of CTA 2045 port and communication modules in residential equipment across the Northwest and exploring demand response control strategies for connected line voltage

thermostats. The EULF project included a study to explore methods to cost-effectively connect CTA-2045 enabled water heaters in the field, including customer and installer awareness and education. The project also included laboratory testing of commercially available water heaters for conformance and compliance with CTA-2045 standards to ensure that the water heaters can deliver their full potential to the grid.

As of June 2025, the project has completed several tasks, including the development of a workplan; the launch of field studies on CTA-2045 water heater modules and demand response capable line-voltage thermostats; the identification of key program metrics; the compilation of a North American demand response program matrix with an in-depth analysis of high-performing programs; and implemented a member utility grid operator and utility staff survey on demand response priorities and current operations. Testing and research will continue the remainder of 2025, with a report detailing the findings from both the field and laboratory planned to be available by the end of 2025. As a result of the conformance and compliance testing, Portland State University is now developing a CTA-2045 implementation guideline that NEEA will advocate water heater manufacturers adopt to increase the level of grid service performance.

NEEA, and utilities funding the current two-year project, are developing a scope of work and budget for a second phase of the project between 2026-2029. If approved, the proposed scope of work includes connecting and engaging grid-enabled water heating and space cooling products cost-effectively and on a meaningful scale.

The findings from phase one and phase two of the project will inform Avista's IRP to determine if these programs can be offered cost-effectively in Avista's service territory. These efforts will also inform any future demand response RFP evaluation. Future work is under discussion at NEEA to continue market transformation efforts for connected load flex devices. Additional updates will be provided in the 2027 Biennial CEIP.

9. Company Initiatives | Goals & Actions

Overview

In addition to the specific targets and specific actions for renewable energy, energy efficiency and demand response, the Company also proposes goals and actions as shown in Figure No. 9.1 below to aid the clean energy transformation and support equitable outcomes. As listed in Table No 9.1 below, Avista proposes five aspirational CBI metric goals by 2029 with associated supporting actions and investing up to $5 million annually in Named Communities with the action of the NCIF.

The Company also included additional actions to demonstrate progress toward meeting future CETA compliance requirements in the areas of transmission access to clean energy, supporting demand response, increasing tribal and community resiliency, and increasing access to electric vehicle transportation and infrastructure, amongst others. These additional actions may directly or indirectly support a CBI metric.

Figure No. 9.1: Company Initiatives | Goals & Actions Summary

Goals	Actions
Five aspirational CBI metrics by 2029	Actions per aspirational CBI metric
Invest up to $5 million annually in Named Communities	Named Community Investment Fund

Company Initiatives | Goals & Actions

Goal | Aspirational CBI Metrics

This section outlines the Company's assumptions and methodologies for the aspirational metric goals. For the 2025 implementation period, the Company proposes one aspirational CBI metric under five of Avista's six benefit areas of affordability (combines reduction in cost and reduction in burden benefit areas), accessibility (non-energy benefit area), energy resilience, energy security (energy benefit area), and environmental effects by 2029. These goals and actions were discussed

with the CEIP Advisory Group in May 2025.[88] As shown in Table No. 9.1 below, these aspirational metrics either have a stated result to achieve or a directionality improvement.

Table No. 9.1: Additional Goals | Aspirational CBI Metrics by Benefit Area

Benefit Area	CBI	Metric	Target by 2029
Reduction in Cost (Affordability)	Participation in Company Programs	Saturation of energy assistance for all customers	Enroll 60% of the eligible population
Non-Energy (Accessibility)	Transportation Electrification	Number of EV trips provided by CBOs	5,040 EV trips
Energy Resilience	Energy Availability	Frequency of outages (CEMI0) for all customers	Decrease five-year average of outage frequency
Energy Security (Energy)	Disconnections for Nonpayment	Percentage of disconnects for nonpayment by month by census tract for all customers	Decrease and maintain the disconnection rate percentage to less than 4% annually
Environmental Affects	Greenhouse Gas Emissions	Avista generated and purchased greenhouse gas emissions	Decrease greenhouse gas emissions to 1.1 Million Metric Ton (MMT) of CO2e

As shown in Table No. 9.2 below, these aspirational metrics were proposed based on certain assumptions related to metric proposal logic and measurement methods. They are not intended to serve as criteria for penalization or reward based on actual outcomes. These aspirational metric results or targets, either defined or implied through directionality, are proposed against various benchmark measurements. An update on the aspirational metrics will be provided in the 2027 Biennial CEIP, while the actual 2029 results will be reported in the 2030 Clean Energy Compliance Report.

Table No. 9.2: Aspirational CBI Metric Goals | Assumptions & Methodologies

Type	Item
Assumption	Metrics are not intended for penalization or reward based on results achieved
Assumption	Specific and directional metrics are acceptable
Assumption	An update will be provided in the 2027 Biennial CEIP

[88] Avista will continue to report an Employee Diversity CBI but removed the aspirational component due to federal guidance: https://www.mwe.com/insights/doj-guidance-on-unlawful-discrimination-implications-for-dei-practices-in-the-private-sector/?utm_campaign=EMP%20%7C%202025%20%7C%20OTS%3A%20DOJ%20guidance%20on%20unlawful%20discrimination%3A%20Implications%20for%20DEI%20practices&utm_medium=email&utm_source=Eloqua

Method	Benchmark measurements against 2029 goal vary based on metric conditions

Table No. 9.3 below provides detail for the five aspirational CBI metrics per benefit area with the aspirational target and proposed measurement.

Table No. 9.3: Aspirational CBI Metric Goals | Measurements

Metric	Goal by 2029	Measurement
Saturation percent of energy assistance for all customers	Increase enrollment to 60% of the eligible population	Actual enrollment percentage for 2029
Number of EV trips provided by CBOs	Increase the number of EV trips to 5,040	Actual enrollment percentage for 2029
Frequency of outages for all customers	Decrease five-year average of outage frequency	Compare 2025-2029 average against 2021-2025 average
Percentage of disconnects for nonpayment by month by census tract for all customers	Decrease and maintain the disconnection rate percentage to less than 4% annually	The percentage of customers disconnected for nonpayment
Avista generated and purchased greenhouse gas emissions	Decrease greenhouse gas emissions to 1.1 MMT of CO2e	Measure 2029 CCA verified actuals

Action | Aspirational CBI Metrics

The following section describes the actions the Company proposes to support achieving the five aspirational CBI metrics by 2029, historical actuals and the proposed measurement as compared to an identified baseline. Avista will provide an update for these metrics and actions in the 2027 Biennial CEIP.

CBI: Participation in Company Programs

Metric: *Saturation percent of energy assistance programs for all customers*

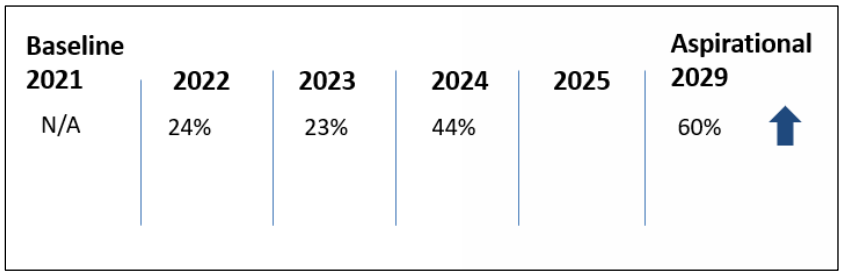
Actions: To support customer affordability and increase the saturation of participation in Company programs to 60% by 2029, the Company will continue to offer financial bill assistance through MED, Arrearage Forgiveness, and Arrearage Management programs funded under LIRAP[89] and other financial assistance programs. The Company will provide targeted marketing and outreach to estimated low-income customers through bill inserts, direct mailers, email campaigns, callouts, digital ads, strategic flyer placement, and presence at community events.

[89] LIRAP Annual Summary Report filed under Docket No. UE-010436.

Additionally, the Company will continue outreach through both phone and email to provide awareness of bill assistance options and enroll as eligible. The Company will continue to conduct annual training for Community Action Partnership (CAP) agencies on LIRAP offerings and enrollment processes and has developed an online toolkit for CAP agency staff with access to FAQs, downloadable print materials, and other relevant resources. Finally, the Company designed a hybrid compensation model in partnership with its EAAG that provides agencies with adequate funding to support their implementation of LIRAP, while also incentivizing additional outreach and program enrollment.

Historic Actuals & Measurement: Figure No. 9.2 below provides the historic saturation of energy assistance.[90] This CBI metric is in the 2022-2025 implementation period and will continue to be reported in the 2026-2029 implementation period. Although Avista has annually increased the number of customers receiving assistance, the Company updates the number of customers who financially qualify for energy assistance annually.[91] As such, the denominator influencing the saturation rate is constantly changing and the number of income-eligible customers increased by almost 19,000 between 2022 and 2024. Avista's aspirational energy assistance saturation rate of 60% by 2029 will be calculated in 2030 and reported in the 2030 Clean Energy Compliance Report.

Figure No. 9.2: Washington Electric Residential Saturation of Energy Assistance



CBI: Transportation Electrification

Metric: *Number of electric vehicle trips provided by CBOs*

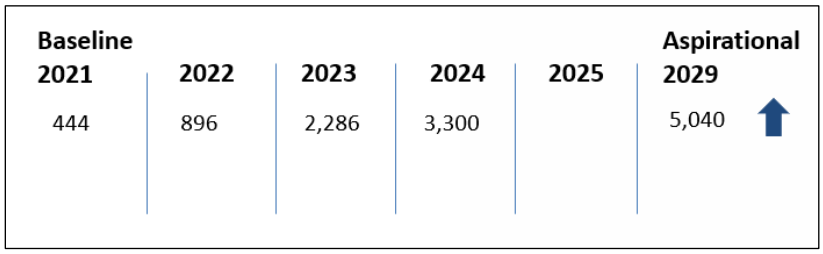
Actions: In Avista's first TEP the Company proposed supporting CBOs and community members with EV transportation. As of 2021, on average, Avista provided three EVs to CBOs annually. CBOs provide an annual report to Avista, which is used to report on

[90] The 2021 and 2022 values for this metric vary from the 2023 Biennial CEIP as the biennial calculated values based on quarterly changes in customers who may qualify for energy assistance, while the above values are calculated on an annual basis with calculation logic that mirrors the 2022 GRC PBR metric for energy assistance saturation rate.
[91] Customers with annual income at or below 200% Federal Poverty Level or 80% Area Median Income.

the number of passenger trips benefiting the communities they serve. Based on historic performance, Avista anticipates achieving the aspirational goal of 5,040 trips annually by 2030. The Company will provide updates in the annual TEP to the WUTC and in its 2027 Biennial CEIP. To determine CBO partnerships, Avista solicits applications as part of a competitive selection process, based on estimated benefits of anticipated passenger miles, ability to provide EV educational awareness, the organization's capacity to support an EV program, and the proposal's uniqueness and diversity, amongst others. As of 2025, Avista has 17 CBO partnerships across its Washington electric service territory, including organizations in Spokane, Colfax, Asotin, and Colville.

Historic Actuals & Measurement: Figure No. 9.3 below provides the actual number of trips provided by CBOs as reported in the narrative of Avista's Draft 2025 TE Annual Report. This metric data is self-reported annually by CBOs to Avista. This metric is in the 2022-2025 implementation period, will continue to be reported in the 2026-2029 implantation period, and in the TE Annual Report. The aspirational goal of CBOs providing 5,040 EV trips in 2029 will be gathered from CBOs in 2030 and reported in the 2030 Clean Energy Compliance Report.

Figure No. 9.3: Number of EV Trips Provided by CBOs



CBI: Energy Availability

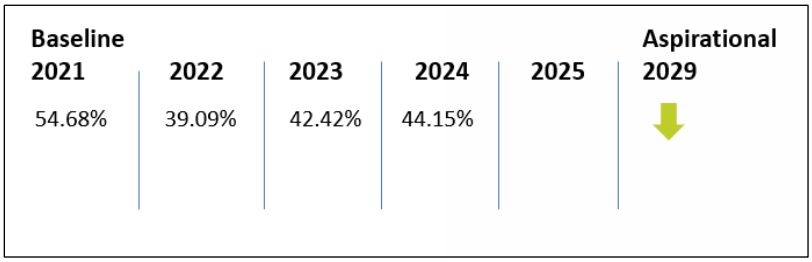
Metric: *Frequency of outages (CEMI0) without major event days for all customers*

Actions: To support a reduction in outage frequency, Avista proposes a new integrated planning and delivery approach to system investments across multiple disciplines, including grid hardening, system reinforcements, vegetation management, and wood pole management. In 2026, the Company will study locations across its Washington electric service territory, with an emphasis on Named Community locations, which may benefit from delivering multiple improvements per location at the same time as compared to delivering independent projects on multiple timelines. This approach pinpoints high-need areas, prioritizes

them for funding, and may accelerate simultaneous improvements. Based on 2026 study results, the Company will implement cost-effective system improvements, if any, in 2027 and 2028 and evaluate their impact on outage frequency in 2029.

Historic Actuals & Measurement: Figure No. 9.4 below provides the annual frequency of Washington electric customer outages as measured by CEMI0 without major event days for all customers.[92] This metric is in the 2022-2025 implementation period, will continue to be reported in the 2026-2029 implementation period, and is in alignment with the calculation logic in the 2022 GRC PBR for electric reliability reporting. The Company's establishes baseline for its reliability statistics, required per WAC 480-100-393(3)(b), using a five-year rolling average. This aspirational goal of reducing customer outages by 2029 will be benchmarked against the 2021-2025 five-year average of outage frequency (to be calculated in 2026) as compared to 2025-2029 average (to be calculated in 2030) and reported in the 2030 Clean Energy Compliance Report.

Figure No. 9.4: Frequency of Outages (CEMI0) for All Washington Customers



Energy Security

CBI: Disconnections for Non-Payment

Metric: *Annual percentage of disconnections for non-payment for all customer customers*

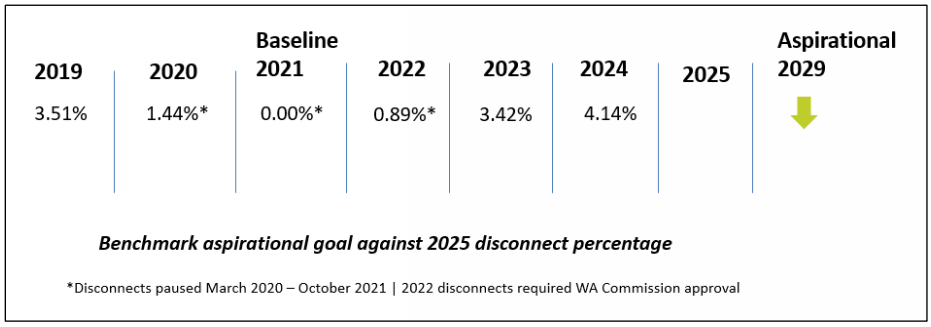
Actions: As discussed above in the Reduction of Cost (Affordability) benefit area and the metric calculating the "Saturation percent of energy assistance programs for all customers," Avista provides financial bill assistance support through a variety of programs. Should customers continue to encounter financial difficulties, there is a potential risk of disconnection. To support this aspirational goal, the Company will continue the existing actions of collecting customer communication preferences, conduct pre-disconnect customer service outreach, offer the MED program, Arrearage Management and Arrearage Forgiveness programs, and offer energy

[92] The 2021 and 2022 values for this metric vary from the 2023 Biennial CEIP as the biennial calculated values based on quarterly basis, while the above values are calculated on an annual basis.

efficiency solutions. As a new action to support the reduction of customer disconnections, the Company will also allocate funds from its proposed SSHB1814 solar and BESS projects. The program to administer these funds will be established in partnership with Avista's EAG and EAAG, with funds anticipated for distribution within the implementation period.

Historic Actuals & Measurement: Figure No. 9.5 below provides the data pertaining to the rate of disconnection for non-payment for Washington electric residential customers.[93] Disconnections from 2020 to 2022 do not represent typical conditions, as disconnections were paused during the Covid-19 pandemic. This metric is in the 2022-2025 implementation period and will continue to be reported in the 2026-2029 implementation period. Although Avista has taken steps to decrease the number of disconnections for nonpayment, electric customer growth continues to increase annually. As such, the denominator influencing the measurement is constantly changing. In addition, the population of customers that are likely at risk of disconnection continues to increase annually. Avista proposes decreasing and maintaining the disconnection percentage rate to less than 4% annually by 2029. As such, Avista will work to decrease the rate of disconnection to below 4% in 2026 and maintain a level below 4% annually through 2029, which will require continued efforts as customer population grows. The 2029 results will be calculated in the 2030 Clean Energy Compliance Report.

Figure No. 9.5: Washington Electric Disconnections for Nonpayment



Environmental Affects

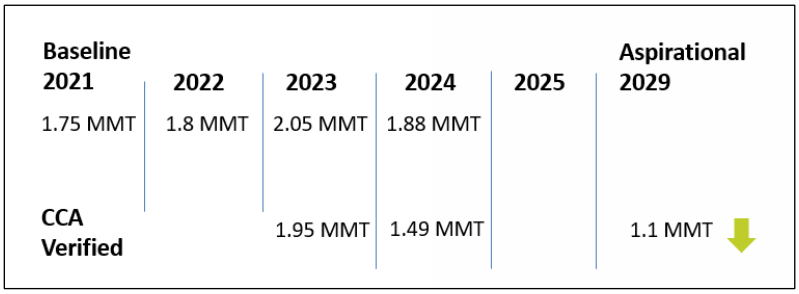
CBI: Greenhouse Gas Emissions
Metric: *Avista generated and contracted greenhouse gas emissions*
Actions: Avista continues to demonstrate clean energy compliance through divesting coal generation at the end of 2025, acquiring additional renewable generation, and

[93] The 2021 and 2022 values for this metric vary from the 2023 Biennial CEIP as the biennial calculated values based on quarterly basis, while the above values are calculated on an annual basis.

retiring RECs from existing Avista-controlled renewable generation. In addition to CETA, Avista also complies with Washington state's CCA, to further reduce greenhouse gas emissions. Through the 2021 CEIP's implementation period, and the proposed 2025 CEIP's renewable energy targets, the Company proposes reducing greenhouse gas emissions to 1.1 MMT of CO2e by 2029.

Historic Actuals & Measurement: To ensure greenhouse gas consistency in reporting, Avista will adopt the CCA's calculation methodology for emission reporting of CO2e, or the carbon dioxide equivalent, for the 2025 CEIP CBI metric. As shown in Figure No. 9.6 below, Avista will calculate the 2025 value under the 2021 CEIP methodology (top row and report in the 2026 Clean Energy Compliance Report) and under the CCA methodology (bottom row) to establish the baseline for the 2025 CEIP. For the 2026-2029 CEIP implementation period, the Company will only calculate the CCA Washington electric emission values. The 2029 Washington electric CCA verified amount of million metric tons CO2e will be calculated in 2030.[94]

Figure No. 9.6: Washington Electric Greenhouse Gas Emissions / MMT CO2e



Goal | Invest in Named Communities

The Company proposes to continue investing up to $5 million annually in Named Communities through funding energy efficiency savings programs and various EAG and community-identified projects. These investments support equitable access to clean energy and non-energy benefits and the equitable reduction of burdens for Named Communities. In its 2021 CEIP, the Company committed approximately $5 million for various project types with funding limitations. For the 2025 CEIP, the Company proposes continuing the Fund with $2 million to supplement energy-efficiency projects that may not meet traditional cost-effectiveness criteria, and $3 million to support community-based projects.

[94] As emission reporting under CCA requires a third-party verifier, the operational data for a given reporting year may not be verified until up to one year after the reported year.

Table No. 9.4: 2025 CEIP's NCIF Allocation & Categories

NCIF Amount	NCIF Investment Category
$2.0 million	Supplement Energy Efficiency
$3.0 million	Community Investment

Maintaining the $5 million program allocation represents a balance between further impacting customer rates, as all customers contribute to the NCIF, while delivering the benefits or clean energy investments, to Named Communities, a subset of customers. The Company is aware of customer sentiment regarding increasing energy costs, and this $5 million cap reflects a prudent approach to avoid additional rate impact due to the Fund while supporting CETA-required allocation of benefits and reduction of burdens for Named Communities.

The Company proposes two key adjustments for the 2025 CEIP implementation period:

- One-year rollover of uncommitted energy efficiency and community funds to accommodate longer project timelines.
- Eliminate the funding allocation limit by project category (distribution resiliency, third-party grants, outreach, and other projects/initiatives) to allow for greater flexibility to meet community-identified needs.

Action | Named Community Investment Fund

The NCIF was approved in June 2022.[95] The Company immediately took steps to provide awareness and understanding of the NCIF, establish a formal process for proposal submission, and determine an internal process for Fund governance and project approval. The Company will continue to collaborate closely with its EAG, and other advisory groups, to guide NCIF priorities and ensure alignment with community needs, including an update to their 2022-2023 Results-Based Accountability (RBA) process to identify and prioritize energy efficiency initiatives for Named Communities as listed below in Table No. 9.5.

Table No. 9.5: EAG NCIF Prioritization Considerations

Rank	EAG NCIF Prioritization Considerations
1	Focus efforts on improving energy efficiency (and awareness/education) for schools, community centers, and other places where Named Community members spend time.
1	Focus efforts on improving energy efficiency for Spokane Tribe partners.
2	Improve energy efficiency in multi-family & mobile home communities.

[95] Docket UE-210628.

3	Increase tree canopy and shade in Named Communities (consider tradeoffs with solar).
3	Increase access to energy efficient products & appliances for Named Communities.
4	Increase awareness of & engagement in energy efficiency programs while also meeting whole-house needs through community-based partnerships and referrals to services.
5	Set aside funds to match energy efficiency grant applications for community organizations and tribal partners (could have higher feasibility).
6	Focus efforts to improve energy efficiency for community members without stable housing (consider including with other initiatives).

Although future projects are unknown, the Company anticipates continuing to support projects that align with energy efficiency improvements for Named Communities and support the Investments in Named Community CBI, amongst others.

As of June 30, 2025, and provided in Table No. 9.6 below, the NCIF has committed more than $12.8 million and spent more than $6.8 million on Named Community projects, supporting more than 450 customers and 50 organizations combined.

Table No. 9.6: NCIF | Total Spend & Committments[96]

Year	Energy Efficiency	Community	Total Spend	Total Commitments
2022	$441,574	$45,034	$486,657	$0
2023	$1,106,555	$310,943	$1,417,498	$1,303,056
2024	$2,448,949	$1,151,241	$3,600,190	$7,167,234
As of 06/2025	$1,049,231	$333,241	$1,382,472	$4,412,326
Total	**$5,046,309**	**$1,840,459**	**$6,886,817**	**$12,882,616**

As the awareness of the NCIF continues to increase and processes mature, the Company has seen an increase in annual funding commitments and actual spending. Launching a large, complex program requires time, committed staff, public outreach, organizational readiness, and careful project management. Avista employees collaborate with organizations to explain that the NCIF is not a conventional grant program and clarify that projects are required to meet specific clean energy criteria and align with broader equity, CBI, or decarbonization objectives. Many organizations require technical assistance and labor support from Avista to develop proposals to meet program standards and confirm the organization is equipped for a project. In addition, some

[96] The 2023 CEIP Biennial report provides NCIF Community project and associated cost details from inception through August 31, 2023, while the 2024 CETA cost recovery reported projects and costs through June 2024. The 2025 CETA cost recovery will be filed in August 2025.

projects are capital intensive with multiple funding sources requiring distinct compliance, reporting, and delivery requirements – all which must be synchronized to ensure project viability and accountability. Examples of these complex, multi-year projects include the Martin Luther King, Jr. Community Center's resiliency hub and the Spokane Tribe microgrid. The MLK Resilience Hub received a funding commitment of $1.2M in March 2023 and is planned for completion in late 2025, while the Spokane Tribe Resilience Station received a funding commitment of $1.5M in the third quarter of 2023 and the current completion date is set for January 2028.

To increase commitments and subsequent spending of $5 million annually, the Company streamlined the application process and intends to increase community outreach to establish strategic partnerships and support project development. Based on applicant feedback, the Company created a paper application in 2024 to reduce administrative burden and provide clarity for eligibility and evaluation on criteria. The paper application is also available in Spanish. In addition, improvements were made to Avista's CETA webpages, with a specific page featuring the NCIF and the online application.[97] The Company will continue to increase outreach efforts through leveraging existing community partnerships and establishing new partnerships with tribes and non-profit organizations, hosting various engagement activities to address comments and questions about the NCIF, and sharing recipient's stories on social media to demonstrate the effectiveness of the NCIF – all in an effort establish a steady pipeline of potential project to benefit Named Communities.

Given the interval between the conclusion of the 2021 CEIP implementation period and the approval of the 2025 CEIP initiating a new four-year NCIF cycle, the Company will continue to advance the NCIF program and accept applications for 2026. Avista will defer the issuance of 2026 Community awards until the 2025 CEIP is approved. For NCIF energy efficiency awards funded through the energy efficiency tariff,[98] Avista consulted with its EEAG at the August 2025 session to determine the prudence of awarding 2026 projects prior to 2025 CEIP determination. Avista will maintain the allocation of NCIF grants for energy efficiency projects in accordance with the agreement established with the EEAG.

[97] https://www.myavista.com/about-us/washingtons-clean-energy-future/named-community-investment-fund
[98] Tariff Scheule 90.

NCIF Governance

Avista will continue to utilize the NCIF governance structure established in 2023 with co-program management of the NCIF between the Company's Social Impact and Energy Efficiency departments. The NCIF Governance Group provides an internal advisory body for evaluating all NCIF project proposals and awards with representation across the company, including Energy Efficiency, Social Impact, Regulatory Affairs, Corporate Communications, Internal Audit, Innovation Lab, and the Integrated Planning and Clean Energy departments. This cross-functional team evaluates each proposal for its alignment with CBI metrics, relevance to Named Communities, and adherence to additional criteria, such as potential for energy savings. The group ensures that funding decisions are aligned with CEIP requirements, EAG priorities, and community needs.

Supporting Underserved Communities

Avista's NCIF program managers will continue to build relationships with community organizations to foster trust, identify emerging needs, and align community and clean energy goals. Recognizing that many organizations face resource constraints, they are available to support applicants by phone, email, and through in-person site visits, helping to guide project development. Extra efforts are made to reach underserved communities, with proactive contact for nonprofits focused on rural communities to raise awareness and discuss how the program could meet each organization's specific energy needs. This approach ensures that proposals reflect community priorities throughout Avista's service area and are not overlooked due to limited awareness, administrative support, or capacity. It also promotes fair and equitable consideration.

Avista also shares NCIF's success stories[99] on social media to increase awareness of community needs and opportunities through the NCIF. Highlighted projects include efforts to increase energy efficiency and comfort at the Family Promise of Spokane shelter, which serves families experiencing homelessness, as well as the installation of solar panels on Malden's community building and town hall/fire station to reduce energy costs and enhance resilience following the 2020 wildfires that devastated the town.

NCIF Participant Survey

[99] NCIF stories available at https://www.myavista.com/connect/tags/named-communities-investment-fund.

Avista will continue to conduct biannual post-award surveys, for energy efficiency and community projects, to gather feedback on the application experience, award process, and project implementation support, with participants given the choice to self-identify or remain anonymous. In the first quarter of 2025, Avista's offered its first survey[100] to 34 participants (29% response rate), with positive results regarding the application process, project goal achievement, and effectiveness in overcoming project challenges. Avista will offer its second survey to newly identified NCIF participants by the fourth quarter of 2025.

NCIF Distributional Equity Analysis

In Avista's 2022 GRC order[101] the Commission ordered Staff to direct a distributional equity analysis (DEA) process and select a facilitator for Avista to hire for incorporating equity into its capital planning processes. A DEA framework compares the impact (typical benefit-cost analysis) on certain customer groups relative to other customers with the intent of understanding if there is a disproportionate burden on any single population. While benefit-cost analysis is a well-established practice for decision making, DEA is an emerging decision-making tool to be used with traditional benefit-cost analysis. Although Staff members have yet to initiate this process yet, Avista has received requests from its EEAG and CEIP Advisory Group for DEAs. Feedback from these groups has led to internal education within the Company and noted areas of alignment of DEA with the Fund's administration.

Using the federal DOE's seven-stage DEA framework,[102] Figure No. 9.8 and Table No. 9.7 below illustrate the DEA stages as aligned with applicable NCIF actions. Although the DEA term is new to Avista, it would appear Avista's existing implementation and management of the Fund aligns with states (1) through six (6). The Company will continue its DEA efforts as it pertains to the NCIF and will remain iterative in nature.

[100] NCIF survey results to date will be filed with the Company's Tariff Schedule 64 Cost Recovery Filing.
[101] 2022 GRC Final Order 10/04 Docket UE-220053 et. al.,
[102] DOE's Distributional Equity Analysis Guide, A Practical Guide for Energy Efficiency and Other Distributed Energy Resources:https://eta-publications.lbl.gov/sites/default/files/bto-distributed-equity-analysis-guide_may2024.pdf.

Figure No. 9.8: NCIF & DEA Stages

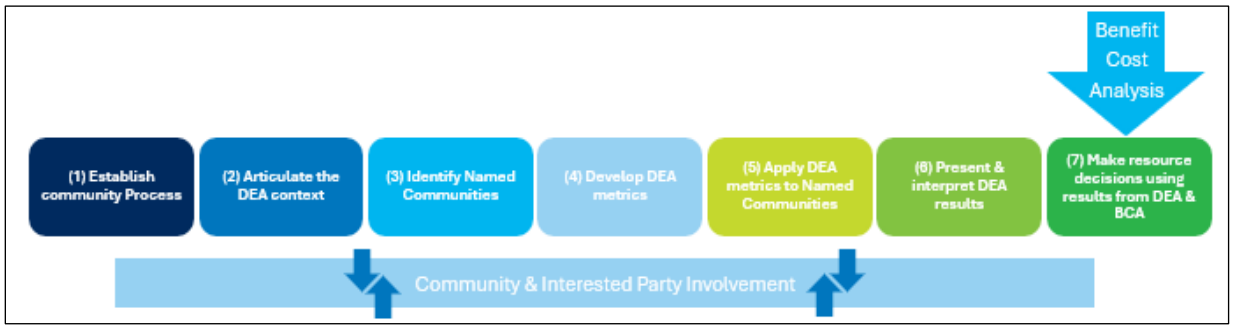


Table No. 9.7: DEA Stage & NCIF Acitivty

Stage	DEA Stage	NCIF Activity
1	Establish community process	EAG Resulted Based Activity for initial project prioritization and process to receive proposals for community identified projects
2	Articulate the DEA context	Regularly occurring updates to interested parties (i.e., EAG, public participation)
3	Identify priority population	Named Communities as identified in CETA and with input from EAG
4	Develop DEA metrics	NCIF metrics aligned with company CEIP CBI metrics, Performance Based Metrics, Biennial Conservation Plan metrics, IRP
5	Apply DEA metrics to priority population	NCIF recipient survey, along with inputs and experiences are used
6	Present & interpret DEA results	Projects' outcomes are reported regularly to interested parties
7	Make resource decisions using results from the DEA & benefit cost analysis (BCA)	NCIF program modifications are made based on results

Company Initiatives | Additional Actions

The Company initiatives listed in Figure No. 9.9 below support areas of the CEIP but are not specific actions to support a specific target. However, they demonstrate progress toward meeting future CETA compliance requirements in the areas of transmission access to clean energy, supporting demand response programs, increasing tribal nation and community energy resiliency, and increasing access to electric vehicle transportation and infrastructure, amongst others. They also highlight Avista's efforts to secure federal and state grants. Progress made in these areas support Avista's CBIs, including Energy Availability, Investments in Named Communities, Transportation Electrification, and Employee and Supplier Diversity. With the exception of the

NCIF awards, any costs associated with these additional actions are not included in the Company's Incremental Cost Analysis.

Figure No. 9.9: Company Initiatives | Additional Actions Summary

Additional Actions

Transmission Expansion Projects
Connected Communities
American Indian Relations & the Spokane Tribe Resilience Station
Martin Luther King, Jr. Community Center Resilience Hub
Transportation Electrification Plan
Nondiscriminatory Hiring & Employment Practice Commitment
Supplier Diversity Program

Transmission Expansion | Washington, Idaho & Montana

Transmission access to a diverse footprint of renewable energy sources is integral to meet Avista's future clean energy needs. Both the 2023-2024 System Assessment and the 2025 electric IRP identify new transmission resources to gain access to markets and to integrate new load and generation. The 2025 IRP highlights a regional effort to develop the North Plans Connector (NPC) – a transmission path between Colstrip, Montana, and North Dakota via a high-voltage direct-current (HVDC) intertie. It also identifies transmission upgrades to the Colstrip transmission system in Montana and upgrades to the Lolo-Oxbow line between Avista and Idaho Power. As Avista plans for future delivery of clean energy, building additional transmission and upgrading existing lines will be necessary to integrate additional renewables in the region, gain access to renewable energy outside the Northwest region, and relieve existing system constraints. Indirectly, these transmission projects support Avista's Energy Availability CBI and highlight various funding sources, including federal and state grants, other organizations, and Avista. In seeking IRA/IIJA grant funding, Avista partnered with the Montana Department of Commerce to support the NPC and the Colstrip Transmission System Upgrade and separately partnered with Idaho Power to support the Lolo Oxbow Upgrade and Optimization project. Although all three projects were awarded in 2024, the projects received further review as of January 2025.[103] In June 2025, Avista supported DOE data requests for the North Plains Connector and directly submitted responses in regard to the Lolo Oxbow Upgrade & Optimization project. In September 2025, the

[103] Unleashing American Energy Executive Order 14226 issued January 20, 2025.

DOE approved grant funding in accordance with terms and conditions of the original award for the NPC and related Colstrip Transmission System Upgrade, while approval for the Lolo Oxbow Upgrade and Optimization project is outstanding.

North Plains Connector

The NPC[104] is slated to create the nation's first HVDC transmission link between three regional electric energy markets – the Western Interconnection, the Midcontinent Independent System Operator (MISO) and Southwest Power Pool (SPP). Grid United, an independent company developing utility-scale transmission line projects to increase grid reliability and provide access to low-cost resources, is developing the 3,000 MW HVDC transmission line stretching approximately 420 miles between Colstrip, Montana and Bismark, North Dakota.

The end points in North Dakota would give Avista access to both MISO and SPP and provide access to generation resources in the mid-continent with different weather patterns and timing of demand peaks than those of the Northwest. The 2025 IRP identifies a 300 MW capacity share of this line as an economically viable option to assist in meeting long-term capacity requirements, gain access to diverse energy resources, improve wholesale market options, and reduce congestion on the western transmission network. In November 2024, Avista signed a non-binding memorandum of understanding[105] for a 10% or 300 MW ownership share with the intent to invest when the project is operational.

In August 2024, the Montana Department of Commerce, with the support of Grid United and the North Plains Interregional Innovation[106]consortium, was awarded $700 million under the federal IIJA's Grid Resilience and Innovation Partnerships (GRIP) program.[107] In September 2025, after additional DOE review, the grant funding was approved in accordance with terms and conditions of the original award.

[104] https://northplainsconnector.com/.
[105] https://investor.avistacorp.com/node/28791/pdf.
[106]A group of eight utilities supporting the Montana Department of Commerce's GRIP application – Avista, Minnkota Power Cooperative, Montana-Dakota Utilities, NorthWestern Energy, Otter Tail Power Company, Portland General Electric and Puget Sound Energy.
[107]https://northplainsconnector.com/utilities-of-north-plains-connector-interregional-innovation-consortium-applaud-the-u-s-department-of-energy-for-historic-investment-in-interregional-transmission-through-700-million-grid-resilience/

Grid United expects permitting and regulatory approval in 2026, with construction commencing in 2028 and an on-line date late in 2032. Avista will continue to evaluate its involvement with project.

Colstrip Transmission System Upgrade

The Colstrip Transmission System is a 249-mile, 500-kilovolt alternating current transmission line from Colstrip to Townsend, Montana. The Colstrip Transmission System was built in the early 1980s to move power from the Colstrip generation facility jointly owned by Avista, NorthWestern, Puget Sound Energy, Portland General Electric and PacifiCorp to load centers across the Northwest.

Under the IIJA and GRIP program mentioned above, the Montana Department of Commerce received a $70 million grant to support Colstrip Transmission System upgrades based on a 2012 study led by the Bonneville Power Administration,[108] with support from Avista and Northwestern. Although grant funding for the NPC and Colstrip Transmission System projects was requested and awarded together, they represent two discrete and independent projects. In September 2025, after additional DOE review, the grant funding was approved in accordance with terms and conditions of the original award. Throughout 2025, the Colstrip Transmission System owners are performing system studies to confirm necessary upgrades to the existing 500 kV transmission lines and the supporting 230 kV and 115 kV infrastructure. The second phase of this 2025 study is underway with a Western Power Pool (WPP) effort to evaluate certain facilities beyond the Colstrip Transmission System, while the owners continue to identify the simultaneous increase in transfer capability across the Northwest. Both studies are planned for completion by the end of 2025.

These upgrades could increase total power transfers out of Montana by approximately 900 MW, with Avista's potential incremental share at 108 MW. The total project costs, including the $70 million IIJA GRIP award, are estimated at $200 million, with Avista's share of the project costs estimated at $24 million to support the additional 108 MW capacity. No construction start date has been set; however, it is anticipated the project will be online by late 2032.

[108] https://www.bpa.gov/learn-and-participate/public-involvement-decisions/project-reviews/montana-to-washington.

Lolo-Oxbow Upgrade and Optimization

The Lolo-Oxbow transmission line is jointly owned by Avista and Idaho Power. It extends from the Oxbow Dam on the Oregan-Idaho border to Lewiston, Idaho, covering approximately 107 miles. In October 2024, Avista, in partnership with Idaho Power, received an $86 million IIJA GRIP award[109] to upgrade and optimize the 230 kV transmission line. The project includes installing high-capacity conductors with wildfire resilient designs and materials and integrating Idaho Power's Pallette Junction substation.

It also includes innovative approaches to construction and power flow management with the use of Infravision and SmartValve. Infravision technology speeds transmission line construction with drone-enabled line stringing instead of helicopter use and SmartValve technology allows for dynamic control and optimization of power flows.

It is anticipated that this project would increase interregional transfer capability by 450 MW from Avista to Idaho and up to 185 MW in the opposite direction. Total project costs, including the $85 million GRIP award shared by Avista and Idaho Power, are estimated at $173 million over five years, with Avista's share estimated at $54 million and Idaho Power's share estimated at $34 million. Construction is planned to begin in 2027.

Connected Communities | Spokane, WA

Connected Communities[110] is a U.S. DOE funded, multi-member partnership program, to demonstrate the value of coordinating DERs for location-specific customers and grid benefits on infrastructure served by Avista's Third and Hatch substation in Spokane, WA. The partnership program goals include energy efficiency, carbon reduction, and demand flexibility. It will use a variety of approaches, including residential smart thermostats, residential batteries, small business energy management, and large commercial and industrial automation.

The project assets will be aggregated and controlled to serve as a Virtual Power Plant (VPP) for demand response during times of high system demand or controlled to serve as a non-wires solution for distribution capacity when the local system is stressed. As customers adopt new

[109] https://www.murray.senate.gov/wp-content/uploads/2024/10/Lolo-Oxbow-Transmission-Upgrade-and-Optimization.pdf
[110] https://connectedcommunities.lbl.gov/spokane-connected-communities-project

technologies, and load continues to grow, using customer DERs to help meet grid needs is becoming increasingly important. The aggregation, control, and coordination of DERs to meet this grid need requires new control technologies, such as a DER management system. Avista and project partners are developing control methods that will serve as a road map for scalable technology.

Project partners include Avista, Edo, Open Energy Solutions, Pacific Northwest National Laboratories (PNNL), WSU, and Urbanova. The project design is complete, and live field demonstrations will begin in late 2025. The project will conclude in 2029 after demonstration and data collection. Avista's portion of the budget is estimated at $4.179 million, with $1.35 million funded by the federal DOE grant and the remaining $2.8 million funded by Avista. This project impacts Avista's Investments in Named Communities CBI.

American Indian Relations | Service Territory

Avista has a history of building and strengthening relationships amongst the Tribes within the Company's service territory. In 1993, the Company created the American Indian Relations Department to address significant and complex Tribal priorities. Over the last 32 years, Avista has reached comprehensive settlement agreements with Tribes to resolve outstanding issues and establish ongoing collaboration. In 1994, a settlement was reached with the Spokane Tribe of Indians concerning the Little Falls Hydroelectric Dam. In 1999, a settlement was reached with the Nez Perce Tribe regarding two dams the Company previously owned on the South Fork of the Clearwater River. Furthermore, in 2008, a settlement with the Coeur d'Alene Tribe resolved numerous issues concerning Lake Coeur d'Alene and Avista's operation of the Post Falls Hydroelectric Dam.

Avista's American Indian Relations Department collaborates with Tribes across its Washington, Idaho, and Oregon service territories, recognizing the importance of these relationships and understanding the unique business operations with sovereign governments. These Tribes include Klamath Tribes, Coquille Tribe, Cow Creek Band Umpqua, Yakima Nation, Wanapum Tribe, Umatilla, Confederated Salish & Kootenai Tribes, Kootenai Tribe of Idaho, Kalispel Tribe of Indians, and the Colville Confederated Tribes.

Avista leaders participate in recurring meetings with Tribal leaders and look for opportunities to keep Tribal needs at the forefront in the communities Avista serves. Beyond upgrading utility facilities on Reservations to enhance reliability and resiliency, Avista also offers a variety of programs and trainings supporting energy and wildfire resiliency, energy efficiency, and financial bill assistance support, amongst others.

Avista works with the Spokane Tribe and Nez Perce Tribes to support microgrid resiliency concepts, EV education and support, wildfire resiliency implementation and planning, Tribal facility and residential weatherization training, residential and commercial energy efficiency upgrades, and solar net metering. Avista is also partnering with the Spokane Tribe to build a resiliency station in Wellpinit, WA (see below). Avista, in collaboration with the Nez Perce Tribe, is providing solar net metering to 57 residential homes, with plans to extend this service to an additional 300 homes over the next five years. This project intends to increase access to solar energy for these households. Although no Avista funding has been committed, the Company also supports the Colville Confederated Tribes' goal of adding a microgrid in Inchelium, WA.

In support of wildfire resiliency preparation and prevention, Avista meets with regional Tribes at least annually to discuss the Company's Wildfire Resiliency Plan prior to the summer season. Under Avista's Wildfire Resiliency Plan, the Company works specifically with the Tribes to identify customers who are dependent on medical equipment and provide equipment batteries in the event of a power outage. The Company also secures locations to host resource centers in the event of a Public Safety Power Shutoff (PSPS) affecting Tribal communities.

Avista formally partners with the Spokane Tribe as a LIRAP administrator. This partnership provides the Tribe with the ability to directly enroll income-eligible customers into financial bill assistance programs, such as the MED and the Arrearage Management and Forgiveness Programs. As LIRAP administrators, they are part of the broad CAP agency network, receiving annual staff training and an annual administrative funding allocation. In addition to inclusion in broader marketing efforts like direct email, direct mail, digital advertising, print advertising, and more, Avista also works directly with the Spokane Tribe to conduct specific outreach. This includes hosting booths at senior luncheons, posting program information on social media or within the local Tribal newsletter (Rawhide Press), and including flyers in senior meal deliveries.

Spokane Tribe Resilience Station | Wellpinit, WA

The Spokane Tribe Resilience Station began with a planning grant from the WA Department of Commerce (Commerce)[111] to collaboratively address the resilience needs of the Spokane Tribe. The result of that collaboration is a unique concept to create a resilience station in Wellpinit, WA. The concept has received funding for construction from the DOE,[112] Commerce, and Avista's NCIF.

The resilience station will include distribution transformers, switchgear, a BESS, and a microgrid control system. The station will move existing 34kV to 13kV voltage transformers from overhead to underground and allow for additional switching flexibility and improved voltage control for the local distribution system. A dedicated underground resilience feeder will connect the station to the three critical Tribal facilities and is designed for future expansion of critical loads and the addition of solar and storage. This project enables clean and resilient backup power and is a unique take on distribution infrastructure. It serves as an opportunity to demonstrate the value of collaborative planning with customers to meet their unique needs and enable a more resilient future grid.

The design phase starts in 2025, and project construction is expected to conclude in January of 2028. The total project budget is $7.19 million, with Avista contributing $1.5 million of capital and the remaining funded by multiple grants from the DOE, Commerce, and Avista's NCIF. This project impacts Avista's Investments in Named Communities CBI.

MLK Community Center Resilience Hub | Spokane, WA

Avista is partnering with the Martin Luther King Jr. Family Outreach Center and the City of Spokane to build the first neighborhood community resiliency hub in the East Central neighborhood. The project, funded partially by grants from Commerce and Avista's NCIF, will install a microgrid for energy resilience and reliability.[113]

The microgrid, complete with solar panels, batteries, and a natural gas generator will provide backup power for the community center during planned and unplanned outages. The system will

[111] https://www.commerce.wa.gov/climate-commitment-act-dollars-at-work-10-million-investment-supports-new-clean-energy-projects-in-tribal-communities/
[112] Search for Spokane Tribe under the Awards section at https://www.energy.gov/gdo/grid-resilience-state-and-tribal-formula-grant-awards#subawards
[113] https://www.myavista.com/about-us/projects/mlk-community-center

benefit customers in the East Central neighborhood by providing local clean energy and energy resilience. The system will also provide grid benefits by serving as a Connected Communities asset while grid-connected, helping alleviate local or system-level constraints.

The project is expected to be completed in early 2026. The total project cost is approximately $3.25 million, with a $1.5 million Commerce solar plus storage grant, $750,000 through Avista's NCIF, and Avista providing the remainder of project capital at $1 million. This project impacts Avista's Investments in Named Communities CBI.

Transportation Electrification Plan | Service Territory

Every five years, the Company submits a TEP to the Commission. Avista's TEP provides market research, cost and benefit analysis, and annual budget and activity targets to achieve the strategic objectives of short- and long-term economic and environmental benefits. This is based on the increasing feasibility of utilizing electricity as a cleaner and more economic transportation fuel, while simultaneously providing utility revenue benefiting rate affordability for all customers.

Annual TE reports are submitted to the Commission providing updated information on progress and adjustments, along with any required changes to programs and activities authorized by tariff schedules.[114] An updated five-year TEP will be submitted by December 31, 2025, providing direction for TE activity through 2030.

In 2024, Avista received a $3,112,000 grant from Commerce's Washington Electric Vehicle Charging Program to install charging stations at 69 sites throughout the Company's Washington electric service territory. Installations will serve fleet, workplace, multi-family, and public alternating current (AC) level 2 charging, as well as public DC fast charging. Construction on initial projects began in late 2024 and final projects will be completed by mid-2026.

The 2026-2030 TEP will continue to support charging infrastructure investments in commercial locations available for use by the public, as well as private workplaces, fleet and multi-unit dwelling utilization. Other ongoing programs include education and outreach, load management, and community support programs. Additional emphasis for fleet advisory services and vehicle-grid integration for both residential and commercial customers, to maximize the benefits of cost-

[114] Tariff Schedules 13, 23 & 77 at https://www.myavista.com/about-us/our-rates-and-tariffs/washington-electric

effective off-peak charging programs. Avista is also committed to ensuring the benefits from electric transportation are equitably distributed to Named Communities, which includes low-income customers as a subset, with an aspirational goal of up to 30% of overall electric transportation funding benefiting these communities.[115] These efforts impact Avista's Transportation Electrification CBI.

Nondiscriminatory Hiring & Employment Practice Commitment | Service Territory

The Company is committed to conducting business ethically and honestly while providing a trusting and respectful work environment centered around nondiscriminatory hiring and inclusive employment practices. This commitment includes hiring practices that support a diverse workforce, fair treatment, and equal opportunity, to foster an inclusive work environment that supports everyone. This supports an environment where employees feel valued, respected, and have opportunities to gain experience. Recent changes in federal regulations and policies restrict the Company's ability to identify specific benchmarks for employment diversity indicators. Avista's employment practices, however, have been and will continue to meet regulations while supporting and creating an inclusive work environment for all employees.

The Company will mature its recruiting process through developing a workforce pipeline with broader outreach to underserved communities and organizations, including engagement with K-12 and post-secondary institutions, and rural and tribal communities. Avista will continue to train its hiring managers in non-discriminatory processes and practices that support diversity and increase employee engagement. This includes adopting consistent application questions, using a structured screening guide, developing intentional interview questions, and requiring multiple reviewers and a diverse interview panel. Efforts under Avista's nondiscriminatory hiring and employment practice commitment support the Company's Employee Diversity CBI.

Supplier Diversity Program | Avista Service Territory

Avista's Supplier Diversity Program[116] seeks to build and maintain relationships with small and diverse suppliers, including those who self-identify as women-, minority-, disadvantaged-, veteran-, and service-disabled veteran-owned businesses. In addition to encouraging diversity

[115] 2020 GRC Docket UE-200900 et. al. Final Order 08/05 Page 28 at Paragraph 67.
[116] See the Company's 2024 Corporate Responsibility Report Page 92: https://investor.avistacorp.com/static-files/25fbbfc6-4a76-485c-8555-b55cdc9837d8.

among our suppliers, the Company also engages with local and small businesses when their products and services meet Avista's supply chain requirements. Supplier diversity is a strategy that supports economic development and enhances Avista's supply chain by incorporating different experiences and perspectives, which can result in increased innovation and competitive advantage. This program supports Avista's Supplier Diversity CBI.

10. Incremental Cost & Alternative Compliance

Overview

The CEIP must outline the utility's plan to meet CETA's clean energy standards and, as required by WAC 480-100-660(4), includes a projection of the incremental cost to achieve compliance. In addition, if a utility intends to rely on an alternative compliance mechanism, those plans must be described as well. Avista is not planning to exceed the cost cap or use alternative compliance mechanism for this 2026-2029 CEIP period.

To determine this incremental cost of compliance, a utility compares an Alternative Lowest Reasonable Cost portfolio (i.e., where CETA's clean energy requirements are not met) with the resource portfolio used to comply with the interim targets. For Avista, this is the updated portfolio analysis for the 2025 CEIP with associated methodology and assumption changes. Avista then uses Aurora, an electric system dispatch model described in the 2025 Electric IRP, to calculate the power costs required to serve customers for both portfolios, and then includes non-power costs such as transmission, distribution, administrative/general expenses, and tariff rider forecasts.

These incremental cost calculations are used to project expected costs based on meeting CETA requirements, while the cost cap is meant to protect customers from excessive cost increases during the transition to clean energy. The cost cap is limited to a 2% increase based on the utility's Weather-Adjusted Sales Revenue (WASR) from customers from each previous year, divided by the number of years in a period.[117] Additionally, the incremental costs must be directly attributable to satisfying the requirements of CETA, such as:

[117] RCW 19.405.060(3).

- The utility made the investment or incurred the expense during the CEIP implementation period.
- The investment or expense is part of the Reasonably Available portfolio.
- The investment or expense is above the costs the utility would incur for the Alternative Lowest Reasonable Cost portfolio.
- The investment or expense is not required to meet any statutory, regulatory, or contractual requirement or any provision of RCW chapter 19.405 other than RCW 19.405.040 or 19.405.050.

In addition to these requirements, Avista provides workpapers, models, and associated calculations in Confidential Appendix H associated with the incremental cost calculation. Lastly, Avista will identify all CEIP-related investments and expenses the Company plans to make during the implementation period related to incremental costs as defined in the RCW:

- Demonstrate that expenses identified are directly attributable to actions necessary to comply with, or make progress towards, the requirements of RCW 19.405.040 and RCW 19.405.050; and,
- The expected costs of planned activities and the expected costs of the Alternative Lowest Reasonable Cost portfolio.

The incremental cost of the CEIP is the difference between the CEIP and an alternative resource strategy's WASR forecast. The CEIP rules outline this procedure by requiring two resource plans, the first is the Reasonably Available portfolio or in this case, Avista's existing resource portfolio plus the CEIP actions. The second resource strategy is called Alternative Lowest Reasonable Cost portfolio and represents what the resource strategy would be absent CEIP clean energy targets and actions.

Weather Adjusted Sales Revenue

Avista's future WASR is derived from the forecasted cost to serve customers. There are two major components of the utility sales revenue – the revenue requirement and tariff riders. The revenue requirement is determined through a general rate case where the Commission determines the appropriate revenue requirement Avista can recover from customers. The revenue requirement

includes approved capital investments and expenses that are passed on to customers. Avista's incremental cost proposal forecasts future revenue requirements to determine the future sales revenue for the Company. This forecast separates power and non-power cost assumptions to estimate these costs. The second component includes adjustments to tariff riders,[118] which are additional charges that allow the Company to recover specific costs not included in standard rates.

Power Cost Modeling

Avista uses the Aurora model to estimate the power cost component of the WASR, much like it is used to determine the power cost component of the revenue requirement in GRC filings. Specifically, Avista simulates its total system generation, contractual rights, and obligations to serve customer load in a least cost manner, accounting for market opportunities to lower customer costs (i.e., rates). Some material methodologies differ in the way the model is applied to rate proceedings versus the CETA power cost modeling, such as using forecasted weather adjusted loads. These methodology differences are required to reflect an accurate estimate of normalized power cost for this four-year period, as opposed to the power cost forecast used for ratemaking, which utilizes one or two near-term years.

To estimate Washington customer's share of power cost, Avista allocates cost using the PT ratio. Historically, Avista has used the PT ratio to allocate electric costs between Washington and Idaho. Avista includes the Aurora study and the summary results as part of the incremental cost calculation in Confidential Appendix H.

Non-Power Costs & Tariff Riders

Power supply costs are a part of the total cost to serve customers' energy. Other non-power costs include transmission, distribution, and administrative/general expenses; these costs are not directly impacted by the CETA legislation. To estimate these costs, Avista used the average increase from non-power supply costs between the 2021 and 2026 rate years, which resulted in an increase of 4.54% each year.

[118] https://www.myavista.com/about-us/our-rates-and-tariffs/washington-electric.

Portfolio Analysis

Avista conducted multiple studies to determine what resource actions a planning model would select given Avista's future resource needs. These studies were conducted based upon the 2025 IRP's resource planning model but updated to reflect assumptions discussed in the Updated Portfolio Analysis for the 2025 CEIP section. As proposed clean energy targets are satisfied with existing resources, Avista's resource needs involve meeting resource adequacy or peak load requirements. CETA's legislation requires two portfolios to demonstrate the incremental cost of complying – the Reasonably Available and Alternative Lowest Reasonable Cost portfolios. As there are limited resources available to meet peak loads within the next four years and with the inclusion of law-required cost adders, the two portfolios meeting system capacity needs were found to be nearly identical.[119] As described in Figure No. 10.1 below, Avista is using the same resource portfolio assumptions in both studies to conduct the incremental cost analysis, with the exception of foregoing REC sales to meet clean energy targets and the NCIF spending targets.

Figure No. 10.1: CEIP Incremental Cost Comparison Assumptions

Reasonably Available Portfolio	Alternative Lowest Reasonable Cost Portfolio
▪ CETA clean energy targets	▪ No CETA clean energy targets
▪ Considers past CETA driven resource additions	▪ Considers past CETA driven resource additions
▪ Includes two HB1819 Solar/BESS projects	▪ Includes two HB1819 Solar/BESS project
▪ Includes NCIF spending targets	▪ No NCIF spending targets
▪ Resource decisions based on Social Cost of Greenhouse Gas	▪ Resource decisions based on Social Cost of Greenhouse Gas
▪ Energy Independence Act targets included	▪ Energy Independence Act targets included

Reasonably Available Portfolio

The Reasonably Available portfolio includes requirements for CETA clean energy targets and the EIA. For new resources it includes currently contracted resource additions, two SSHB1814 solar and BESS projects,[120] and demand response programs. The Reasonably Available portfolio does not include any additional generating resources outside of the two proposed SSHB1814 solar and

[119] Models for these simulations are available in Confidential Appendix H.
[120] Projects are dependent on SSHB1814 and WSU funding availability and approval.

BESS systems described in Renewable Energy | Additional Actions section. While new resources are needed to meet peak load demand, the additions' sizes and costs are unknown, as proposals are currently being evaluated in the RFP process. Market purchases are assumed for any generation shortfalls which the RFP is intended to supply.

Avista also includes the demand response selections in this Reasonably Available portfolio analysis as shown in Table No. 10.1 below. These projects are expected to have an annual cost impact of $2.4 million by 2029 and are based on the updated analysis to set the proposed DR targets in the Demand Response | Specific Targets & Actions section. It is unknown if these savings will materialize. Demand response resource selection and any updates to these targets will be discussed in the 2027 Biennial CEIP.

Table No. 10.1: Demand Response Selection 2026-2029 (MW-Winter)

Program	2025 CEIP
Customer BESS	1.0
Behavioral	2.1
Third Party Contracts	10.8
Time of Use (TOU) Rate (Opt-in)	2.2
Electric Vehicle TOU	0.8
Peak Time Rebate	4.8
Variable Peak Pricing	0.0
Total	**21.6**

The main difference between this Reasonably Available portfolio's cost forecast and the Alternative Lowest Reasonable Cost's forecast is the inclusion of the NCIF spending targets and the CEIP-related labor and non-labor expenses which are estimated with the following cost impacts by year in Table No. 10.2 and the requirements to retire RECs to comply with clean energy targets.

Table No. 10.2: 2025 CEIP | Estimated CETA Deferral Costs[121]

Year	Cost (Millions $)
2026	$5.49
2027	$5.50
2028	$5.21
2029	$5.21
Total	**$21.41**

[121] Cost estimates in this table are subject to change as the Company anticipates including CETA deferred labor expenses in its 2026 GRC.

Alternative Lowest Reasonable Cost Portfolio

The Alternative Lowest Reasonable Cost portfolio includes the same resources included in the Reasonably Available portfolio. The only difference between these plans includes retiring RECs to meet clean energy targets and the NCIF spending targets. Avista developed the Alternative Lowest Reasonable Cost portfolio in two steps. The first step is to determine the 2026 to 2029 resource portfolio using the PRiSM model from the 2025 IRP process, while the second step involves running the portfolio through the Auroa model. As described in the Updated Portfolio Analysis for the 2025 CEIP, the resources selected within this updated modeling for the CEIP were similar enough to the Reasonably Available portfolio, resulting in using the same portfolio. Although Avista could have included placeholder resources for potential RFP selections, the Company chose not to, as unknown costs and sizes would not have meaningfully changed the incremental cost analysis or altered the resource portfolios.

From a resource selection point of view, the similar results between the Alternative Lowest Reasonable Cost and the Reasonably Available portfolios stem from the SCGHG requirement and the economic hurdle for natural gas plants to overcome. Given Avista's ability to meet clean energy standards with existing renewable resources under its control, no resource differentiation resulted in this comparison. However, when Avista acquires the necessary capacity resources through the RFP, the CEIP methodology of applying a SCGHG pricing requirement on natural gas facilities will not apply, but the CCA allowance pricing will be used. This Alternative Lowest Reasonable Cost portfolio also found both the solar and BESS projects to be cost effective due to the state's SSHB1814 utility tax credits. Lastly, the same demand response programs were economic as in the Reasonably Available portfolio due to the immediate need for new capacity resources.

For energy efficiency, Avista chose not to model a reduction in energy efficiency savings for the Alternative Lowest Reasonable Cost portfolio due to the immaterial difference in savings between the Reasonably Available portfolio's result during the 2025 IRP process. A 2025 IRP study that estimated the impact of removing clean energy targets from the long-term portfolio analysis found by the end of 2029 without the clean energy targets energy efficiency would be 0.08% lower. Avista finds this result immaterial. The main reason for this conclusion is avoided cost for energy efficiency due to energy, capacity, and SCGHG pricing creates a high enough price to justify most

of the available energy efficiency programs. Avista's 2021 CEIP also did not use a different energy efficiency amount for these two studies for the same reasons.

An aspect of Alternative Lowest Reasonable Cost portfolio that is often overlooked is the value of selling excess clean energy resources for the benefit of customers, after the EIA requirements are satisfied. Avista includes the continued sale of excess RECs and selling specified renewable power to lower power supply cost and customer rates. This is the main cost difference between the Alternative Lowest Reasonable Cost and the Reasonably Available portfolio. For this analysis, Avista prices RECs using the pricing shown in Table No. 10.3 below. The REC prices for hydro resources assume an unbundled REC pricing seen in today's marketplace from REC brokers. The price for non-hydro RECs is derived from the CCA price forecast from the 2025 IRP ($40 to $48 per metric ton) and then multiplies this price by 0.432, the conversion factor from metric ton to MWh used in the CCA for unspecified power purchases. This price estimates reflect the opportunity cost of what Avista may have sold the energy for absent being required to retire the RECs for CETA.

Table No. 10.3: REC Pricing & Total Cost Impact

Year	Hydro ($/MWh)	Non-Hydro ($/MWh)	Total Cost Impact (Millions $)
2026	$2.25	$17.66	$10.1
2027	$2.30	$19.01	$11.6
2028	$2.34	$20.03	$12.0
2029	$2.39	$21.34	$13.0

Incremental Cost Cap Analysis

The incremental cost cap calculation requires a WASR for 2025 as the base year, and forecasted 2026 through 2029 WASR, these forecasts are shown in Table No. 10.4. For 2025 and 2026, these revenues are based on rates approved during prior rate proceedings.[122] Beyond 2026, WASR forecasts are based upon the principles used in rate proceedings and assume CETA energy targets and specific actions are not required. Avista includes tariff rider estimates for each of the five years to reflect changes to base rates. Overall, without clean energy targets, customer revenues (or cost to customers) are expected to increase an average of 6% per year through 2029. While non-power supply costs are assumed to increase by 4.4% per study assumptions, the remaining increases are

[122] Final Order 08 in Docket UE-240006 et. al.

due to power supply costs being higher than the baseline amounts. These increases are driven by Colstrip exiting the system after 2025 and lower expected wholesale energy sales revenue compared to existing benefits included in rates.

Table No. 10.4: Alternative Lowest Reasonable Cost | WA Revenue Requirement Estimate

Item	($ Millions)				
	2025	2026	2027	2028	2029
WASR	$732	$769	$867	$892	$925
Annual Cost Percent Change		5.0%	12.7%	2.9%	3.7%
Four-Year Amortized Annual Increase					**6.0%**

Utilities must calculate the average annual threshold amount for determining eligibility for reliance on RCW 19.405.060(3) as an alternative means of compliance. The average annual threshold amount is equal to a 2% increase to customers over the utility's WASR from each previous year, divided by the number of years in the period. For a period consisting of four years, the mathematical formula for the annual threshold amount is:

$$\text{Annual Threshold Amount} = \frac{(WASR_0 \times 2\% \times 4) + (WASR_1 \times 2\% \times 3) + (WASR_2 \times 2\% \times 2) + (WASR_3 \times 2\%)}{4}$$ [123]

Using the above compounding formula, the four-year cost-cap for Avista is $157.2 million as shown in Table No. 10.5, using the forecasted WASR within the Alternative Lowest Reasonable Cost portfolio. For Avista to use the cost cap alternative compliance, the Reasonably Available portfolio's incremental cost must exceed the $157.2 million threshold over the four-year period.

Table No. 10.5: Incremental Cost of Compliance

Item	($Millions)				
	2025	2026	2027	2028	2029
WASR	**$732**	**$769**	**$867**	**$892**	**$925**
Cost Cap Calculation					
Year 1		$14.6	$14.6	$14.6	$14.6
Year 2			$15.4	$15.4	$15.4
Year 3				$17.3	$17.3
Year 4					$17.8
Annual Cost Cap		**$14.6**	**$30.0**	**$47.4**	**$65.2**
Four-Year Incremental Cost Cap					**$157.2**

[123] WAC 480-100-660(2).

The Reasonably Available portfolio analysis for the 2026-2029 implementation period uses the same resource portfolio as the Alternative Lowest Reasonable Cost portfolio as described above. The WASR estimates differ because the Reasonably Available portfolio does not include REC sales at the same level to meet clean energy targets and includes NCIF and other CEIP costs as shown in Table 10.2. The resulting WASR forecast is shown in Table No. 10.6. The difference between the WASR of the two scenario forecasts results in an increase in customer costs of $68 million. This amount is well below the $157.2 million cost cap. Given this result, Avista does not expect to use the cost cap provisions for compliance with the clean energy standards in 2026 through 2029.

Table No. 10.6: Reasonably Available | Washington WASR Estimate

Item	($ Millions)				
	2025	2026	2027	2028	2029
WASR	$732	$785	$884	$909	$943
Annual Cost Percent Change		7.1%	12.6%	2.9%	3.8%
Four-Year Amortized Annual Increase					**6.5%**
Alternative WASR	**$732**	**$769**	**$867**	**$892**	**$925**
Annual Incremental Cost		$16	$17	$17	$18
Four-Year Incremental Cost					**$68**

Alternative Compliance

Through December 31, 2044, utilities may satisfy up to 20% of their obligation in meeting CETA's clean energy standards with an alternative compliance mechanism. Alternative compliance may include any combination of the following:

- Making alternative compliance payments
- Using unbundled RECs that haven't previously been counted
- Investing in energy transformation projects
- Using electricity from an energy recovery facility using municipal solid waste

In determining incremental cost compliance options, utilities must provide evidence that an alternative compliance option was used and that investment in energy efficiency or conservation, renewable resources, and non-emitting electric generation was maximized before relying on these alternative compliance options. Alternative compliance options must align with options allowed under RCW 19.405.040 (1)(b). Avista does not anticipate implementing any alternative compliance options for this CEIP interim 2026-2029 period.

Early Action Credit

This provision authorized in RCW 19.405.040(11) allows multistate utilities with less than 250,000 customers, who close coal fired facilities prior to January 1, 2025, count the reduced megawatt-hours toward meeting the 2030 compliance obligation. As Avista has more than 250,000 customers, it is not eligible for this credit and does not propose using it.

11. 2021 CEIP & 2023 Biennial Conditions

Overview

For the 2021 CEIP, the Commission adopted 38 conditions[124] across a variety of CEIP and IRP-related topics. In the 2023 Biennial CEIP, the Company provided an update for each condition,[125] resulting in the modification of Condition 5 and the addition of Condition 39. The following information provides clarification for each condition status provided in Table No. 11.1 below.

- **Complete**: Fulfilled as required for the 2021-2025 implementation period, with no further action required in subsequent CEIPs or CEIP updates.
- **2025 CEIP Inclusion**: Fulfilled and included in the 2026-2029 implementation period, and the Company will inherently include them in future implementation periods. No action is required by the Commission as these conditions are carried forward from the 2021 CEIP.
- **Modify**: The Company fulfilled the conditions as written in the 2021-2025 implementation period and proposes modifications to the language for the 2026-2029 and future implementation periods.
- **Remove - No Longer Relevant**: The Company fulfilled these conditions to the best of its abilities during the 2021-2025 implementation period; however, the condition did not yield actionable or meaningful results. As such, the Company deems these conditions irrelevant to the 2025 CEIP implementation period and future implementation periods.

As listed in Table No. 11.1 below, the Company has satisfied the requirements of 33 conditions that were specific to the 2021 CEIP, with no additional action required. While developing the 2025 CEIP, the Company discussed many of the 2021 CEIP conditions with its advisory groups, particularly the adaptation of conditions related to CBIs in the 2025 CEIP. The result of these discussions led to the proposed CBIs provided in Chapter 5. For the 2025 CEIP, the Company provided updates for conditions 5, 11, and 12, as discussed in the July 2025 CEIP Advisory Group meeting. Avista proposes modifications to Condition 35 for the 2026-2029 implementation period and future compliance periods. The conditions that are no longer relevant and proposed for removal are described in Table 11.2 below.

[124] Orders 01 and 02 issued in Docket UE-210628.
[125] https://www.myavista.com/-/media/myavista/content-documents/about-us/ceip/210628avarpt-biennial-ceip-1112023.pdf

Table No. 11.1: 2021 CEIP & 2023 Biennial CEIP Condition Status

Condition Status	Count	Condition Numbers
Complete	33	2-4, 7-10, 13-34, 36-39
2025 CEIP Inclusion	3	5, 11, 12
Modify	1	35
Remove - No Longer Relevant	2	1, 6
Total	**39**	

While the Company satisfied its 2021 CEIP's conditions as written for Condition 35, it proposes a modification in the condition language as discussed in Table No. 11.2 below. Avista proposes the removal of Conditions 1 and 6 as they are not relevant to the 2026-2029 implementation period or future compliance periods. The conditions relating to CBI metrics were discussed at the April 2025 CEIP Advisory Group meeting and summarized in Appendix F.

Table No. 11.2: Proposed Conditions for Modifcation & Removal

#	Condition	Status	Avista Comment
1	Once the Commission has adopted final "use" rules in Docket UE-210183, in its Clean Energy Implementation Plan (CEIP) docket, if different than Table 2.1 on page 2-3 in the CEIP, Avista shall update its CEIP to reflect the percentage of retail sales of electricity supplied by non-emitting resources and renewable resources in 2020 within 30 days.	Remove - No Longer Relevant	Although "use" rules are pending, the recalculation of 2020's renewable and non-emitting resources as a percentage of retail sales isn't relevant to the targets proposed in the 2025 CEIP or future CEIPs.
6	In its 2023 Biennial CEIP Update and in future CEIPs, Avista will include quantitative and qualitative risk analysis, if risk is used to justify deviating from the lowest reasonable cost solution that complies with CETA.	Remove - No Longer Relevant	As the term risk is not defined, it is difficult to know what risk to measure. In the 2025 CEIP, Avista is not using risk to justify deviating from the lowest reasonable cost solution for meeting renewable targets.
35	Avista recognizes that not all CBIs will be relevant to resource selection (for example, some CBIs pertain to program implementation). For its 2023 IRP Progress Report, and future IRPs and progress reports, Avista should discuss each CBI and where	Modify	As CBIs are consistent across the four-year period, duplicative information is reflected in the IRP and IRP Progress Reports. Avista proposes retaining CBIs that are relevant to resource selection in the IRP, and the

	the CBI is not relevant to resource selection, explain why		removal of this requirement from IRP Progress Reports. Proposed language for 2025 CEIP: *Avista recognizes that not all CBIs will be relevant to resource selection (for example, some CBIs pertain to program implementation). For future IRPs, excluding IRP Progress reports, Avista should discuss each CBI and where the CBI is not relevant to resource selection, explain why.*

12. Washington CEIP Regulatory Requirements

For ease of reference, reflecting the Company's compliance with each CEIP rule, the following Tables No. 12.1 through 12.17 contain the Washington Administrative Code (WAC) and appropriate link to CEIP section where the requirement is discussed.

Table No. 12.1: Filing Requirements

WAC Rule	Requirement	CEIP Discussion
WAC 480-100-640 (1)	File with the commission a CEIP by October 1, 2021, and every four years thereafter. The CEIP describes the utility's plan for making progress toward meeting the clean energy transformation standards, and is informed by the utility's clean energy action plan	This CEIP begins the second CEIP implementation period from 2026-2029.

Table No. 12.2: Interim Targets

WAC Rule	Requirement	CEIP Discussion
WAC 480-100-640 (2)(a)	Propose a series of interim targets that: Demonstrate how the utility will make reasonable progress toward meeting the standards identified in WAC 480-100-610 (2) and (3); Are consistent with WAC 480-100-610(4); and Each utility must propose interim targets in the form of the percent of forecasted retail sales of electricity supplied by non-emitting and renewable resources prior to 2030 and from 2030 through 2045.	Renewable Energy | Interim 2026-2029 Targets
WAC 480-100-640 (2)(b)	Include the utility's percentage of retail sales of electricity supplied by non-emitting and renewable resources in 2020 in the first CEIP it files.	Although not applicable for this CEIP, please see Target's Forecasted Distribution of Costs & Benefits
WAC 480-100-640 (2)(c)	Each interim target must be informed by the utility's historic performance under median water conditions	Renewable Energy Interim Targets & Specific Actions

Table No. 12.3: Specific Targets

WAC Rule	Requirement	CEIP Discussion
WAC 480-100-640 (3)(a)	Propose a series of specific targets for energy efficiency, demand response, and renewable energy. The energy efficiency target must encompass all other energy efficiency and conservation targets and goals the commission requires the utility to meet. The specific energy efficiency target must be described in the utility's biennial conservation plan required in chapter 480-109 WAC. The utility must provide forecasted distribution of energy and nonenergy costs and benefits. The utility must provide proposed program details, program budgets, measurement and verification protocols, target calculations, and forecasted distribution of energy and nonenergy costs and benefits for the utility's demand response target. The utility must propose the renewable energy target as the percent of retail sales of electricity supplied by renewable resources and must provide details of renewable energy projects or programs, program budgets as applicable, and forecasted distribution of energy and nonenergy costs and benefits.	Energy Efficiency | Specific Targets Energy Efficiency | Target's Forecasted Distribution of Costs & Benefits Demand Response | Target's Forecasted Distribution of Costs & Benefits Renewable Energy | Target's Forecasted Distribution of Costs & Benefits
WAC 480-100-640 (3)(b)	The utility must provide a description of the technologies, data collection, processes, procedures, and assumptions the utility used to develop the targets in this subsection. The utility must make data input files that are used to determine relevant targets available in native format and in an easily accessible format as an appendix.	Demand Response Targets | Assumptions & Methodologies

Table No. 12.4: Customer Benefit Data

WAC Rule	Requirement	CEIP Discussion
WAC 480-100-640 (4)(a)	Identify highly impacted communities using the cumulative impact analysis pursuant to RCW 19.405.140 combined with census tracts at least partially in Indian country;	Named Communities
WAC 480-100-640 (4)(b)	Identify vulnerable populations based on adverse socioeconomic factors and sensitivity factors developed through the advisory group process and public participation plan described in WAC 480-100-655, describing and explaining any changes from the utility's most recently approved CEIP	Vulnerable Populations
WAC 480-100-640 (4)(c)	Include proposed or updated customer benefit indicators and associated weighting factors related to WAC 480-100-610 (4)(c) including, at a minimum, one or more customer benefit indicators associated with energy benefits, nonenergy benefits, reduction of burdens, public health, environment, reduction in cost, energy security, and resiliency. Customer benefit indicators and weighting factors must be developed consistent with the advisory group process and public participation plan described in WAC 480-100-655. The utility should describe and explain any changes in customer benefit indicators or weighting factors from its most recently approved CEIP	Customer Benefit Indicators

Table No. 12.5: Specific Actions

WAC Rule	Requirement	CEIP Discussion
WAC 480-100-640 (5)	Each CEIP must include the specific actions the utility will take over the implementation period. The specific actions must meet and be consistent with the clean energy transformation standards and be based on the utility's clean energy action plan and interim and specific targets. Each CEIP must present the specific actions in a tabular format that provides the following information for each specific action	Renewable Energy | Specific Actions Energy Efficiency | Specific Actions Demand Response | Specific Actions
WAC 480-100-640 (5)(a)	The general location, if applicable, proposed timing, and estimated cost of each specific action or remaining resource need, including whether the resource will be located in highly impacted communities, will be governed by, serve, or otherwise benefit highly impacted communities or vulnerable populations in part or in whole	Renewable Energy | Specific Actions Benefits, Burdens & Risk Assessment Energy Efficiency | Specific Actions Benefits, Burdens & Risk Assessment Demand Response | Specific Actions Benefits, Burdens & Risk Assessment
WAC 480-100-640 (5)(b)	Metrics related to resource adequacy including contributions to capacity or energy needs	Updated Portfolio Analysis for the 2025 CEIP
WAC 480-100-640 (5(c)	Customer benefit indicator values, or a designation as nonapplicable, for every customer benefit indicator described in subsection (4)(c) of this section	Renewable Energy | Specific Actions Benefits, Burdens & Risk Assessment Energy Efficiency | Specific Actions Benefits, Burdens & Risk Assessment Demand Response | Specific Actions Benefits, Burdens & Risk Assessment

Table No. 12.6: Narrative Description of Specific Actions

WAC Rule	Requirement	CEIP Discussion
WAC 480-100-640 (6)(a)	The CEIP must describe how the specific actions: Demonstrate progress toward meeting the standards identified in WAC 480-100-610 (2) and (3)	Renewable Energy | Specific Actions Energy Efficiency | Specific Actions Demand Response | Specific Actions
WAC 480-100-640 (6)(b)	Demonstrate consistency with the standards identified in WAC 480-100-610(4) including, but not limited to: An assessment of current benefits and burdens on customers, by location and population, and the projected impact of specific actions on the distribution of customer benefits and burdens during the implementation period; A description of how the specific actions in the CEIP mitigate risks to highly impacted communities and vulnerable populations and are consistent with the longer-term strategies and actions described in the utilities most recent IRP and CEAP as required by WAC 480-100-620 (11)(g) and (12)(c)	Renewable Energy | Specific Actions Benefits, Burdens & Risk Assessment Energy Efficiency | Specific Actions Benefits, Burdens & Risk Assessment Demand Response | Specific Actions Benefits, Burdens & Risk Assessment
WAC 480-100-640 (6)(c)	Are consistent with the proposed interim and specific targets	Renewable Energy | Interim Targets & Specific Actions Energy Efficiency | Specific Targets & Actions Demand Response | Specific Targets & Actions
WAC 480-100-640 (6)(d)	Are consistent with the utility's integrated resource plan	Renewable Energy | Interim Targets & Specific Actions Energy Efficiency | Specific Targets & Actions Demand Response | Specific Targets & Actions

WAC 480-100-640 (6)(e)	Are consistent with the utility's resource adequacy requirements, including a narrative description of how the resources identified in the most recent resource adequacy assessment conducted or adopted by the utility demonstrates that the utility will meet its resource adequacy standard	Updated Portfolio Analysis for 2025 CEIP
WAC 480-100-640 (6)(f)	Demonstrate how the utility is planning to meet the clean energy transformation standards at the lowest reasonable cost including, but not limited to: A description of the utility's approach to identifying the lowest reasonable cost portfolio of specific actions that meet the requirements of (a) through (e) of this subsection, including a description of its methodology for weighing considerations in WAC 480-100-610(4); A description of the utility's methodology for selecting the investments and expenses it plans to make over the next four years that are directly related to the utility's compliance with the clean energy transformation standards, consistent with RCW 19.405.050 (3)(a), and a demonstration that its planned investments represent a portfolio approach to investment plan optimization; Supporting documentation justifying each specific action identified in the CEIP.	Updated Portfolio Analysis for 2025 CEIP

Table No. 12.7: Projected Incremental Cost

WAC Rule	Requirement	CEIP Discussion
WAC 480-100-640 (7)	Each CEIP must include a projected incremental cost as outlined in WAC 480-100-660(4)	Incremental Cost & Alternative Compliance

Table No. 12.8: Public Participation

WAC Rule	Requirement	CEIP Discussion
WAC 480-100-640 (8)	Each CEIP must detail the extent of advisory group and other public participation in the development of the CEIP as described in WAC 480-100-655 including, but not limited to, the summary of advisory group member comments described in WAC 480-100-655 (1)(i).	Public Participation

Table No. 12.9: Alternative Compliance

WAC Rule	Requirement	CEIP Discussion
WAC 480-100-640 (9)	The utility must describe any plans it has to rely on alternative compliance mechanisms as described in RCW 19.405.040 (1)(b)	Alternative Compliance

Table No. 12.10: Early Action Coal Credit

WAC Rule	Requirement	CEIP Discussion
WAC 480-100-640 (10)	If the utility proposes to take the early action compliance credit authorized in RCW 19.405.040(11), the utility must satisfy the requirements in that statutory provision and demonstrate that the proposed action constitutes early action by presenting the analysis in subsection (6) of this section both with and without the proposed early action. The utility must compare both the proposed early action and the alternative against the same proposed interim and specific targets.	Early Action Credit

Table No. 12.11: Biennial CEIP Update

WAC Rule	Requirement	CEIP Discussion
WAC 480-100-640 (11)	The utility must make a biennial CEIP update filing on or before November 1st of each odd-numbered year that the utility does not file a CEIP. The CEIP update may be limited to the biennial conservation plan requirements under	The Company will file its 2027 Biennial CEIP in accordance with this rule no later than November 1, 2027.

	chapter 480-109 WAC. The utility must file its biennial CEIP update in the same docket as its most recently filed CEIP and include an explanation of how the update will modify targets in its CEIP. In addition to its proposed biennial conservation plan, the utility may file in the update other proposed changes to the CEIP as a result of the integrated resource plan progress report.	

Appendix A –
Federal Grant Application Status

Grant	Avista Project	Est. Grant $	Approx. Match $	Grant Phase	Status	Direct/Indirect
Idaho Office of Energy and Mineral Resources	Rural EDGE – Elk City	**$1,500,000**	$3,468,355	Application submitted		Direct
Energy Improvements in Rural or Remote Areas - Fiscal Year 2025 Release	Concept complete	$2M - $50M	5% - 50%	Concept submitted	Program cancelled by DOE	Direct
DOE Office of energy Efficiency and Renewable Energy (EERE) Connected Communities 2.0	Deferred	Up to $6M	Up to $1.8M	Deferred	No concept paper submitted. Timing of the application period and priorities of other work did not allow enough time to submit a concept paper.	Direct
WA DOC Families Clean Energy Credits Grant Program	$200 Bill credits available to low-income customers (below 80% AMI first, then below 150% AMI)	$10.6M		Project execution	Grants continue to be applied to customer accounts	Direct
Grid-Enhancing Data Analytics Demonstrations for Operations, Monitoring and Control	Utility Digital Alliance (UDA)	$1M	$400K	Not awarded	Application not awarded	Direct
Water Power Technologies Office (Topic Area 3) - Strategies to Increase Hydropower Flexibility	Attributing Value to Coordinated Operation of Large Cascading Hydro Systems, and the Incremental Values of	$1,492,092	$390K	Awarded; in negotiations	Currently in negotiations with DOE	Direct

	Pumped Storage					
DOE Grid Resilience & Innovation Partnerships (GRIP) Round 2	Lolo-Oxbow Transmission Upgrade & Optimization (Topic Area 2)	$54M (Avista's share)	$55M	Awarded; in negotiations	Partnership with Idaho Power Currently in negotiations with DOE	Direct
DOE Grid Resilience & Innovation Partnerships (GRIP) Round 2	Wildfire/All Hazards Consortium (Topic Area 1)	$52M	$46M	Not awarded	Partnership with Portland General Electric, Consumers Power, Forest Grove Light & Power, Blachly-Lane Electric Cooperative, Clark Public Utilities, Northern Lights, Inc., Douglas Electric Cooperative, Inland Power & Light Company, Kootenai Electric Cooperative, Northwestern Energy Concept submitted on 1/12/2024 and full application submitted on 4/14/2024. Expected DOE response Summer/Fall 2024.	Direct
DOE Grid Resilience & Innovation Partnerships (GRIP) Round 2	Mobile Batteries for Adaptive Resilience (Topic Area 2)	$17M	$17M	Not awarded	Partnership with Portland General Electric Concept submitted on 1/12/2024 and full application submitted on 5/23/2024. Expected DOE response	Direct

					Summer/Fall 2024.	
DOE Maintaining & Enhancing Hydroelectricity Incentives Sec. 247	Projects across 3 categories: Dam Safety, Environmental, Grid Resiliency Selected for application: • Long Lake Modernization • Cabinet Gorge Fishway • Little Falls Fishing Platform – Not eligible	Up to $5M per Project	No	Awarded; in negotiations	Long Lake Modernization awarded = $5M Cabinet Gorge Fishway = $3,687,000 Currently in negotiations with DOE	Direct
DOE Hydroelectric Efficiency Improvement Incentives Sec. 243	• Post Falls • Upper Falls • Noxon Rapids	Up to $5M per Project	No	Awarded; in negotiations	Post Falls awarded = $5M Upper Falls and Noxon were declined an award. Currently in negotiations with DOE	Direct
Energy Improvements in Rural or Remote Areas	Spokane Tribe Geothermal Project	Up to $5M	No	Not awarded	Pre-application submitted 7/13/23. Not approved to proceed to full application	Direct
IIJA & Idaho Office of Energy & Mineral Resources (OEMR)	Idaho Energy Resiliency Grant Program – Various Projects in grid hardening, vegetation management	Up to $230K	50% Cost-Share	Deferred	Received a $230K grant in Round 1. Round 2 application process did not allow enough time to submit.	Direct

DOE Grid Resilience & Innovation Partnerships (GRIP) Round 1	Wildfire Risk Mitigation Program	$50M	$50M	Not awarded	Submitted 4/6/23, Notified in Oct. that we were not awarded in this round – will apply in next round of funding	Direct
DOE Grid Resilience & Innovation Partnerships (GRIP) Round 1	Community Grid Platform – Digital Substation	$17M	$19M	Not awarded	Submitted 3/17/23, Notified in Oct. that we were not awarded in this round – will apply in next round of funding	Direct
WA EV Charging Program	• Public Charging • Fleet Depot & Workplace Charging • Multi-Family Housing	$3M	No, grant covers cost-share	Project execution	Applications Due Dec. 1, 2023. In January 2024, Avista learned that we received a $2.1M grant for charging stations	Direct
WA Dept of Commerce, DOE Clean Energy Fund 1-4	• Energy Storage • Microgrid • Eco-District HUB • Transportation Electrification • Avista/PNNL Digital Lab • Spokane Tribe Microgrid	$12M	Typically, 50%	Project execution	Since 2014, we have received various grants.	Direct
DOE Connected Communities	EDO/Avista Connected Communities Program	$1.4M	$3.2M	Project execution	Awarded 10/21/23	Direct
Solar Energy Technologies Office and Wind Energy Technologies Office	INTENT submitted an application that Avista is participating			Full application submitted		Indirect

	in as a subrecipient					
DOE Grid Resilience & Innovation Partnerships (GRIP) Round 2 **Prime Recipient: Montana Department of Commerce**	North Plains Connector Interregional Innovation (NPCII)	$700M (Avista share $60.5M)	Avista's investment of $500M to receive $60.5M and 10% ownership	Awarded by DOE 09/12/2025	Under Grid United, the North Plains Connector is entering the permitting phase and is initiating regulatory filings, with approvals expected in 2026. Construction is expected to commence in 2028, and the line is expected to be operational in 2032. Avista's potential ownership per the signed MOU is 10%.	Indirect
DOE Grid Resilience & Innovation Partnerships (GRIP) Round 2 **Prime Recipient: Montana Department of Commerce**	Colstrip Transmission System	$8.4M Avista share	Avista investment of $50M to receive $8.4M share	Awarded by DOE 09/12/2025	Project is pre-construction design amongst joint CTS owners. Avista's current ownership share of CTS is approximately 12%.	Indirect
DOE Office of energy Efficiency and Renewable Energy (EERE)	Geothermal Technologies Office Geothermal Resources' Value in Implementing Decarbonization (GTO GRID)	$0	~$100K	Not awarded	Avista submitted a LOS for this application	Indirect

WA DOC Clean Energy Grants Round 3	Skils'kin Solar plus Battery Storage	Avista's portion unknown currently		Not awarded	Avista submitted a LOS on 6/7/2024 in support of their application. Avista involvement unknown until feasibility study and interconnection request.	Indirect
DOE Office of energy Efficiency and Renewable Energy (EERE)	Spokane Tribe Microgrid Resiliency Station (Wellpinit)	$1.2M	$1,290,000	Award negotiation	Subcontractor for the design and build.	Indirect
WA DOC Clean Energy Grants Round 1	Spokane Tribe Microgrid Resiliency Station (Wellpinit)	$2.75M		Award negotiation	Subcontractor for the design and build.	Indirect
WA DOC Climate Pollution Reduction Grants Program	Vehicle-to-grid integration for resilience Implementation Grants General Competition	$6.7M	$616,250	Not awarded	Avista submitted project scope as part of an application the City of Spokane submitted to the State of WA for a federal grant	Indirect
Economic Development Administration (EDA) Regional Technology and Innovation Hubs Phase 2	American Aerospace Materials Technology Center			Not awarded	In Phase 2, EDA will award implementation grants to 5-10 Designated Tech Hubs, with each of those Hubs receiving approximately $40-$70 million across approximately 3-8 projects. Avista is supporting as part of the region.	Indirect
DOE Grid Resilience &	Grid Copilot for an	$2.5 M		Not awarded	Partnership with GE Vernova.	Indirect

Innovation Partnerships (GRIP) Round 2	Electrified, Decarbonized & Empowering Grid				Avista is a subrecipient.	
US Dept of Energy & PNNL	Field demonstration & evaluation of Distributed Grid Sensor Service framework in the Energy Data Exchange Platform	$1M		Project execution		Indirect
DOE Grid Resilience & Innovation Partnerships (GRIP) Round 1	UMS Group->eSource Advanced Solutions for Wildfire Mitigation (technology for wildfire mitigation and detection)	$2.4M	$1.2M	Stopped negotiations	Avista decided to step out of negotiations for this grant award with eSource.	Indirect
National Science Foundation	Regional Energy Platform for Grid Resiliency, Innovation and Decarbonization (Intent)	$1M		Not awarded for round 2 funding		Indirect
WA DOC Rural Clean Energy Fund 5 Grid	Spokane Tribe Microgrid	$18K		Awarded	Avista is a subrecipient	Indirect

Appendix B –
2025 CEIP Comment Matrix

Appendix B:

2025 Clean Energy Implementation Plan | Comment Matrix

This matrix summarizes comments received throughout the planning process of the 2025 CEIP, including the monthly CEIP Advisory Group meetings (January-July 2025), the quarterly public participation meetings, and through the comment period for the Draft 2025 CEIP (August 1-31, 2025).

CEIP Advisory Group Meeting #3 – March 18, 2025, from 9-10:30 am PST (based on February 2025 meeting topics)

Commenter	Topic	Comment	Avista Response
Commission Staff	2021 CEIP Conditions	Condition #2 as listed is Condition #1 (final use rules) Create a table based on existing draft use rules	Avista apologizes for the error; Condition #1 is correct. Table 2.1 in the 2021 CEIP satisfies this requirement. If use rules change prior to the filing of the 2025 CEIP, Avista will update the table.
Commission Staff	2021 CEIP Conditions	Condition #5 (qualitative & quantitative analysis) applies any time there are new interim renewable targets Avista is expected to "show their work" for justification of proposed interim targets	Avista will provide this analysis on the three renewable energy target scenarios in the May CEIP Advisory Group meeting and in the 2025 CEIP.
Commission Staff	2021 CEIP Conditions	Condition #6 (deviating from the lowest cost interim renewable target based on risk avoidance) AWEC was interested in this condition – ask them if they have thoughts about this	Avista emailed AWEC about the CEIP Advisory Group and has not received a response. Avista's proposed renewable interim targets were not selected based on risk avoidance.
Commission Staff	Demand Response	5 MW of DR is low compared to the 2025 CEIP target of 30 MW DR. Explain how Avista arrived at 5 MW of savings in a single peak hour. Is single peak hour the same as 5 MW of capacity?	5 MW is incremental to the existing 30 MW. The 30 MW was set based on a prior contract Avista had already signed with a large industrial customer. 2024 AEG DR Potential Study with cost-effective programs proposed in the 2025 CEAP. Yes, representing the single peak hour plus the adjacent hours around the peak hour.

Commission Staff	Energy Efficiency	Avista states the EE targets are subject to the 2025 CPA & 2026 – 2027 BCP. Is Avista intending to conduct a new CPA rather than use the one produced by AEG on August 30, 2024?	Avista will not conduct a new CPA. The 2026 – 2027 EE target's asterisk should have read "based on" not "subject to."
Commission Staff	Energy Efficiency	What are the specific actions is Avista planning to take to advance distributional equity through its conservation programs this cycle?	Continue with the Named Communities Investment Fund, allocating $2M annually to supplement non-cost-effective EE programs for Named Communities. Measure equitable distribution of benefits and reduction of burdens through CBIs. Measure EE Named Community program's saturation rate.
Commission Staff	Costs	Do you have a sense of the cost impact for Named Communities for the 2026-2029 CEIP?	An analysis of energy burden for all customers and a projection of how their usage may change will be shared at the May CEIP Advisory Group meeting.
Commission Staff	Costs	What strategies is Avista planning to employ to mitigate the negative impacts and high energy burden?	To mitigate high energy burden, Avista will continue to pursue increasing the saturation rate of the Low-Income Residential Assistance Program (LIRAP).

CEIP Advisory Group Meeting #4 – April 18 9-10:30 am PST (based on March 2025 topics)

Commenter	Topic	Comment	Avista Response
Commission Staff	Energy Burden	This (energy burden) made me think about the intersection between energy efficiency and energy burden for Named Communities. Is there discussion or intent to target those with high energy burden within the LIRAP umbrella? ▪ Low-income weatherization? ▪ Targeted outreach strategy?	**Existing Process** ▪ Customer Action Agencies (CAA) get a weekly report of high usage customers which is 125% of normal or 939 kWh/month, and, ▪ Refer those customers to weatherization programs. **New Programs** ▪ Q4 2025 – Direct install insulation for NC with targeted social media promotion.

Commission Staff	Named Communities	Because the number of people in highly impacted communities is so high, and over half of your electric customers, are you considering something like PSE has done in identifying their deepest need customers?	Avista will evaluate a deepest need designation internally and if applicable, work with advisory groups to determine characteristics.
EAG Member	Public Participation	Looking at the *demographics of who filled out the [CEIP] survey* and thinking about Named Communities increasing to 58%, it seems like you are only getting responses from one segment of the community. You should look at a *strategy to reach more Named Community populations*.	**Existing Process** Offer paper survey in Spanish, Russian, Ukrainian, Marshallese & Arabic at public events and CBO distribution & collection. **Future Process** Discuss additional distribution channels and community partnership opportunities with EAG for increased Named Community survey response.

CEIP Advisory Group Meeting #5 – May 20 9-10:30 am PST (based on April topics)

Commenter	Topic	Comment	Avista Response
Commission Staff	Named Communities	Named Communities include Highly Impacted Communities and Vulnerable Populations. There are a lot of nuances with those two groups, and they can be expanded and looked at more granularly. Staff is pushing for a Deepest Need designation and looking for things such as Avista's 2021 CEIP Condition 10. We would encourage you to talk with PSE as a resource.	2021 CEIP Condition #10 – Action to benefit a subset of Named Communities: ▪ Medical Battery Pilot: portable AC, solar panel kit, battery backup. Existing My Energy Discount's income-threshold tiers address a financial component of Deepest Need. In the 2025 CEIP implementation period, with an update in the 2027 Biennial CEIP, Avista will: ▪ Identify characteristics of Deepest Need designation through collaboration with EAG and other advisory group members, ▪ Implement an action(s) to address inequities, and, ▪ Contacted PSE for a Deepest Need discussion.
Commission Staff	Energy Resiliency	Regarding the Energy Resiliency equity area and the Energy Availability CBI, I want to further discuss resiliency vs.	**Resiliency** Company level: An energy system's capacity to withstand or recover quickly from disruptions/outages.

		reliability at the customer and company level.	Customer level: A *customer's ability to withstand a long outage*; requires assessing factors beyond utility metrics. Individual: Secondary power source. Community: Shelters/community centers ability to help customers endure extended outages. **Reliability** Company: An energy system's ability to maintain power delivery despite uncertainties in operating conditions. Customer: Not applicable.

CEIP Advisory Group Meeting #6 – June 23 8:30-10 am PST (based on May topics)

Commenter	Topic	Comment	Avista Response
EAG Member	CBIs	**Goal:** *Provided 5,040 EV trips by CBOs by 2029* Where did the goal number come from and how did you arrive at that number?	2020-2025 Transportation Electrification Plan 2024 Annual Transportation Electrification Report ▪ Metric Logic: ▪ Historically providing 3 EVs to CBOs annually ▪ CBOs providing avg of 180 trips/ year per EV ▪ Goal: ▪ Provide 3 EVs annually to CBOs ▪ Provide 28 EVs and 5,040 trips by 2029
The Energy Project	CBIs & KLI	Goal: *As baselined against the 2025 disconnection percentage, reduce the percentage disconnects for nonpayment (all customers).* Comment: Disconnections may be part of the "deepest need" designation and knowing this information will be helpful. To	Annual Disconnection Reduction Report 2019 GRC Requirement | Docket UE-190334 Reporting began in 2021 ▪ Total number of KLI disconnections for non-payment ▪ Total number of KLI disconnects for any reason other than non-payment

		do that, we need to continue to track known low income (KLI) for this and the other CBI metrics suggesting KLI removal (Energy Burden CBI).	▪ Total number of KLI customers remotely disconnected ▪ Total number of KLI customers who made a payment to a service representative in the field to avoid disconnection.
Northwest Energy Coalition	General	This process has been excellent so far you do a great job with your advisory groups, while this is not required, I really appreciate how you have walked through the monthly cadence and going over previous month's meetings. Just giving credit where credit is due.	Avista thanks NWEC for their comments.
Commission Staff	General	Echoing what NWEC said, appreciate the chance to go through all of this and hopefully that will help with streamlining the review process and thank you for the slides today, they are very well laid out.	Avista thanks Staff for their comments.

CEIP Advisory Group Meeting #6 – July 8:30-10 am PST (based on June topics and a request for all topics/comments)

Commenter	Topic	Comment	Avista Response
Commission Staff	CBIs	UTC Policy docket A-230217: Include discussion in the CEIP of how Avista is considering the interim policy statement regarding procedural justice (issued 5/12/2025), and any other past or future guidance from this docket.	Avista will include Procedural Justice update in the 2025 CEIP: ▪ Adding link to dockets for IRP & CEIP pages, ▪ Add descriptions of intent of filings, ▪ EEAG and EAAG discussions to determine next steps for compliance, and, ▪ Translation services to be discussed under Public Participation section.
Northwest Energy Coalition	CBIs & Tribal Relations	Is Avista doing separate outreach to and collaboration with the tribal nations in its WA service area about the CEIP? The Commission recently filed Final Order 16 in the PAC CEIP docket (210829) where they encouraged PAC to adopt a	Avista has not conducted specific CEIP outreach to the tribal nations in our Washington service territory: Spokane Tribe & Colville Tribes. Avista's EAG includes a member of the Spokane Tribe. He participated in 2021 (representing the Spokane Tribe) and 2025 (general member) CBI discussions.

		tribal recommendation in its 2025 CEIP: "Work with the Yakama Nation and CRITFC to develop Community Benefit Indicators that reasonably reflect the Yakama Nation's treaty rights and the lives of its people, as expressed through their traditions, culture, and needs." Now is the opportunity to ensure Avista's CBIs and metrics capture the Tribes' interests.	
Nathan South	Renewable Targets	Why was there no discussion/review of the grid-scale renewable generation elements from the IRP? Why does the CEIP not look at alternative scenarios for accelerating grid scale renewable production with the concurrent benefits/trade-offs? What is the roadmap for getting to 100% clean energy by 2045?	The 2025 All-Source RFP submissions will determine cost-effective utility scale resources. Avista is meeting the requirements of CEIP in the least reasonable cost manner through existing resources. See the 2025 Electric IRP for current resource strategy to achieve clean targets. The 2027 Electric IRP will provide updated information.
Commission Staff	Demand Response Target	We reiterate our recommendation to have Avista note that if its demand response specific target will be 5MW over this compliance period, it will adjust the target if the current RFP results in a higher amount of DR. This is important especially in light of the presentation in the May advisory group meeting on changing load and how that might mean DR is well positioned to meet some of that increase.	From the 2025 All-Source RFP, Avista will select all cost-effective submissions. If RFP cost-effective DR solutions provide savings beyond the 55 MW target, Avista will adjust target.
Northwest Energy Coalition	Demand Response Target	In the Feb 18th meeting on slide 20, Avista showed that the DR target for the 2025 CEIP is 5	Assumption is dispatchable, but RFP results will show what's most cost effective.

		MW. In the March 18th meeting, you went into more detail in slides 4-7 (in response to a Staff question) about how that 5 MW target came to be and said the hope is that the RFP will identify 5 additional MWs of DR. Would this 5 MW be a mix of both dispatchable and non-dispatchable DR resources? Or would it most likely only be dispatchable resources?	Non dispatchable: Existing TOU pilots to inform future design.
Northwest Energy Coalition	Named Communities & Energy Burden	In the March 18th meeting on slide 9, Avista responded to a question about the cost impacts for Named Communities in 2026-2029. Avista's response was that "an analysis of energy burden for all customers and a projection of how their usage may change will be shared at the May CEIP Advisory Group meeting." I didn't see this in the April or May meeting presentations. Could we discuss this?	Energy Burden Estimates ▪ By average income level by census tract ▪ Includes electric & dual fuel customers ▪ Prior to financial energy assistance ▪ Includes CEIP incremental costs ▪ Energy Use Estimates Average increase per customer ▪ 2024 energy burden is at 18.4% as a subpopulation of all Avista customers and increases to 25.7% to 29.7% from 2026-2029. Energy usage is increasing
Commission Staff	Energy Resilience CBI	Consider adding energy resilience CBI/metric(s) related to the "indirect" category of the NARUC Resilience Framework document, on page 23 (attached). The value of lost load for different customer types (Named Communities, NC in deepest need, etc.) may be valuable to track, and this document has some resources starting on page 24.	Met with UTC Staff June 11th to discuss. NARUC indirect metric options aren't supported with available data. Avista will provide a narrative for how Avista wholistically approaches resiliency efforts in 2025 CEIP.
Commission Staff	Data Centers & Load Growth	We recommend that in the final CEIP document, Avista include a section discussing the impacts of potential or actual data centers on load growth, and thus	The CEIP is a four-year action plan of specific actions Avista will take based on what is known today. If load increases, proposed 4-year annual targets remain. Avista will discuss this in the 2025 CEIP.

		the possible impacts within this or future compliance periods on any specific targets/actions, if any.	
The Energy Project & Northwest Energy Coalition	CBIs & KLI Reporting	The slide deck from your Apr. 22, 2025 CEIP advisory group meeting: On slide 19, you proposed to modify the CBIs to omit the number of disconnection and disconnection for known-low-income customers. Energy Project: The Energy Project does not support such a change and would like to request that Avista continue report the CBI for "Number and percentage of disconnects for nonpayment by month census tract, All, KLI, NC." NWEC: Similar to The Energy Project, we respectfully ask that Avista continue report the CBI for "Number and percentage of disconnects for nonpayment by month census tract, All, KLI, NC."	Avista will continue to report this information in the Annual Disconnection Reduction Report: ▪ Total number of KLI disconnections for non-payment, ▪ Total number of KLI disconnects for any reason other than non-payment, ▪ Total number of KLI customers remotely disconnected, and, ▪ Total number of KLI customers who made a payment to a service representative in the field to avoid disconnection.
The Energy Project	CBIs & Rebates	On slide 12, Avista proposes to discontinue a CBI for "Named Community residential rebates and those in rental units," and noted that this information was available in its annual conservation report. I did a quick review of Avista's 2023 Annual Conservation Report and could not find this info in that report. Could you please point me to where this information can be found outside of the CBIs?	NC Residential Rebates: ▪ 2024 Annual Conversation Report ▪ Portfolio level distribution of incentives, savings, NEIs (page 7) ▪ Program level distribution of incentives, savings, NEIs (page 30) ▪ Percentage that benefitted Named Communities NC Residential Rebates in Rental Units: ▪ Only reported in the CEIP CBIs ▪ Not an energy efficiency program ▪ To be reported in 2026 Clean Energy Compliance Report

Commission Staff		2021 CEIP Condition #5: We reiterate our recommendation to provide clear discussion in the final CEIP that illustrates how the proposed interim targets balance both cost and progress towards the CETA renewable energy goals.	Avista will address in the 2025 CEIP and explain the gradualism making progress, while trying to maintain customer cost impacts.
Commission Staff	Named Communities	At Staff's request, in the May advisory group meeting, Avista agreed to identify characteristics of Named Communities in deepest need and propose action(s) to address inequities. We look forward to any updates Avista has on this topic.	Avista will address in the 2025 CEIP and in the 2027 Biennial CEIP. Avista does not want to adopt the Deepest Need title but allow the advisory group process to determine population title, characteristics and actions to reflect needs of Avista's service territory. Avista will reference PSE's Deepest Need characteristics but may not adopt.

Energy Assistance Advisory Group Meeting Comments– November 12, 2024

Commenter	Topic	Comment	Avista Response
Northwest Energy Coalition	CBIs	I'm okay if Avista removed the two environmental CBIs' metrics. I've attached chapter 6 (CBIs/metrics) of PSE's 2023 Biennial CEIP Update. This might be a helpful tool for comparison with Avista's CBIs. Ideally, it would be nice to see the IOUs have similar CBIs/metrics as it makes it much easier to track progress across the state. If Avista removes the two enviro metrics (as noted on slide 28), would it consider any other GHG/emission metrics that PSE has?"	Avista is not considering adopting any additional PSE metrics in the 2025 CEIP.

Energy Assistance Advisory Group Meeting Comments – July 8, 2025

Commenter	Topic	Comment	Avista Response
The Energy Project	CBIs	Raised concerns about Avista's proposal to remove the CBI for "Number and percentage of disconnects for nonpayment by	Avista will continue to report this information in the Annual Disconnection Reduction Report:

		month census tract, All, KLI, NC." TEP is open to this information for known low-income (KLI) customers being reported elsewhere, but as it is not currently reported anywhere else; don't want to lose that data altogether.	▪ Total number of KLI disconnections for non-payment, ▪ Total number of KLI disconnects for any reason other than non-payment, ▪ Total number of KLI customers remotely disconnected, and, Total number of KLI customers who made payment to a service representative in the field to avoid disconnection.
SNAP	CBIs	SNAP echoes the desire to maintain metrics around KLI.	Avista will continue to report this information in the Annual Disconnection Reduction Report: ▪ Total number of KLI disconnections for non-payment, ▪ Total number of KLI disconnects for any reason other than non-payment, ▪ Total number of KLI customers remotely disconnected, and, Total number of KLI customers who made payment to a service representative in the field to avoid disconnection.

Energy Efficiency Advisory Group Meeting Comments – October 15, 2024

No actionable comments received

Energy Efficiency Advisory Group Meeting Comments – August 25, 2025

No actionable comments received

2025 Second Quarter CETA Public Meeting Regarding 2025 CEIP Comments – May 28, 2025

Commenter	Topic	Comment	Avista Response
Spokane County Senior Environmental Analyst	2025 CEIP	Hello, I was just on the Avista Q2 Public Participation call and there was a question at the end about whether these metrics were inclusive and representative. I wanted to share a global reporting resource that has identified	No response required.

		various metrics for reporting energy access and equity measurements. We have just begun reporting some of these in our GHG reporting but would love to see more of these metrics included in the future if possible for our community. Global Covenant of Mayors Energy-Access-and-Poverty-Pillar-Annex-to-the-CRF.pdf Secure Energy o Percentage of municipality population or households with access to electricity o Average duration of available electricity o Average yearly energy consumption per capita • Sustainable Energy o Installed capacity of renewable energy sources within local boundary o Total energy generated from renewable energy source within local boundary o Energy consumption from renewable energy sources o Source mix of thermal energy (heating and cooling) consumed within local boundary o Percentage of households within the municipality with access to clean cooking fuels and technologies • Affordable Energy o Percentage of households or population within the city boundary that spending up to	

		X% of income on energy service The list of non-mandatory global indicators is reported below and in Annex B: • Secure Energy o Estimated share of electricity consumed within the municipality but not billed (non-technical losses, illegal connections) o Average number of electric supply interruptions in a typical month (or year) o % energy consumption per capita from i) electricity, ii) gas, iii) other sources • Sustainable Energy o Total installed energy capacity within local boundary o Number of local energy efficiency programs o Number of local renewable energy programs • Affordable Energy o Percentage of households within the municipality experiencing heating or cooling discomfort o Percentage of clean energy investment at local level going to low- and moderate-income households o Price of green electricity	

2025 Thid Quarter CETA Public Meeting Regarding 2025 CEIP Comments – August 27, 2025

Commenter	Topic	Comment	Avista Response
Customer	2025 CEIP	I've read and attempted to verify from multiple sources	Customer indicated they did not want to be contacted regarding this comment.

		that more than half of all internet/datacenter traffic is "dead" - as in spam going straight to spam filters without a human seeing it and all other equivalent zero-value traffic. I've also read that powering the internet as a whole including AI workloads accounts for more than 6% of global greenhouse gas emissions. Please verify this for yourself. That means the dead half of the internet accounts for more greenhouse gas emissions than all cars, trucks and trains in America combined. Literally just spam everyone hates is destroying the planet faster than every dingus with a F-250, every semi truck, school bus, camaro, freight train, minivan and prius combined. Would it be so bad if someone you know.. uh... did something about that? At all?	
Customer	2025 CEIP	Clean energy as defined by the progressives is a fool's errand that will increase energy costs across the user base. Nuclear along with our hydroelectric bounty is this state's future. However, you can't fix stupid. Wind and solar are laughable and still need duplicative power sources when they are offline.	Thank you for your comments in response to Avista's 2025 CEIP. We take each comment seriously. As a regulated utility, Avista's is required to comply with Washington's clean energy laws. If you'd like to make formal comments to the Washington Utilities and Transportation Commission, you're welcome submit a comment through their Public Comment Form located here: https://www.utc.wa.gov/consumers/submit-comment/public-comment-formPublic and reference Avista's 2025 CEIP.
Customer	2025 CEIP	Please don't continue on this green energy agenda. There are many examples of how this is the wrong direction. We want cheap plentiful energy, green is disaster in the making. If you	Customer indicated they did not want to be contacted regarding this comment.

		want green, go nuclear. Your projections of an increase of $33 is laughable. Please don't go down this road. Thank you.	
Customer	2025 CEIP	I do not support your green energy scam. I support President Trump's America first agenda. I support electricity with hydroelectric dams as we have installed already as our forefathers had common sense and knowledge that is lacking in today's lawmakers and the big green money scam is exactly that a big scam Stop trying to jack up our electricity rates and stop using stupid technology like windmills can't you listen to the president do you think he actually is saying that because it's not accurate? Namaste	Thank you for your comments in response to Avista's 2025 CEIP. We take each comment seriously. As a regulated utility, Avista's is required to comply with Washington's clean energy laws. If you'd like to make formal comments to the Washington Utilities and Transportation Commission, you're welcome submit a comment through their Public Comment Form located here: https://www.utc.wa.gov/consumers/submit-comment/public-comment-form and reference Avista's 2025 CEIP.
Customer	2025 CEIP	I don't see any plans for actual, true proven environmentally friendly energy, which is nuclear. Wind and Solar is not a reasonable option as both are inherently unreliable and unsustainable. As a son of a trailblazer, I ask what steps are you taking outside of the silly laws laid down by leftist lawmakers and the cult of climate change? We need and depend on the energy you provide, regardless of who is politically "in charge". Please take steps to ensure we have the energy we need when the climate change cult collapses with all its lies. Think long range, Avista, embrace your WWP roots that independent company that has served our community for so many years	Thank you for your comments in response to Avista's 2025 CEIP. We take each comment seriously. As a regulated utility, Avista's is required to comply with Washington's clean energy laws. If you'd like to make formal comments to the Washington Utilities and Transportation Commission, you're welcome submit a comment through their Public Comment Form located here: https://www.utc.wa.gov/consumers/submit-comment/public-comment-formPublic and reference Avista's 2025 CEIP.

		and preserve what you have, and prepare for our future.	
Customer	2025 CEIP	I'd like to know what the estimated cost will be for this entire transition to "carbon neutral "energy. There is no way our bills will only increase by $33. How many billions are we talking, and how much is estimated that every average home will pay just for the changeover to clean energy, not the energy usage itself? That wasn't included in your presentation. Also, how will the earth be affected by the dumping of old batteries, solar panels , ect ? The amount of discarded appliances , ect will be a huge burden on the earth. Does anyone have a plan for any of that?	Thank you for your comments in response to Avista's 2025 CEIP. We take each comment seriously. As a regulated utility, Avista's is required to comply with Washington's clean energy laws. If you'd like to make formal comments to the Washington Utilities and Transportation Commission, you're welcome submit a comment through their Public Comment Form located here: https://www.utc.wa.gov/consumers/submit-comment/public-comment-form and reference Avista's 2025 CEIP. The estimated incremental increase of $33 annually due to the 2025 CEIP is for the 2026-2029 period only. Avista already has the necessary resources to comply with the carbon neutral target based on the hydro system developed between the beginning of the company through the 1960s, along with hydro power purchases from the Mid-Columbia region. Additions from Kettle Falls in the 1980s and wind projects acquired over the last 10 years mean Avista can meet the 2030 target without new resources. The 2045 target of 100% clean energy will be a challenge. Cost impacts for 2030-2045 compliance years are not currently known. Avista is not in a position to comment on environmental impacts of decommissioning renewable resources.
Customer	2025 CEIP	I live on the Palouse, and am opposed to the creeping landscape of wind farms. I think more needs to be done to protect and develop the hydro power we have now and to protect our aquifer. If you look at the farming and irrigation in the Quincy and Wenatchee, it has exploded in the last 50 years- not to mention the West side. Our environment cannot sustain	Thank you for your comments in response to Avista's 2025 CEIP. We take each comment seriously. As a regulated utility, Avista's is required to comply with Washington's clean energy laws. If you'd like to make formal comments to the Washington Utilities and Transportation Commission, you're welcome submit a comment through their Public Comment Form located here: https://www.utc.wa.gov/consumers/submit

		the ever growing development that leads to more demand.	-comment/public-comment-form and reference Avista's 2025 CEIP.
Customer		I applaud your outreach efforts to inform your customers about CETA efforts. I want to offer some thoughts: 1- Over reliance on hydro resources in your service areas when drought is on going is an increasing threat. Solar, wind and battery storage can mitigate those losses, but baseload replacement with solar, wind and battery storage takes time. PLEASE consider utility scale geothermal energy plants to tap volcanic heat year 'round. 2- Improve grid interconnection and DC power transmission lines to enhance reliability and cost controls between utilities. 3- Time of use rates will certainly trigger more residential storage actions and I encourage Avista to assist customers to purchase, install and interconnect those battery storage devices on a virtual power plant type of arrangement, incentivizing efficient use of resources and monetizing power sharing to a greater extent. 4- Make it clear to WA Utility Commission that BPA policies and procedures are not democratized and need to be made to function in THE PUBLIC INTEREST, not corporate interests.	Customer indicated they did not want to be contacted regarding this comment.
Customer	2025 CEIP	I support the transition to a cleaner energy supply in the future that uses less carbon emitting energy sources. I especially support those efforts if the avoid energy supply from the dams most harmful to wildlife. Regardless, I support	Customer indicated they did not want to be contacted regarding this comment.

		all energy alternatives that are forward thinking. Thank you for maintaining the mission to deliver sustainable energy and a better future for generations to come.	
Customer	2025 CEIP	What a joke. This sounds like another RIDICULOUS plan to raise our d*** rates yet again in the name of fairness and "equity." You preach clean energy yet you guys talk constantly about removing dams for some BS feel good garbage. How about you continue to provide this highest priced electricity, and we just keep paying it. Skip the liberal eco B***S*** that makes some people feel good about paying an exorbitant rate for basic needs like power and water.	Customer indicated they did not want to be contacted regarding this comment.
Customer	2025 CEIP	Thank you for the well organized presentation regarding the CEIP. I have some questions about future plans at Avista. Is Avista contemplating efforts at the state level for legislation supporting the creation of Virtual Power Plants (VPPs), as has been done in other states? VPPs and other programs aggregating Distributed Energy Resources (DERS) can also be implemented without state support--is such a program under consideration at Avista as part of its CEIP or otherwise? The Energy Policy Institute has reported that Avista and other utilities have supported the Partnership For Energy Progress, which promoted natural gas and gas infrastructure in a public	Thank you for attending our public meeting regarding Avista's 2025 Clean Energy Implementation Plan and providing written comments. At this time, Avista is not pursing or advocating legislation in support of VVPs. Avista is proposing demand response targets and has issued an All-Source Request for Proposal to acquire cost-effective demand response programs for customers, which may include aggregating customer resources into a VPP. These customer demand response programs and the ability to aggregate customer DERs is new in Avista's Washington electric service territory. We'll await the decisions of the RFP for such programs. Avista does support natural gas as a clean energy option and has a been a member of the Partnership for Energy Progress. In the last year or so, Avista has left the Partnership for Energy Programs and has joined the Coalition for Energy Choice.

		relations campaign in 2023. Is this report true, and is Avista today supporting such a public campaign? Thank you for your time and attention.	
Customer	2025 CEIP	I would like my power from nuclear plants. My husband worked at Hanford and just passed away at 93. I have a son who works on windmills, and they are not clean energy. The 300 ft. blades are being buried on farmland and each windmill takes 80 gallons of oil. They require a lot of care.	I'm very sorry to hear your husband has passed. I'm sure it's a very difficult time. Thank you for your comments regarding clean energy resource choices. Avista will continue to monitor clean energy resource options, including nuclear energy, and select resources that are compliant with the law and cost-effective for customers.
Customer	2025 CEIP	I admit that I haven't attended forums or read through all the documents provided through links. I am a retired engineer who has followed energy topics for decades. Much of the "Green Energy" agenda is based on faulty science and skewed models. I see many buzzwords in Avista literature and Olympia's thumb is heavy on the scale. I would like to see a return to rational and reasonable energy policy based on science and economics. That is my "equity". We should utilize a mix of energy options that provide all customers with dependable, affordable energy. Windmills and solar have niche applications. They are not reliable, affordable, or "green". True cradle to grave studies belive this. SMR's may provide a lasting solution. I hope Avista researches the burgeoning nuclear options.	Customer indicated they did not want to be contacted regarding this comment.
Customer	2025 CEIP	Will this raise our electric bills? If so, then maybe the Avista CEO'S can take a pay cut. If you truly wanted to help your	Customer indicated they did not want to be contacted regarding this comment.

		customers, then pay cut anyone who makes over 75,000 a year.	
Customer	2025 CEIP	Figure No 4.1 "2025 CEIP | Named Community Designation" on page 37 of the CEIP pdf is so low resolution the legend and area names are largely unreadable. Recommend replacing it with a higher-resolution graphic.	Customer indicated they did not want to be contacted regarding this comment. The Named Community map pdf provided in the CEIP and the attachment has been updated with a higher resolution graphic.
Customer	2025 CEIP	For net metered residential solar installations, could the CEIP explain what happens to unused credits when they expire on the March 31st net-metering reset date? I am curious if Avista utilizes unused credits as a way of lowering operating costs (as avoided energy purchases). Alternatively, would Avista consider using those unused production credits to support the bill assistance program, similar to how the Boulder Park Solar Site supports the bill assistance program? Please let me know if the dispensation of expiring credits is already addressed in a different document or if the amount of energy is so trivial it doesn't warrant formal accounting.	Thank you for your comments regarding Avista's 2025 CEIP. Although Avista does have a net-metering program for customers, it is not a component of Avista's CEIP. In Washington, unused credits generated from net metering do expire annually on March 31 without compensation to the customer under RCW 80.60.30(5). These unused credits, or kilowatt hours, do join the Avista grid at large to benefit all customers, but are not material enough to significantly lower operating costs or avoid energy purchases. At the present time, Avista is not required to report the unused credits or kilowatt hours provided to the grid annually. In 2024, the last year reporting was required for Avista, 845,000 kWh expired for net metering customers. Avista's non-solar or non-net-metered customers currently subsidize net-metered customers with solar, and this benefit helps offset their cost. Further, all customers are currently subsidizing low-income customers at 5% of their current bill as required by state law and are not costs reflected in the incremental CEIP cost estimates. Avista appreciates your comments and creative thinking. As presented in the 2025 CEIP, the Boulder Park solar and battery storage project under SSHB1814 will benefit all customers by providing power to the grid and particularly known low-income customers by

			financially valuing the energy produced and allocating those funds to support financial bill assistance. If you'd like to make formal comments to the Washington Utilities and Transportation Commission, you're welcome submit a comment through their Public Comment Form located here: Public Comment Form and reference Avista's 2025 CEIP.
Customer	2025 CEIP	With the IMMENSE future demand of electric cars plus AI server farms, CETA will just end up using every power resourse available! Coal, oil, nuclear, hydro, nat gas turbines, geothermal, wind-power, inefficient solar, wave power, ... You will no longer have any possible way to meet future huge demands with clean, woke, touchy-feelie pipe dreams of magical electricity generation that does not yet exist. Don't know why you are wasting breath talking about it.	Thank you for your comments in response to Avista's 2025 Clean Energy Implementation Plan. We take each comment seriously. As a regulated utility, Avista's is required to comply with Washington's clean energy laws. If you'd like to make formal comments to the Washington Utilities and Transportation Commission, you're welcome submit a comment through their Public Comment Form located here: Public Comment Form and reference Avista's 2025 CEIP.

2025 Draft CEIP Comments

Commenter	Topic	Comment	Avista Response
Whitman County Commissioner		In reading the CEIP for 2025, I have several concerns. I believe the plan needs to add more time for societal caused delays in building new clean energy generation facilities. The public is very upset about wind/solar farms proposed here in Whitman County and their actions have and will slow down the approval process and final completion timelines compared to what was previously experienced or	Customer indicated they did not want to be contacted regarding this comment.

		expected. I also believe the reliability factor for renewables as base power has not been derated enough to show actual reliable generation capacity. I expect more service interruptions because of this and according to Bob Morris from Montana Tech University, the inertial stability of wind/solar isn't anywhere near as large as that we currently receive from hydro/CT type supplies--so when things go bad, they go bad everywhere quickly. This was experienced in Spain through their recent crash in their renewable power system. I also note there is no pumped storage systems discussed but we have the snake river breaks where such systems could be constructed and "camouflaged" to not be real obvious. The elevation change is present to make them viable. In regards to vulnerable communities in Whitman County, the snake river breaks area going past Clarkston, WA is shown as white on your maps=not vulnerable. I believe this misses a lot of rural residents who are vulnerable to the increased costs and decreased reliability of a system dependent on solar/wind generation. I support your recalculating costs and timelines for creation of new renewable energy resources in the near future as I believe inflation and tariffs will significantly affect material costs as well as	

		permitting delays. Local governments have limited capacity. I'd like to see some more impact assessments regarding the new Federal Administration's cuts to renewable energy support for the near future (next 3 years) and what that does to the financial viability and ability to construct wind/solar farms in the region. My accountant has talked with some of the big wind developers and many have stopped projects at least for the near future. If the developers aren't willing to build, or costs must significantly increase to build such projects, we will be unable to meet CETA requirements and vulnerable populations and our local economy will be very negatively impacted financially. The balance of generation resources would have to change to keep things operating in a manner people can afford to pay their electric bills. thank you Art Swannack Whitman County Commissioner	
Idaho Electric Customer		Avista Clean Energy team, I am an Avista Electric customer in Post Falls ID. As Avista has requested public comment, I read through the DRAFT 2025 Clean Energy Implementation Plan document. In brief, I think you should push back on "green" and "equitable" activism and focus on minimizing cost to the end user.	Thank you for your comments. From a policy point of view, Avista has to comply with and balance two very divergent states. The equity and clean energy provisions Avista is required to follow will apply to Washington electric customers, and the associated costs to comply with these requirements will also be assigned to Washington electric customers.

		I am appalled by the focus on "Renewable Energy" "Clean Energy" and reducing "Greenhouse Gas Emissions". CO2 emissions have improved the climate for both humanity and the ecology. We should be increasing greenhouse gas emissions, not reducing them. I realize much of this is required by regulatory bodies and Washington State requirements, but I encourage you to loudly resist this unscientific foolishness. I am also deeply offended and alarmed by the insistence on "equity" which amounts to illegal discrimination. This is the kind of resentful excellence-hating thought that killed over 100,000,000 people in the past 70 years in the failed and failing communist states. As to the "Affordability Initiative", it's all very nice sounding to forgive "Arrearage" but what this actually amounts to is wealth redistribution under the guise of compassion. If you really wanted to make power more affordable, actually lower your costs and prices for all of your customers. As it is, you are effectively engaging in discriminatory pricing which, I state once more, is totally illegal. The public utilities should be focused on delivering reliable	

		power at the lowest net cost, without engaging in environmental and social activism. It is true that emissions have some costs associated with them, but they are trivial compared to the cost of "green energy". Consenting to enmesh "equity" concerns in your planning will only lead to grief. It would behoove Avista to take advantage of the current power-generation-friendly federal governmental climate in order to punish Washington State for mandating these illegal and discriminatory measures.	
Public Counsel	CBIs	In alignment with TEP and other parties, Public Counsel opposes Avista's decision to modify or eliminate certain CBIs, particularly those related to disconnections and known-low-income customers. In Public Counsel's comments in the recent equity docket, A-230217, Public Counsel detailed its support for utilities' inclusion of more, not less, data in utilities' CEIPs. Public Counsel also agrees with Staff that utilities should track more, not fewer, subsets of Named Communities. We would also emphasize the importance of continuing to collect more granular data – census tract data on disconnections is one such example of data which offer the opportunity to engage in more precise data analysis.	While the Company does not agree it should include KLI reporting for CBIs, nor has any party provided justification or rationale for why the KLI data should be required in the CEIP, Avista proposes to include granular energy burden and excess burden data for its MED program as discussed in *Named Communities* chapter.

		Thank you for providing us the opportunity to offer our initial feedback.	
The Energy Project	CBIs	The Energy Project provided you the following feedback after the Apr. 22, 2025, CEIP advisory group meeting. We submit these same comments in response to the draft CEIP you distributed. TEP is very interested in continuing robust utility reporting on disconnections. You proposed to modify the CBIs to omit the number of disconnections and disconnections for known-low-income customers. TEP does not support such a change, and would like to request that Avista continue report the CBI for "Number and percentage of disconnects for nonpayment by month census tract, All, KLI, NC."	While the Company does not agree it should include KLI reporting for CBIs, nor has any party provided justification or rationale for why the KLI data should be required in the CEIP, Avista proposes to include granular energy burden and excess burden data for its MED program as discussed in *Named Communities* chapter.
The Energy Project	CBIs	Avista also proposed to discontinue a CBI for "Named Community residential rebates and those in rental units," and noted that this information would be available in its 2024 annual conservation report. Now that the report is out, could you please point me to where in the 2024 ACR to find this information?	To clarify, the Company is reporting residential rebates for Named Communities in the 2025 ACR and excluding rental units as specified on slide 12 of the April 2025 CEIP Advisory Group meeting.
Northwest Energy Coalition	Introduction	We appreciate the opportunity and time given to provide feedback on Avista's Draft CEIP. We by and large believe that this is an excellent draft—it is easy to understand, makes progress and improvements since the 2021 CEIP, and aligns with the information shared in	Avista thanks NWEC for their review and comments.

		the CEIP advisory group. We offer comments below with our high-level observations, as well as on the advisory group process, targets, specific actions, customer benefit indicators (CBIs), and incremental cost. Since Avista's 2021 CEIP, significant changes have occurred—new state laws, two rate cases, UTC guidance on energy justice and performance-based ratemaking, a state Transportation Electrification Strategy, and a new federal administration. Avista has engaged in and responded to these developments, culminating in this 2025 CEIP. Now that the first CEIP implementation period is coming to an end, we offer some reflections. We recognize Avista's leadership and collaboration in the development of its CEIPs and Biennial Update. Each Plan was submitted on time and has offered interested parties a sufficient opportunity to assess and provide feedback. Both the 2021 CEIP and 2023 Biennial Update were approved with settlement conditions, which Avista has made a good-faith effort to fulfill. The Company has also consistently engaged advisory groups, including NWEC, throughout implementation. In the IRP advisory group, we supported Avista's inclusion of	

		climate change in resource modeling. Furthermore, NWEC appreciates that Avista updated assumptions in the 2025 Preferred Resource Strategy as it drafted the 2025 CEIP, resulting in a revised resource portfolio for 2026–2029. 2 We see that Avista has learned a lot since 2021 and is finding its rhythm. A great example of this is the company's Named Communities Investment Fund (NCIF). Originally proposed in the 2021 CEIP, the NCIF sets aside $5 million annually for projects to advance the equitable distribution of energy and non-energy benefits among Named Communities. Since its proposal, the Company has worked with its advisory groups on the fund's design, project prioritization, and program evaluation. After realizing how the NCIF could be modified to allow greater funding flexibility, Avista consulted with its advisory groups and now proposes a revised NCIF in this 2025 CEIP which NWEC is supportive of. Finally, we would also like to commend Avista for following the UTC guidance on Procedural Justice by improving public access to CEIP information on its CETA website.	
Northwest Energy Coalition	CEIP Advisory Group	Avista's CEIP advisory group process was well-designed and effective. Monthly meetings began in January and were structured around specific CEIP	The Company would like to thank NWEC for participating in Avista's various advisory groups, including the CEIP Advisory Group. Avista agrees with NWEC's suggestion and plans to continue

		content, which offered clarity and focus. The process felt transparent and easy to follow, with meeting materials posted online for easy review. What we see in this Draft CEIP is reflective of the material presented in the advisory group. We recommend Avista continue this process as it drafts future CEIPs and that other IOUs adopt this approach for future CEIP (or Integrated System Plan, ISP) engagement.	a CEIP Advisory Group for the 2029 CEIP and may consider it for the 2027 Biennial CEIP update.
Northwest Energy Coalition	Targets	NWEC supports Avista's interim targets for renewable energy, energy efficiency, and demand response. The renewable energy targets demonstrate a steady glidepath toward meeting the 80% clean electricity requirement by 2030. As shared in the CEIP Advisory Group, a major change in the updated Preferred Resource Strategy is a significant increase in demand response, with a 55 MW cumulative capacity target. We believe this will provide meaningful benefits to customers as peak loads grow, and we support Avista's plan to pursue all cost-effective demand response beyond this target if identified in the 2025 All-Source RFP. While Avista's energy efficiency targets declined between the 2021 CEIP and 2023 Biennial Update, this 2025 CEIP proposes targets that slightly exceed the Biennial Update. Together, these targets position Avista well ahead of 2030.	Avista thanks NWEC for their review and support of its 2025 CEIP interim targets.

Northwest Energy Coalition	Specific Actions	NWEC appreciates the breadth and specificity of Avista's specific actions across renewable energy, demand response, energy efficiency, and company initiatives. We look forward to the results of the 2025 All-Source RFP, which will enable Avista to secure additional renewable energy resources and reduce reliance on RECs for compliance. We also look forward to the 2026 report on TOU/PTR pilots, which will inform strong demand response actions in the 2027 Biennial CEIP Update, and agree the Company should pursue all cost-effective demand response identified through the 2025 RFP. It is helpful to see Avista's additional actions and initiatives that don't fall under the targets. We support Avista's exploration of transmission expansion and continue to believe the Named Communities Investment Fund is an exemplary program, demonstrating flexibility, community prioritization, and intentional relationship-building between the utility and communities. We appreciate the integration of Avista's Transportation Electrification Plan into the CEIP and see a potential opportunity to connect the Company's clean energy implementation to its wildfire mitigation and resilience work. Finally, we commend Avista's commitments to supplier	Avista thanks NWEC for their review and support of its 2025 CEIP specific actions and additional actions. Please see the *Customer Benefit Indicator* chapter for updates regarding employee diversity metrics.

		diversity and DEI, even in the absence of strong federal leadership on these topics.	
Northwest Energy Coalition	CBIs	NWEC supports the addition of directionality for the CBIs that show desired increases and reductions. This aligns with PSE and PacifiCorp's approach to CBIs. We also appreciate the reorganization of the CBI Summary Table (Table 5.3) which organizes CBIs by CETA benefit area.	Avista thanks NWEC for their review and support of its proposed CBI directionality and CBI organization by CETA benefit area.
Northwest Energy Coalition	CBIs	Avista was clear with its CEIP Advisory Group about its proposed modifications, additions, and deletions of metrics. Below, we offer feedback for a few of these metrics. **CBI: Energy Burden** Metric: Number and percentage of high energy burden after energy assistance for all & Named Communities **Comment:** This newly proposed metric for this CBI comes from the PBR metrics in the Commission's April 2024 Interim Policy Statement. The Policy Statement's metric refers to "the number and percentage of *customers* experiencing high energy burden" (italics added). 1. However, Avista's PBR metric reporting on its "Washington PBR Metrics" webpage shows the number and percentage of *households* experiencing high energy burden.	The PBR metrics currently provided on the Company's Washington PBR Metrics webpage provide data for metrics as approved in the Company's 2022 General Rate Case (GRC).[126] New PBR metrics were established in the Company's 2024 GRC as provided in Final Order 08 Appendix A in Docket UE-240006 et. al. and referenced in the CEIP Advisory Group meetings. The 2024 GRC-identified PBR metrics will be provided on the Company's webpage as of April 2026 and will be reported on an annual basis. Avista will use this approved 2024 GRC PBR metric under the Energy Burden CBI: Annual residential bill divided by area median income by census tract for all customers, comparing outcomes in Named and Non-named Communities. For dual fuel utilities, electric and natural gas services should be stated separately calculated both before and after energy assistance. Also provide the number and percentage of customers experiencing high energy burden by census tract. These metrics are represented in the Company's CEIP under the Energy Burden CBI as:

[126] Final Order 10/04 issued in Docket UE-220053 et. al.

		2. We recommend Avista specify the granularity of data for this metric.	1. Average energy burden after energy assistance by census tract for all customers and Named Communities. 2. The number and percentage of high energy burden after energy assistance by census tract for all customers and Named Communities.
Northwest Energy Coalition	CBIs	**CBI: Energy Burden** Metric: Number and percentage of high energy burden after energy assistance for all & Named Communities **Comment:** In the April 2025 Advisory Group meeting and in the prior metric from 2021, energy burden was specified as ">6%". We recommend keeping that specification here in the CBI title: "Energy Burden (>6%)"	Under the Energy Burden CBI, Avista will provide two 2024 WA GRC approved PBR metrics: 1. *Average energy burden* after energy assistance by census tract for all customers and Named Communities. 2. The number and percentage of *high energy burden* after energy assistance by census tract for all customers and Named Communities. High energy burden is defined as the allocation of 6% or more of a household's annual income toward utility bills. As the CBI title encompasses both an average and a high energy burden metric, and the definition of energy burden specifies this percentage, including (>6%) in the CBI title is unnecessary. See footnote 37 for explanation of high energy burden.
Northwest Energy Coalition	CBIs	**CBI: Energy Burden** Metric: Number and percentage of high energy burden after energy assistance for all & Named Communities **Comment:** NWEC recommends continuing to track this data for known low-income customers as Avista did in the 2021 CEIP. While some low-income customer level data is being tracked elsewhere (e.g., U-200281), we believe that presenting this data in a holistic,	While the Company does not agree it should include KLI reporting for CBIs, nor has any party provided justification or rationale for why the KLI data should be required in the CEIP, Avista proposes to include granular energy burden and excess burden data for its MED program as discussed in *Named Communities* chapter.

		public-facing document like the CEIP provides valuable insight into how the Company is performing on affordability and how that plays into the broader work of advancing CETA.	
Northwest Energy Coalition	CBIs	**CBI: Energy Burden** Metric: Average energy burden after energy assistance by census tract for all customers and NC **Comment:** Similarly, NWEC recommends continuing to track this data for known low-income customers as Avista did in the 2021 CEIP.	While the Company does not agree it should include KLI reporting for CBIs, nor has any party provided justification or rationale for why the KLI data should be required in the CEIP, Avista proposes to include granular energy burden and excess burden data for its MED program as discussed in *Named Communities* chapter.
Northwest Energy Coalition	CBIs	**CBI: Disconnections for Non-Payment** Metric: Percentage of disconnections for nonpayment by month by census tract for all customers and NC **Comment:** Similarly, NWEC recommends continuing to track this data for known low-income customers as Avista did in the 2021 CEIP.	While the Company does not agree it should include KLI reporting for CBIs, nor has any party provided justification or rationale for why the KLI data should be required in the CEIP, Avista proposes to include granular energy burden and excess burden data for its MED program as discussed in *Named Communities* chapter.
Northwest Energy Coalition	CBIs	**CBI: Employee Diversity** Metric: Employers representative of communities served **Comment:** We note the typo for "employees".	Avista apologizes for the error; this has been corrected.
Northwest Energy Coalition	2021 CEIP Conditions	**Removal of Condition 18:** *Avista agrees that the CBI: Number of Households with a High Energy Burden (>6%), will be separately tracked for all Avista electric customers, Known Low Income (KLI) customers and Named Communities. KLI customers are defined as those who have received.*	While the Company does not agree it should include KLI reporting for CBIs, nor has any party provided justification or rationale for why the KLI data should be required in the CEIP, Avista proposes to include granular energy burden and excess burden data for its MED program as discussed in *Named Communities* chapter.

		The CBI proposed in Condition 18 is similar to the CBI for Energy Burden that Avista proposes. The CBI for Condition 18 includes tracking for KLI customers, which NWEC continues to believe is valuable data to incorporate in the CEIP. If it is removed from the CEIP, we recommend that the exact data be reported elsewhere and be regularly updated.	
Northwest Energy Coalition	2021 CEIP Conditions	**Modification of Condition 22:** *Avista agrees to add the following CBI and metrics related to Energy Security: CBI: Residential Arrearages and Disconnections for Nonpayment Measurement: 1. Arrearages 2. Disconnections for all customers, NCs, and KLI.* 5 Similarly, the CBI and metrics proposed in Condition 22 are similar to what Avista proposes in its CBI Disconnections for Nonpayment. However, the CBI for Condition 22 includes tracking for KLI customers, which NWEC continues to believe is valuable data to incorporate into the CEIP. If it is removed from the CEIP, we recommend that the exact data be reported elsewhere and be regularly updated.	While the Company does not agree it should include KLI reporting for CBIs, nor has any party provided justification or rationale for why the KLI data should be required in the CEIP, Avista proposes to include granular energy burden and excess burden data for its MED program as discussed in *Named Communities* chapter.
Northwest Energy Coalition	2021 CEIP Conditions	**Removal of Condition 38**: *Avista must choose at least two of its current CBIs which it will track for at least five subsets of Named Communities, at a granularity to be determined by agreement with Staff, stakeholders, and the*	The Company completed this condition for the purpose of the 2021 CEIP and is not required for future CEIPs. As the Company agrees with the intent of Condition 38, it has included a new proposal for granular data tracking within *Named Communities* chapter.

		Company's Equity Advisory Group. Avista will incorporate relevant updates in its 2023 Biennial CEIP update. To achieve this condition, Avista selected metrics under the Energy Burden and Energy Availability CBIs. However, because Avista proposes removing those metrics, we are unclear where the Company would then stand with this condition.	
Northwest Energy Coalition	Incremental Cost	Avista is not planning to exceed its 2% cost cap (approximately $157 million) or use an alternative compliance mechanism for this 2026-2029 CEIP period. We appreciate Avista's explanation and inclusion of its calculations in the CEIP. We look forward to reviewing how the inclusion of the resource acquisitions from the 2025 AS RFP will impact the incremental cost analysis when this information is available.	Given the RFP selections will occur after filing the 2025 CEIP and the Company remains well below the cost cap, Avista does not plan to update the incremental cost calculation after the conclusion of the RFP or in the 2027 Biennial CEIP, as neither are required. The actual incremental costs will be included in the clean energy compliance report as required in WAC 480-100-650(1)(g). It is possible that resources selected may be in both the alternative and CEIP portfolios and have no incremental cost, or it is also possible a selected resource may have an incremental cost. In addition, resources may come online late in the four-year period and have minimal impact on incremental cost.
Northwest Energy Coalition	Distribution Planning Advisory Group	Avista proposes to eliminate the Distribution Planning Advisory Group (DPAG) and fold its content into the IRP advisory group. We recommend that in the 2025 CEIP Avista explain how the DPAG's substance will be preserved in this transition and provide clarity on what outcomes the DPAG achieved in the last planning cycle—for example, whether it influenced	Avista is planning to merge all technical planning advisory group meetings, including electric supply, natural gas supply, and distribution energy delivery. Avista is pursuing this efficiency to align technical advisory groups with its internal effort to plan its system in a coordinated, integrated fashion, and reduce participant meeting fatigue, as many participants overlap between groups. Avista will provide an agenda of topics covered in these meetings in advance on its website and identify which topics will be covered

		demand response targets, reliability, or program selection. If the DPAG has not yet demonstrated such value, there may be an opportunity to strengthen its role rather than discontinue it.	and what planning area is being addressed. Participants are welcome to provide recommendations of topics at these meeting and the intent is to share the same information provided at the DPAG in this larger forum. The Company added this information in the *2021 CEIP & 2023 Biennial Conditions* section.
Northwest Energy Coalition	Conclusion	As Avista continues to map a path to achieving an equitable transition to 100-percent clean electricity, the CEIP will be an important document for communicating to customers how Avista plans to supply them with clean electricity and meet the requirements of the law. We offer these comments on the Draft CEIP to commend the progress Avista has achieved so far and in the spirit of improving the final product.	Avista thanks NWEC for their review and comments.
Commission Staff	Introduction	Staff appreciates that Avista has voluntarily provided a draft of its 2025 CEIP by August 1, 2025, ahead of filing its final by October 1, 2025. We also appreciate the advisory group's meeting process in the months leading up to this filing. This process has helped us to understand some of the material ahead of the filing and allow a chance to discuss ideas and make suggestions. Our comments here are informal and preliminary in nature. In our review, we considered areas where additional explanation or information would be helpful to make a more complete filing. We began a preliminary review of the policy issues within the CEIP, but will reserve a deeper	Avista thanks UTC Staff for their review and comments. Avista's written response to Staff's comments and any applicable updates made to the final 2025 CEIP are noted in this comment matrix.

		analysis for after the final is filed. We hope that Avista can respond to the feedback by making the necessary changes within the final filing, or where applicable, by providing a written response.	
Commission Staff	Introduction	Applying to the entire document, Avista has done a good job of using "plain talk" in many places, making the document more accessible. We appreciate that many concepts are explained in simple terms, for readers who may not be entrenched in the technical details.	Avista thanks UTC Staff for their review and comments.
Commission Staff	Named Communities	Given that Avista reports that 58% of its service territory fits into the category of a Named Community (NC), Staff strongly encourages Avista to work on identifying subsets of NCs that have deeper and more urgent needs than other NCs, and designing specific actions to serve those subsets. As we have noted throughout the advisory group process, we recommend Avista include a specific and actionable plan to do this work in the 2025 CEIP filing. The equitable distribution of benefits and burdens is an essential part of implementing CETA, and identifying who is benefited or burdened is paramount.	The Company describes how it is currently addressing concerns for customers with compounding burdens through the My Energy Discount program, Energy Efficiency offerings, and the Named Communities Investment Fund in the *Named Communities* chapter in the *Identifying Additional Burdens* subsection. Due to the large percentage of customers designated as Named Communities, Avista intends to take a collaborative approach with its advisory groups to further identify subsets of Named Community populations, develop a meaningful description or title for these needs and develop impactful approaches to supporting these communities. Please see updates in the *Named Communities* chapter.
Commission Staff	Named Communities	It is unclear what the current working list of Vulnerable Populations is. We see a long list in Table 4.2, with some additions in Tables 4.3 and 4.4 based on CESJ data and EAG conversations. We recommend showing one list of the current	Avista combined all 2025 Vulnerable Population characteristics and is reflected in Figure No. 4.1 and included additional information in the *Vulnerable Populations* subsection in the *Named Communities* chapter.

		factors Avista considers when identifying Vulnerable Populations. Some of the factors on the lists provided are unclear. Please demonstrate how Avista has determined that each characteristic is reasonable and in line with the definition of Vulnerable Population as outlined in WAC 480-100-605. We highlight 'people who fall between the cracks', 'religious and spiritual people', 'neighboring communities and states' as examples of undefined and possibly unmeasurable characteristics without a clear link to being a vulnerable population under CETA.	
Commission Staff	CBIs	Employee Equity, Inclusion & Diversity Commitment / CBI: Employee Diversity. This CBI lacks a defined benchmark, interim milestones, and timeline for progress. We recommend providing a clear benchmark measure of current Employee Diversity for results to be measured against. It is unclear whether the Company prioritizes equal opportunity practices, equal outcomes, or any other methods. Providing specificity in this area is crucial for credibility and accountability.	Recent changes in federal regulations and policies restrict the Company's ability to identify specific benchmarks for diversity indicators. Avista's employment practices, however, have been and will continue to meet regulations while actively fostering a nondiscriminatory hiring and employment environment. Please see the *Customer Benefit Indicator* chapter for updates.
Commission Staff	Renewable Energy Targets & Actions	Potential new large load: Given that Avista has received approximately 3,000 MW in preliminary data center requests, we would like to see some process for how the Company is evaluating at what stage of a request it may start seriously incorporating it into	Avista does not include speculative large loads within its load forecast. Instead, the load is included in the forecast once an agreement has been signed. Any large load agreement would include a power supply arrangement to ensure reliability and protection from negative rate impacts on other customers. At this time, Avista has not signed any large load, or subsequent

		load forecasts. We would like to get a better sense of what all the options are that Avista can consider if faced with new large load, and what actions it can reasonably take in anticipation. For example, what is the likelihood a data center will bring some or all of its own generation and how much of that might be renewable or non-emitting? How will Avista administer an RFP in response to a new large load in a timely manner?	power supply agreement. Further, Avista's 2025 RFP process was designed to identify resources in the event of a large-load customer is added to the system. If a large load agreement were to be signed in the next year, resource submissions from the 2025 RFP process, if available at that time, would be considered. If 2025 RFP submitted resources were not available or an agreement were reached after 2026, it's anticipated that Avista may need to issue another All-Source RFP. If a load is located within Washington state, Avista will be obligated to the 2030 carbon neutral and 2045 carbon-free standards in its resource acquisition to meet the new demand. The Company's resource selection will ultimately depend on the location of the large load, transmission access, and resource costs and or preference. Avista intends to include an update in the 2027 Biennial CEIP if any large load agreements are made. Please see the *Potential New Large Load* subsection in the *Renewable Energy* chapter for updates.
Commission Staff	Demand Response	Does Avista have any plans to offer a residential EV DLC or residential EV TOU program?	Avista is currently piloting a residential EV direct load control program using telematics technology. In addition to pilot learnings, the Company intends to conduct further industry and market/customer research to implement this as a program. Although Avista does not currently have plans to offer a residential EV TOU program, the Company intends to analyze results of the current TOU program (which includes some EV customers) and conduct further research to propose additional pilots and program as appropriate in the future. It is a strategic objective of the Company's TE Plan to scale cost-effective load management programs.
Commission Staff	Demand Response	Staff agrees with Avista's plan to pursue all cost-effective	Avista thanks UTC Staff for their review and comments.

		demand response that comes from the 2025 RFP, even if over the 25MW target, as required by RCW 19.405.040(6)(a).	
Commission Staff	Demand Response	Regarding the NEEA End-Use load flex project, please clarify if Avista expects that the permanent standard will be completed by the end of 2025, and if Avista then plans to develop the pilot. If so, what is the expected timing and workplan for this pilot?	The permanent standard will not be completed for implementation by the end of 2025. The Department of Commerce (DOC) grid-enabled electric water heater standard became permanent for all electrically heated water heaters manufactured after January 1, 2023 (WAC-194-24-180). All new electric water heaters sold in Washington after January 1, 2023 have the ability to be connected and responsive to grid requests for services, however the standards for how to connect, report and respond to the grid signals are being developed. In 2024, Avista and nine other Northwest utilities, funded a two-year End-Use Load Flexibility (EULF) project through NEEA. The EULF project included a study to explore methods to cost-effectively connect CTA-2045 enabled water heaters in the field, including customer and installer awareness and education. The project also included laboratory testing of commercially available water heaters for conformance and compliance with CTA-2045 standards to ensure that the water heaters can deliver full potential to the grid. A report detailing the findings from both the field and laboratory work will be available by the end of 2025. As a result of the conformance and compliance testing, Portland State University is now developing a CTA-2045 implementation guideline, of which NEEA will advocate water heater manufacturers adopt to increase the level of grid service performance.

			In addition, NEEA, and utilities funding the current two-year project, are developing a scope of work and budget for a second phase of the project between 2026-2029. If approved, the proposed scope of work includes connecting and engaging grid-enabled water heating and space conditioning products cost-effectively and at meaningful scale. The findings from phase one and phase two of the project will inform Avista's Integrated Resource Plan (IRP) to determine if these programs can be offered cost-effectively in Avista's service territory. Please see *NEEA End-Use Load Flex Project* subsection under the *Demand Response* | *Specific Targets & Specific Actions* chapter for updates.
Commission Staff	Company Initiatives Goals & Actions	We commend the Company for its intention to set up aspirational goals. However, for the goals in Table 9.1 to be useful, even if aspirational, they would all need to be measurable, like the first two are (i.e. specific percentage and numerical goals). Similarly, benchmark metrics should be provided in this plan for each goal so that progress towards the goals can be measured. Without these details, the aspirational goals are no different than the directionality named in the CBI section, which we wouldn't characterize as aspirational.	Please see the *Goal* | *Aspirational CBI Metrics* subsection in the *Company Initiatives* | *Goals & Actions* chapter for updates regarding aspirational measurement metrics and benchmark metrics. Avista has proposed detailed aspirational goals where possible but continues to believe that improved directionality for some CBI metrics is the appropriate method for tracking and monitoring these aspirational goals.
Commission Staff	Company Initiatives Goals & Actions	NCIF: Please provide continued justification for why the $5 million annual cap is set. Next, please provide explanation as to why that $5 million cap continues to not be	Please see the *Actions* | *Named Communities Investment Fund* subsection under the *Company Initiatives Goals & Actions* chapter for updates.

		spent within the NCIF. If Avista intends to ramp up the spending to the $5 million cap, please demonstrate what steps are being taken to ramp up programs	
Commission Staff	Company Initiatives Goals & Actions	Transportation Electrification Plan: If more than 50% of Avista's customer base resides in Named Communities, provide justification for why electric transportation funding is capped at 30% of benefits flowing to NC.	As a settlement of the 2020 GRC, and prior to the establishment of Named Communities, Avista was required to set a goal of 30% of the TE Plan's funds to benefit low-income customers: *Last, the Settlement requires Avista to establish, by working with its EEAG, an electric vehicle (EV) project or program dedicated to benefiting low-income customers by 2022. Avista will do so "in alignment with its Transportation Electrification Plan and goal of dedicating thirty percent (30%) of transportation electrification program funds to the benefit of low-income customers." Docket UE-200900 et. al. Final Order 08/05 Page 28 at Paragraph 67* With the establishment of the Named Communities in the 2021 CEIP, this benefit population was expanded to include all Named Communities, as low-income customers are considered a subset Named Communities. The goal is aspirational and not capped at 30%. The investment goal is dependent on certain market conditions and customer participation that Avista may influence but does not control. For example, in 2024, based on charging infrastructure investments in Named Communities and at facilities operated by non-profit organizations serving those in need, and other investments from the Company's Community EV Program, Avista reported more than 50% of TE funding benefited Named Communities and low-income customers.

			Community benefits are not solely associated with charging investments in Named Communities. It should be recognized that over the long term, TE can provide beneficial load growth in terms of net utility revenue, which can reduce rate pressure for all customers. Realizing this strategic objective is the long-term focus of the TE Plan and is designed to be flexible and adaptive to changing technologies and market conditions. Please see the *Transportation Electrification Plan* subsection under the *Company Initiatives* | *Goals & Actions* section for updates.
Commission Staff	Company Initiatives Goals & Actions	NCIF Distributional Equity Analysis: We clarify that the Commission ordered a Commission-led process, rather than Staff-led process. The Commission has initiated this process in docket A-230217, with a distributional equity workshop planned for October 2025. While the result of this docket should inform Avista's approach to analyzing distributional equity, Staff notes that the absence of a conclusion in this ongoing work does not relieve Avista of its equity-related obligations under CETA in the meantime.	Avista's distribution equity progress is demonstrated in the *NCIF Distributional Equity Analysis* subsection under *Company Initiatives* | *Goals & Actions* chapter. Outside of the CEIP, distribution equity is also demonstrated in the 2025 Biennial Conservation Plan and in Avista's energy assistance program offerings. The Company looks forward to the Commission's guidance in how to advance this work.
Commission Staff	Company Initiatives Goals & Actions	To the extent possible, provide any updates on if any projects mentioned in this chapter are affected by recent treasury guidance.	Please see updates to the *Company Initiatives* | *Additional Actions* chapter.
Commission Staff	Incremental Cost & Alternative Compliance	There are several instances in this chapter where Avista cites the main differences between the Reasonably Available portfolio and the Alternative Lowest Reasonable Cost portfolio. These range from the	Please see updates to the *Portfolio Analysis* section in the *Incremental Cost & Alternative Compliance* chapter.

		cost of RECs, the NCIF, and labor and non-labor expenses. Several of these instances cite a different cause as the leading factor, and other times it notes that the two portfolios are nearly identical with no cost difference between the two. Please clarify and remain consistent with what the differences are between the two throughout this chapter.	
Commission Staff	Incremental Cost & Alternative Compliance	Because Avista is not including potential RFP acquisitions in the incremental cost calculation at this time, do you plan to include an updated incremental cost calculation in the 2027 BCEIP if relevant acquisitions do occur?	Given the RFP selections will occur after filing the 2025 CEIP and the Company is not close to reaching the cost cap, Avista does not plan to update the incremental cost calculation after the conclusion of the RFP or in the 2027 Biennial CEIP, as neither are required. The actual incremental costs will be included in the clean energy compliance report as required in WAC 480-100-650(1)(g).
Commission Staff	2021 CEIP Conditions & 2023 BCEIP Conditions	Please elaborate on how Avista proposes to "remove" conditions. We may interpret that to mean Avista proposes that it is no longer required to comply with these conditions in the 2026-2029 compliance period, and not that it proposes to reopen the 2021 docket to actually remove them. Is that consistent with Avista's intent?	Please see updates to the *2021 CEIP & 2023 Biennial Conditions* chapter. Avista does not propose to reopen the 2021 CEIP docket. As described in Chapter 11, Avista satisfied all 39 conditions under the 2021 CEIP, of which 33 require no further action in the 2025 CEIP or future CEIPs. In its order approving the 2025 CEIP, Avista proposes that the Commission remove two conditions, as they do not apply to the 2025 CEIP or future CEIPs.
Commission Staff	2021 CEIP Conditions & 2023 BCEIP Conditions	Similarly, elaborate on how Avista proposes to "modify" conditions. Where proposing to modify, please provide the exact redlined modifications Avista proposes to each condition, if applicable.	Please see updates to the *2021 CEIP & 2023 Biennial Conditions* chapter. In its order approving the 2025 CEIP, Avista proposes that the Commission modify Condition 35 for the 2025 CEIP and future CEIPs.
Commission Staff	2021 CEIP Conditions & 2023 BCEIP Conditions	Condition 20: What steps has the Company taken to identify if there are any other data sources, besides the Spokane Clean Air program that ended,	Existing and new CBIs were thoroughly reviewed and discussed with the EAG as described in the CBI chapter. No other wood stove metrics were identified during those discussions.

		to support the continued inclusion of this metric?	
Commission Staff	2021 CEIP Conditions & 2023 BCEIP Conditions	Condition 38: It is unclear whether the Company proposes to continue this condition but for the proposed replaced metrics under the applicable CBIs or fully remove this. Staff opposes fully removing this intention of this condition, regardless of if some metrics are changing within other CBIs. Instead, we recommend the Company do more tracking of subsets of Named Communities, with increased granularity to better accomplish what we mention under the "Named Communities" section of this feedback.	The Company agrees with Staff on the desire to retain the intent of Condition 38, which was completed for the 2021 CEIP. Please see the *Named Communities* chapter for information regarding proposed Named Community subset metric tracking.

Appendix C – Avista's 2025 Clean Energy Action Plan

Washington Clean Energy Action Plan

Introduction

Avista's 10-year Clean Energy Action Plan (CEAP) is the lowest reasonable cost plan of resource acquisition given societal costs, clean energy, and reliability requirement targets over the IRP's 20-year time horizon, including known information and assumptions regarding the future. Avista developed this CEAP in conjunction with its IRP Technical Advisory Committee (TAC) to meet the capacity, energy, and clean energy needs of both Idaho and Washington. The resources described in this CEAP are specific to Washington's portion of Avista's system needs for compliance with the Clean Energy Transformation Act (CETA). This plan describes how Avista will meet the key considerations required by the Washington Utilities and Transportation Commission (UTC). Details regarding the methodology and assumptions for this plan are included in the 2025 IRP. This CEAP is the basis for the 2025 Clean Energy Implementation Plan (CEIP). Table 1[127] illustrates annual resource additions, including demand response (DR) and energy efficiency, for 2026 through 2035.

Table 1: Resource Acquisition Forecast

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Supply Resources (MW)										
Washington Allocated Wind	-	-	-	200.0	200.0	100.0	-	-	-	-
System Allocated Wind (WA share)	-	-	-	-	-	65.9	66.0	103.8	-	-
Distributed Solar	-	0.5	0.6	0.6	0.7	0.8	0.8	1.0	0.5	0.5
Total Resources	**-**	**0.5**	**0.6**	**200.6**	**200.7**	**166.7**	**66.8**	**104.8**	**0.5**	**0.5**
Cumulative Demand Response (MW)										
Battery Energy Storage	0.0	0.1	0.2	0.9	2.5	3.4	3.8	4.3	4.8	5.4
EV Time of Use Rates	0.1	0.3	0.5	0.8	1.1	1.4	1.7	2.0	2.4	2.8
Variable Peak Pricing	0.3	1.0	2.2	3.2	3.7	3.9	3.9	3.9	3.9	3.9
Peak Time Rebate	-	-	-	-	-	-	-	-	-	0.2
Total Demand Response	**0.5**	**1.4**	**3.0**	**4.9**	**7.2**	**8.7**	**9.4**	**10.2**	**11.1**	**12.4**
Cumulative Energy Efficiency										
Energy Savings (aMW)	4.2	8.4	12.6	16.8	21.0	25.2	29.4	33.6	37.8	42.1
Winter Peak Reduction (MW)	8.5	17.0	25.6	34.1	42.6	51.1	59.7	68.2	76.7	85.2
Summer Peak Reduction (MW)	7.1	14.2	21.3	28.4	35.5	42.6	49.6	56.7	63.8	70.9

[127] Energy efficiency savings totals 44.5 aMW when considering savings from line losses.

Avista proposes annually increasing its clean energy target until the 2030 greenhouse gas (GHG) emissions neutral target and then continuing the trajectory adding more clean resources each year toward the 2045 target of 100% clean energy. Table 2 shows proposed target percentages, starting with a 66% clean energy target in 2026 and increasing to 76.5% by 2029, the last year of the 2025 CEIP. The table shows Avista can meet the targets on an annual basis with existing Washington allocated resources through 2033. Attaining clean energy goals beyond 2033 will require using Idaho allocated renewable energy unless new clean energy resources are added. On an annual average basis, with the new resource additions described in this plan, in 2030 and thereafter, Avista's Washington customers will have net clean energy exceeding 100% of its retail load. As discussed in the 2025 IRP, the amount of clean energy generated within a year will exceed clean energy targets for the following reasons:

- Early acquisition of renewable energy to take advantage of lower cost, lower complexity transmission interconnection projects, and the Inflation Reduction Act (IRA) tax credits to lower customer costs compared to building later. Early acquisitions will offset future load growth and later higher renewable energy targets.

- The "use" rules of clean energy are subject to final WUTC determination. It is possible any renewable energy generation exceeding load within a defined period, such as a month or a period of the day and may not qualify as clean energy and therefore requiring additional renewable energy to ensure generation in other periods either for compliance of planning.

- Planning for the 100% clean energy goal in 2045 requires additional clean energy resources for contingency planning in the event of low renewable energy production years and to meet 100% of load rather than "retail" load, where load includes line losses.

Table 2: Clean Energy Load and Resource Balance (aMW)

Item	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Retail Sales	704.9	708.1	709.3	708.4	708.7	709.8	711.9	718.8	727.5	737.1
PURPA	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9
Solar Select	5.7	5.7	5.6	5.5	5.5	-	-	-	-	-
Net Requirement	**678.2**	**681.5**	**682.9**	**681.9**	**682.3**	**688.8**	**691.1**	**697.9**	**706.5**	**716.2**
Target Clean % for Primary Compliance	66.0%	69.5%	73.0%	76.5%	80.0%	80.0%	80.0%	80.0%	85.0%	85.0%
Clean Energy Goal	**447.6**	**473.6**	**498.5**	**521.6**	**545.8**	**551.1**	**552.9**	**558.3**	**600.6**	**608.8**
Washington Allocated Share										
Clark Fork & Spokane River Hydro	297.1	288.5	289.3	296.8	299.2	304.1	305.6	308.6	310.9	312.8
Mid-Columiba and CBH Hydro	159.9	167.2	165.4	165.0	162.2	163.2	164.5	165.6	130.8	131.0
Kettle Falls	23.3	21.1	18.7	17.7	17.8	18.8	17.8	17.5	16.8	16.3
Wind PPAs	86.6	87.0	87.0	87.3	87.3	87.4	87.3	87.6	87.9	88.1
Solar PPA	-	-	-	-	-	5.3	5.3	5.3	5.2	5.2
Available Resources	**566.9**	**563.9**	**560.4**	**566.8**	**566.5**	**578.8**	**580.5**	**584.7**	**551.5**	**553.4**
Position Before Idaho Transfers	**119.3**	**90.2**	**61.9**	**45.2**	**20.7**	**27.7**	**27.6**	**26.3**	**(49.0)**	**(55.4)**
Idaho Transfers (Wind, Biomass, Hydro PPA)	118.6	121.3	119.0	119.0	119.1	142.4	142.2	142.6	142.1	141.7
Position After Available Idaho Transfers	**237.9**	**211.5**	**180.9**	**164.2**	**139.8**	**170.1**	**169.8**	**168.9**	**93.1**	**86.3**
Proposed Wind Additions	-	-	-	75.9	152.0	221.6	253.2	288.2	288.6	289.4
Proposed Solar Additions	-	0.1	0.2	0.3	0.4	0.5	0.7	0.8	0.9	1.0
Total Proposed Clean Energy Additions	**-**	**0.1**	**0.2**	**76.2**	**152.5**	**222.1**	**253.9**	**289.0**	**289.5**	**290.4**
Net Position w/ Idaho Transfers	**237.9**	**211.6**	**181.1**	**240.3**	**292.2**	**392.3**	**423.7**	**458.0**	**382.6**	**376.7**
Net Postion w/o Idaho Transfers	**119.3**	**90.3**	**62.1**	**121.3**	**173.1**	**249.9**	**281.5**	**315.4**	**240.5**	**235.0**
WA Allocated Resources as % Retail Load	84%	83%	82%	94%	105%	116%	121%	125%	119%	118%

Clean Energy Action Plan Requirements

CETA commits Washington to greenhouse gas emission free electricity supply by 2045. RCW 19.280.030 provides requirements for a CEAP and WAC 480-100-620 expanded these requirements for Investor-Owned Utilities. Avista's CEAP meets the following requirements:

A. Be at the lowest reasonable cost;
B. Identify and be informed by the utility's ten-year cost-effective conservation potential assessment as determined under RCW 19.285.040;
C. Identify how the utility will meet the requirements in WAC 480-100-610 (4)(c) including, but not limited to:
   - Describing the specific actions the utility will take to equitably distribute benefits and reduce burdens for highly impacted communities and vulnerable populations;
   - Estimating the degree to which such benefits will be equitably distributed and burdens reduced over the CEAP's ten-year horizon; and
   - Describing how the specific actions are consistent with the long-term strategy described in WAC 480-100-620 (11)(g).
D. Establish a resource adequacy requirement;

E. Identify the potential cost-effective demand response and load management programs that may be acquired;
F. Identify renewable resources, non-emitting electric generation, and distributed energy resources that may be acquired and evaluate how each identified resource may reasonably be expected to contribute to meeting the utility's resource adequacy requirement;
G. Identify any need to develop new, or to expand or upgrade existing, bulk transmission and distribution facilities;
H. Identify the nature and possible extent to which the utility may need to rely on an alternative compliance option identified under RCW 19.405.040 (1)(b), if appropriate; and
    a. Incorporate the social cost of greenhouse gas emissions as a cost adder as specified in RCW 19.280.030(3).

A. Lowest Reasonable Cost

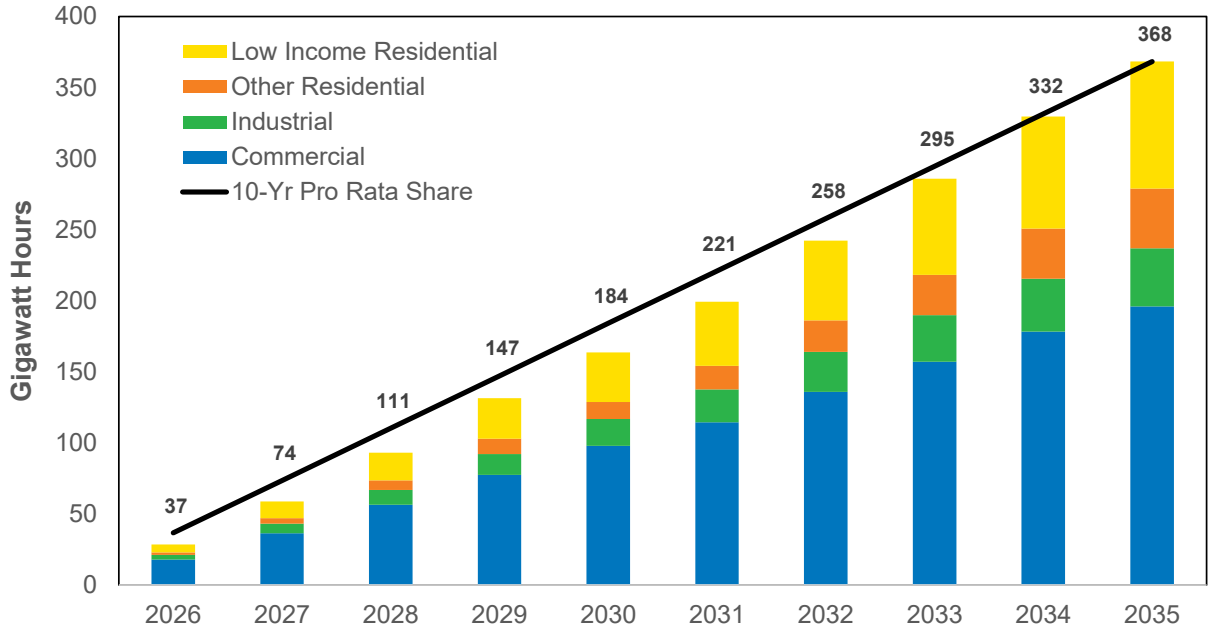
The CEAP is a derivative of the 2025 Electric IRP. The IRP selects the lowest cost resource portfolio given policy constraints, such as available resource types and lower emissions requirements for new resources. A Mixed Integer Program (MIP) optimizes resource options to choose the lowest cost portfolio given resource needs and available options. The model simultaneously selects both supply- and demand-side resources to reach a solution. It also considers transmission costs, availability of resources, and all identified non-energy impacts to evaluate the social cost of different resource choices. Chapter 2 of the 2025 IRP describes the Preferred Resource Strategy (PRS) over the next 20 years and covers the needs for Avista's customers. This CEAP identifies the expected resources for the 2026-2035 period meeting only Washington's policy requirements and needs. Avista currently does not allocate supply-side resources by state. New resources identified in this plan will be allocated to Washington using Avista's Production Transmission (PT) ratio unless a new allocation methodology is developed and approved by each state commission.

B. Energy Efficiency

Avista contracted with Applied Energy Group (AEG) to conduct an independent conservation potential assessment (CPA) of Avista's service area. A summary of the study is in the 2025 IRP's Chapter 6 and AEG's report is available in Appendix C. AEG identified 1,486 programs for both Avista and the Northwest Energy Efficiency Alliance (NEEA) to implement (if cost effective). If all these programs were successfully implemented and customers agreed to fully participate, energy sales would reduce by 903 GWh (103 aMW) through 2035. Not all potential program measures are economic for Avista's customers. To identify the cost-effective measures for

implement, the IRP capacity expansion model conducts a Total Resource Cost (TRC) test of each energy efficiency measure compared to other resource alternatives. The analysis found 368.4 GWh (42.1 aMW) to be cost effective on a cumulative basis if customers participate as forecasted. In addition to the energy savings, peak loads winter peak load is reduced by 85 MW in December and 71 MW lower in the August peak by the end of 2035. Figure 1 shows the annual cost-effective energy efficiency expected for each customer group. Avista's 2026-2027 target is 73,672 MWh

Figure 1: 10-Year Cost Effective Conservation Potential Assessment



C. Equity and Customer Benefits

Equity and incorporating the tenets and principles of Energy Justice, including recognition, procedural, distributive and restorative, are crucial in the transition to clean energy and form the core of the CEAP.[128] The CETA guidelines not only focus on the advantages of energy usage, but also on the benefits and opportunities it brings, including economic growth, social health and safety improvements, and the reduction of GHG emissions benefiting the environment. There is an emphasis on how these benefits are distributed among communities. Utilities are required by CETA to address these topics when planning to acquire resources to minimize unequal access to

[128] The Company defines equity as fair and just inclusion, treating all customers fairly, recognizing that each person has a unique circumstance, and allocating resources and opportunities in a manner which achieves an equal outcome.

benefits or disproportionate burden of risks – allowing all customers to share in the benefit and burden. Specifically, CETA requires all customers to benefit from the transition to clean energy:

> "through (i) the equitable distribution of energy and nonenergy benefits and reduction of burdens to vulnerable populations and highly impacted communities, (ii) long-term and short-term public health and environmental benefits and reduction of costs and risks; and (iii) energy security and resiliency."[129]

CETA also has a strong public participation focus to ensure customers and communities can provide input on clean energy decisions. While not specifically defined as "energy justice tenets," the nature of CETA requirements align with the definition of energy justice, which is as follows:

> "Energy justice refers to the goal of achieving equity in both the social and economic participation in the energy system, while also remediating social, economic and health burdens on marginalized communities. Energy justice explicitly centers the concerns of frontline communities and aims to make energy more accessible, affordable, clean and demographically managed for all communities."[130]

These requirements create a broader consideration of benefit types, increase input of interested parties regarding equity issues, and promote continuous progress for resource evaluations and the overall delivery of the energy system within the traditional planning process. To ensure Avista is effectively planning for equitable outcomes, the four tenets of energy justice – recognition, procedural, distributive, and restorative – are included in the development of the CEAP and selection of resources.

Recognition Justice

Recognition justice primarily focuses on whose energy service has been, or is currently, impacted in a disproportional manner. It is primarily concerned with the historical context and seeks to understand how previous actions or policies have resulted in disproportional outcomes. This "…

[129] RCW 19.405.060(1)(c)(iii).
[130] Shalanda Baker, Subin DeVar, and Shiva Prakash, "The Energy Justice Workbook" (Boston, MA: Initiative for Energy Justice, December 2019), https://iejusa.org/wp-content/uploads/2019/12/The-Energy-Justice-Workbook-2019-web.pdf.

requires an understanding of historic and ongoing inequalities and prescribes efforts that seek to reconcile these inequalities."[131]

A key aspect of CETA includes a focus on Named Communities. These communities are either socially or economically disadvantaged or sensitive to environmental impacts on their health. Avista incorporated recognition justice into the IRP and CEAP through its work on the Named Community mapping tool. These maps overlay the Washington State Department of Health (DOH) Environmental Disparities map of Avista's Washington service territory. In addition, the White House's Justice 40 Initiative map, identifying community burdens in the areas of climate change, energy, health, housing, legacy pollution, transportation, water and wastewater, and workforce development, was incorporated. These maps provide insight for identification of communities who may have, or continue to, receive a disproportionate benefit or burden. This is more fully described in the "Named Community Identification" section below.

Beyond a contextual understanding of disparities, recognition justice also validates lived experiences, encourages constructive dialogue regarding methods for addressing inequities, and ensures new policies do not exacerbate existing situations or create unintended consequences. The Equity Advisory Group (EAG) was established in 2021 to support these efforts. The EAG members have been instrumental in validating inequalities in known Named Community areas and identifying additional communities or individuals who have or are experiencing disparities within Avista's Washington service territory. Through conversations with the EAG, public outreach and engagement efforts, Avista began incorporating recognition equity into its planning efforts.

Procedural Justice

Procedural justice focuses on impartial, accessible, and inclusive decision-making. Incorporating procedural justice into the IRP and CEAP process involves ensuring all interested parties, especially those from Named Communities, have meaningful opportunities to provide input to the decisions impacting them.

Throughout the IRP and CEAP's development, Avista promoted procedural equity in a variety of ways:

[131] Final Order No. 09 in UG-210755, paragraph 56.

- Engaged several advisory groups and encouraged participation in the areas of equity, energy efficiency/demand response, energy assistance, resource planning and the IRP's TAC, and Distribution Planning Advisory Group (DPAG).
- Modified the TAC meeting's frequency and duration based on feedback from participant's feedback.
- Reviewed and modified presentations to ensure more use of common language (non-technical) where possible.
- Recorded presentations for ease of access at later dates/times.
- Posted IRP calculation workpapers to provide transparency.
- Posted presentations several days before meetings to provide more time to develop questions and share concerns.
- Developed CBIs informing resource selection in consultation with the EAG and reviewed publicly with the TAC.
- Ensured participation from customer advocates to represent customers who may not be able to attend.
- Evaluated baseline CBIs in relation to resource planning to track progress, recognize, and acknowledge there are disparities and to support transparency in Avista's actions and impacts.
- Enabled language translation and closed captioning on the Zoom platform for public participation meetings.
- Posted input received from public meetings to support transparency of feedback.

Avista's Public Participation Plan (PPP)[132] informed tactics and strategies to facilitate meaningful engagement. The PPP supports broad representation from interested parties and customer advocates, providing additional opportunities for identifying and considering policies or procedures going forward.

Distribution Justice

Distribution equity in the IRP and CEAP pertains to the allocation of advantages and disadvantages of interim clean energy goals and targets and ensures they are allocated between different communities or across generations. It not only focuses on the actions taken but also on the communities affected, considering variations among them, such as between Named Communities and the general customer base.

The foundation of energy equity emphasizes identifying benefits going beyond traditional energy-related benefits. In IRP modeling, resource selection is based on either a constraint (forcing an action) or a financial driver (cost or benefit) to incentivize resource selection. Recent IRP's

[132] See Docket No. UE-210295 for Avista's 2021 Public Participation Plan and Docket UE-210628 for its 2023 Public Participation Plan.

resource selection used additional modeling of non-financial benefits, or Non-Energy Impacts (NEIs), to highlight the interconnectedness of economic, social, and environmental issues from resource selection.

To measure the distributional impacts of resource selection, CBI metrics are monitored. The CBIs are designed to provide a transparent, consistent, and measurable way to track progress and ensure accountability in equity areas including affordability, accessibility, reliability, and environmental impacts. The inclusion of CBIs in resource modeling may not fully inform economic resource selection, as the cost may exceed the financial benefits, or may negatively impact a CBI metric. For example, affordability may be negatively impacted if there is an increase in distributed energy resources (DERs). Avista included an IRP scenario to maximize all CBIs regardless of the cost to the system. This Maximum Customer Benefit scenario is described in Chapter 10 of the IRP. A forecast of CBI changes relevant to this plan and the full 20-year IRP are discussed later in this document.

Avista's approach to distributional justice and energy equity is comprehensive and multifaceted. By focusing on CBIs and NEIs, and addressing affordability, accessibility, reliability, and environmental sustainability, Avista aims to ensure the transition to clean energy is just, inclusive, and beneficial for all customers. See information below for more about CBIs and their associated metrics.

Restorative Justice

Restorative justice focuses on systematic approaches to prevent harm from occurring or continuing in the future. Striving to minimize disparities between Named Communities and all customers, particularly in relation to areas of affordability, availability, and accessibility, amongst others. Avista incorporates restorative equity in the following ways:

- **Climate change impacts**: The CEAP includes consideration for future weather impacts in the load and hydro forecast. Avista also accounts for the Social Cost of Greenhouse Gas (SCGHG) in resource decisions as directed by CETA.
- **Energy Efficiency efforts**: Energy efficiency provides significant value in support of clean energy goals and as a method for restorative equity. By supporting more energy efficiency in Named Communities, Avista provides opportunities to mitigate disparities. As previously mentioned, "fairness" is the act of being fair, impartial, and just. Through these

additional energy efficiency efforts, Avista is essentially meeting customers where they are – seeking to "close the gap" in disparities.

- **Named Community Investment Fund (NCIF)**: Avista created the NCIF to fund projects for customers in Highly Impacted Communities or from Vulnerable Populations, jointly referred to as Named Communities. This approximately $5 million annual fund enables energy and non-energy projects for these communities where they may not be able to complete or fund on their own. Avista accounts for these energy impacts in the CEAP by including an additional $2 million of annual energy efficiency spending for Named Communities in the energy efficiency target. Further, it includes an additional spending requirement for local DERs as a placeholder for future NCIF selected projects. These investments in Named Communities will influence local economic development and provide specific opportunities for people in these communities.

Achieving equity in Washington's clean energy transformation is not limited to IRP/CEAP planning. A broader, Company-focused effort is being made to ensure an equitable transition – one that is fair, impartial, and provides opportunities for all customers regardless of their unique circumstance. Avista has several efforts in progress to help incorporate equity throughout Avista's operations. These efforts include an equity focus on capital planning, energy efficiency and weatherization, affordability, and distribution planning.

Challenges to Implement Energy Equity Tenets

While Avista has taken several steps to incorporate energy equity tenets throughout its resource planning efforts, challenges remain regarding these efforts. The Company briefly discusses these challenges below and will provide additional details pertaining to specific actions to overcome these challenges and identified inequities in its Clean Energy Implementation Plan (CEIP). Incorporating equity tenants and implementing strategies to address inequities is not a one-and-done activity but is an iterative improvement process as Avista continues to engage with the communities it serves. Avista will consider the equity impacts of business decisions, and where feasible or practical to benefit all customers, implement equity-related improvements. Operationalizing equity and energy justice principles – moving from theory to practice – has inherent challenges including, but not limited to, the following:

Data availability and quality

Obtaining accurate data on energy usage, demographics, and socio-economic factors is crucial. In many areas, such data may be incomplete, outdated or only available through a third-party, making it difficult to identify and address disparities.

Specific Action: *To improve data availability and quality, where possible, Avista contracts with a third-party data provider for personal identifiable information such as income, if they rent or own a home, age, marital status, etc., and match that data with internally available customer data. To enhance data integrity and accuracy, Avista has improved data collection and validation efforts for CBI reporting and other metric obligations through a centralized data analytics team. Further, the Company recognizes there is a need for accurate, complete data which is consistent across all business units.*

Engaging interested parties

Effective outcomes require collaboration among all interested parties, beyond those who have historically participated in how Avista generates and delivers energy now and into the future. Directly engaging customers or advocates on their behalf is often difficult due to several factors, including having a desire to participate, or the ability to participate based on existing priorities and resource constraints within external organizations.

Specific Action: *To mitigate public awareness barriers, Avista hosts quarterly public participation meetings, provides social media campaigns to increase public meeting awareness, attends and participates in community engagement events, and contracts with a third-party to deploy customer engagement strategies and improve outreach effectiveness. Additionally, Avista is developing videos to support its clean energy initiatives to broaden awareness and increase customer participation. The Company continues to include its EAG in conversations regarding methods for contacting "hard to reach" customers and those in Named Communities. Although the Company has an obligation to promote awareness and conduct engagement efforts in good faith, a decision to participate in the activities must come from the customer or the advocacy groups. Avista's 2025 Public Participation Plan, due by May 1, 2025, will outline specific actions to overcome barriers to customer engagement and participation.*

Funding and Resources

Implementing equity-focused initiatives often requires significant investment. Limited funding can hinder the development, operation and awareness of programs supporting Named Communities.

Specific Action: *In the Company's 2022-2025 CEIP, Avista implemented its Named Community Investment Fund (NCIF), spending up to $5 million annually for direct investments in Named Communities, including investments in resiliency and additional energy efficiency. In addition, Avista has expanded its Low-Income Rate Assistant Program (LIRAP) to include a tiered bill discount program, known as My Energy Discount, an Arrearage Forgiveness Program, and an Arrearage Management Program, all with the intention of reducing energy burden and making energy service more affordable. Avista is actively working on ways to increase participation in these energy assistance programs and on continued investments in Named Communities.*

Technical Expertise

Customers may want to participate to a greater extent in resource planning Technical Advisory Committee (TAC) meetings; however, due to the technical nature of long-term system planning and inherent complexities, do not feel they have the skillset to do so.

> ***Specific Action:*** *Avista recognizes the IRP TAC process is highly technical in nature with complex terminology and lengthy meeting times. To reduce meeting fatigue, the Company pivoted from half day meetings once a month, to shorter meetings every two to three weeks during the planning phase. Additionally, various components of the Company's IRP are discussed throughout the CEIP public participation meetings where the language and discussion topics are shared using customer friendly terminology, instead of technical verbiage that is used during the TAC meeting process. Overcoming technical barriers is broader than a single Company's specific action and will take a collaborative approach between utilities, the Commission and its Staff, customer advocate groups, and other interested parties.*

Named Community Identification

Avista identified communities who are disproportionally impacted by adverse socioeconomic conditions, pollution, and climate change, among others, to ensure planning and implementation processes are fair and to equitably distribute clean energy transition benefits. Avista identified two types of community groups, Highly Impacted Communities and Vulnerable Populations (WAC 480-100-605), or collectively Named Communities, defined as follows:

- **Highly Impacted Community** is designated by the Washington Department of Health (DOH) based on cumulative impact analyses in section 24 of this act or a community located in census tracts that are fully or partially on "Indian country" as defined in 18 U.S.C. Sec. 1151.12.

- **Vulnerable Populations** are communities experiencing more risk from environmental burdens due to:
  - Adverse socioeconomic factors, including unemployment, high housing and transportation costs relative to income, access to food and health care, and linguistic isolation; and
  - Health sensitivity factors, such as low birth weight and higher rates of hospitalization.

Avista relies on information provided by the Washington State Health Disparities Map from the DOH to identify Highly Impacted Communities. For each census tract in the state, the DOH developed a score to measure disparities ranked between 1 and 10 for Environmental Exposure, Environmental Effects, Socioeconomic Factors, and Sensitive Populations. Communities where the combined average score of the four categories was nine or higher are considered Highly

Impacted Communities. The DOH also includes any areas fully or partially within "Indian Country".[133]

In Avista's 2021 CEIP, its methodology to determine Vulnerable Population characteristics was conditionally approved.[134] The EAG and other advisory groups helped Avista determine the geographic boundaries of Vulnerable Populations for the 2021 CEIP by using the Health Disparities Map[135] community rating system for Socioeconomic Factors and Sensitive Population. The maps identify areas on a scale of 1 to 10, where 10 is an area with the most significant health disparity. Avista focused on identifying census tracts not otherwise identified as a Highly Impacted Community whose socioeconomic factor or sensitive population score was 9 or 10. This methodology was conditionally approved contingent upon the incorporation of additional metrics as identified by Avista and the EAG. The criteria for determination of Vulnerable Populations (as developed by DOH) was reviewed to ensure these socioeconomic or sensitivity factors applied specifically to Avista's customers. Beyond inclusion of those indicators, additional collaboration with its EAG members resulted in a review of other traits that could be considered in the final determination of Avista's Vulnerable Populations. Avista also overlayed the Justice40 map of disadvantaged communities on its Named Community map to provide additional insights into challenges within its service territory. The Justice40 map provides a more in-depth look at indicators that are directly impacted by the energy industry. In combination, these maps provide an opportunity to further improve recognition justice, as well as monitoring, tracking and allocating resources to help ensure equity through energy transformation.

The maps of both types of Named Communities are shown in Figures 2 through 4 below. Avista is working with the EAG to determine other ways to identify Vulnerable Populations.

[133] The DOH's list of Highly Impacted Communities originally included areas misidentified as "Indian" country due to GIS borderline errors. Avista excluded these census tracts from its list for this report.
[134] Docket No. UE-210628.
[135] https://fortress.wa.gov/doh/wtnibl/WTNIBL/Map/EHD

Figure 2: Washington Service Area Named Communities

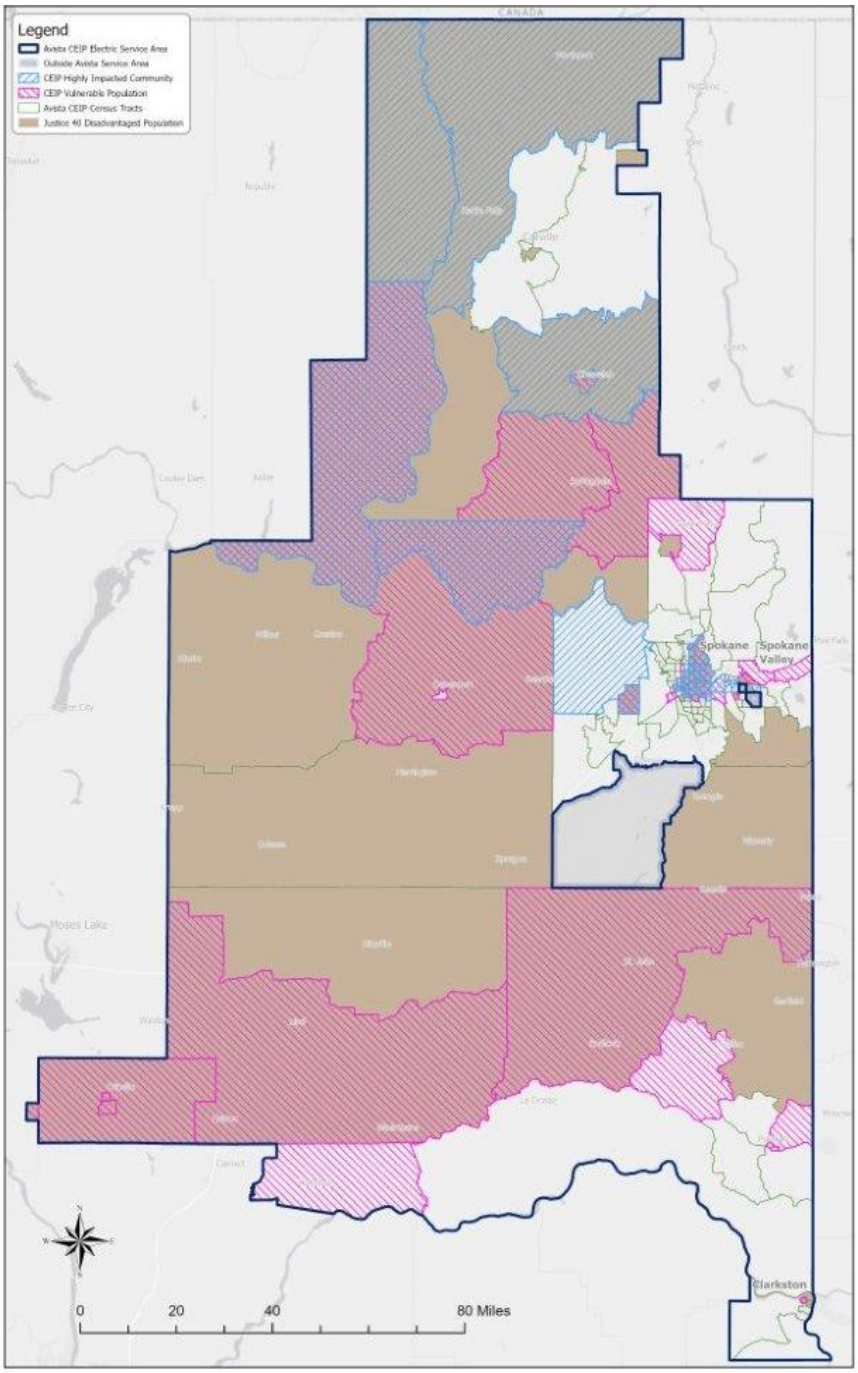


Figure 3: Spokane Named Communities

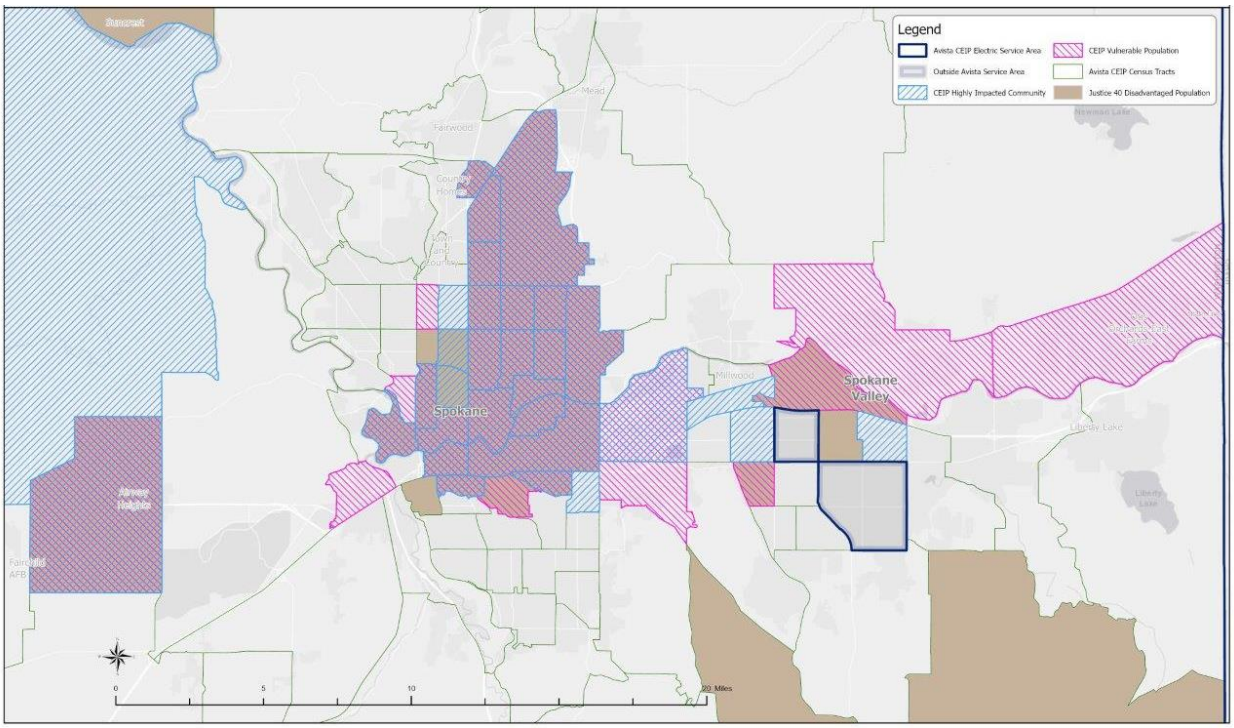
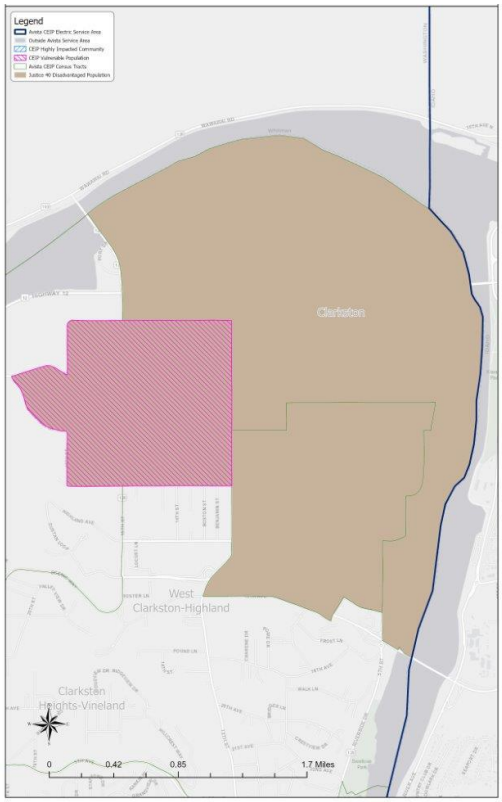


Figure 4: Clarkston Area Named Communities



D. Resource Adequacy

Avista must maintain enough resources to reliability serve current and future customers. Planning an electric system using a geographic footprint greater than a single utility take may take advantage of load and resource diversity of load and resources of other utilities. To address this, Avista is participating in the development of Western Power Pool's Western Resource Adequacy Program (WRAP).[136] Participation in regional resource adequacy efforts is important because Avista can benefit from the diversity and availability of other utilities resources, resulting in deferring the need for new resources. Until the WRAP is operational and binding, Avista continues to use its own planning standard of ensuring a 5% Loss of Load Probability (LOLP) including the ability to access 330 MW of market power. This LOLP planning standard results in a 24% planning margin added to the 1-in-2 peak load forecast, positioning Avista to withstand energy uncertainties. For summer planning, Avista uses the size of its single largest contingency resource (Coyote Springs 2) to determine the summer planning reserve margin, this results in a metric of 16%.

The 2025 IRP included an analysis of Avista's resource position in 2030 and finds with the current resources and projected retirements to cover both Washington and Idaho load, the system will not meet the resource adequacy requirement. With the resources identified in this CEAP for Washington, combined with additional resources needed for Idaho customers, the system would be resource adequate. These additional resources include a 90 MW natural gas-fired Combustion Turbine (CT), energy efficiency, and DR programs. With these additions, the system is resource adequate in 96.8% of future weather conditions (above the 95% threshold) assuming 330 MW of market reliance. In 3.2% of future scenarios where resource adequacy is not met, Avista would be dependent on the energy market or load curtailment beyond the 330 MW threshold. While the CEAP is directed at resource decisions for Washington, the resources needed for Idaho directly affect Washington due to the unique position where resources are allocated to each state using the production transmission (PT) ratio as opposed to which state's need drives the resource as modeled in the IRP. When Avista acquires resources, regardless of the primary driver, both states share the benefits and the costs using a pre-approved allocation methodology through the PT ratio. Avista will need to issue a Request for Proposal (RFP) of at least 90 MW of winter capacity with on-line delivery by the winter of 2029/2030 to maintain a reliable system. The new capacity addresses

[136] The WRAP is currently operated by the Southwest Power Pool (SPP) on the behalf of WPP.

load growth, expiration of a long-term PPA, and the potential retirement of the Northeast CT. However, based on the circumstances of these factors this resource need could change.

E. Demand Response & Load Management Programs

Avista and a large industrial customer agreed to a 30 MW DR program after the 2021 IRP. Following the 2021 CEIP, Avista began multiple DR pilots including an electric Time of Use (TOU) rate for residential and commercial customers, a Peak Time Rebate (PTR) for residential customers, and a partnership with NEEA to test grid-enabled CTA-2045 water heaters.[137] The 2025 IRP includes a biennial assessment of the DR potential programs within Avista's service area conducted by a third-party – Applied Energy Group (AEG). The potential assessment identified 101 MW of potential winter peak savings could be realized by 2035 if all programs were started by 2026. However, similar to the energy efficiency potential, not all programs are cost effective. Further, DR programs should only be implemented when the utility has a capacity need. In some cases, programs are cost effective within the plan, but not within every year of the 20-year study. Overall, nine programs within the 20-year plan are selected, but only four programs within the first 10-years of the plan. A summary of these programs and their expected peak savings is shown in Table 3. As behavioral DR programs are designed to affect energy usage behavior during peak usage events, it is nearly impossible to measure total program savings and the amount of customer load changes.

Table 3: Cumulative Demand Response (MW)

Year	Battery Energy Storage	EV Time of Use Rates	Variable Peak Pricing	Peak Time Rebate	Total Demand Response
2026	0.03	0.09	0.35	-	0.47
2027	0.10	0.30	1.00	-	1.40
2028	0.24	0.54	2.19	-	2.97
2029	0.92	0.80	3.17	-	4.89
2030	2.47	1.06	3.70	-	7.23
2031	3.44	1.35	3.88	-	8.67
2032	3.83	1.68	3.92	-	9.43

[137] According to the Customer Technology Association (CTA), the CTA-2045 standard is a modular communications interface to facilitate two-way communications with residential devices for energy management.

2033	4.28	2.02	3.92	-	10.22
2034	4.75	2.41	3.93	-	11.09
2035	5.39	2.85	3.95	0.20	12.38

F. Clean Energy Acquisitions

The 2025 IRP identifies multiple clean energy additions including community solar and utility scale wind. Currently, Avista is not proposing non-emitting electric generation (energy storage) unless capacity needs change due to unexpected load growth or generation capability/availability changes. The selected resources within the PRS will contribute to meeting the clean energy standards of CETA and provide minimal resource adequacy capacity to the system. While the assigned Qualifying Capacity Credits (QCCs) are relatively small for meeting peak load, one exception is Montana wind. Although, if there is a future downward QCC revision based upon recent cold weather performance, Avista may need a traditional capacity resource.

Avista's system capacity need by 2035 is estimated to be 225 MW for winter peak and 155 MW for summer peak, while the capacity need for its Washington portion of the portfolio is estimated to be 107 MW for winter peak and 93 MW for summer peak (prior to the DR selections covered earlier in this plan). As discussed earlier, Avista currently does not have an allocation methodology outside of the PT ratio for cost recovery of assets using a fixed ratio. This results in the 2025 IRP assuming a greater resource need for Idaho over Washington due to less PURPA generation and DR within the Idaho jurisdiction, even though Washington load is larger. Until an agreement is reached regarding resource allocation, the new resources resolving these deficits will continue to be split using the existing cost recovery methodology rather than the IRP methodology.

Community Solar

Avista's 2025 IRP includes a placeholder for community solar ranging from 0.5 MW to 1 MW annually. The forecasted first addition begins in 2027 utilizing grants from the Department of Commerce and Avista's NCIF. Within the CEAP time horizon, a total of 5.9 MW of distributed solar could be installed, contributing 0.2 MW to winter and up to 1.8 MW toward summer resource adequacy. Depending on location, grant availability and need, energy storage could also be added to the final resource configuration. To ensure the best locations and needs are met, this CEAP is not prescriptive about how solar will be added to the system but will seek the best use of available

grant funds in achieving energy burden reductions. Avista will continue its community solar development efforts and may provide a proposal in its 2025 CEIP.

Wind

Over the 10-year CEAP period, as seen in Table 4, 736 MW (257 aMW) of wind is selected for Washington in the 2025 IRP. Including Idaho, total system wind additions are 857 MW. Wind resources selected by the planning model includes wind within Avista's service area, on Montana and other transmission systems. Procuring wind early in the planning horizon makes this resource more economic due to low wind PPA pricing forecasts, the availability of tax incentives from the Inflation Reduction Act (IRA), and high forecasted wholesale electric prices allowing the use of surplus energy sales to reduce customer costs. However, if the tax credits were not available, wind selection would occur later in the planning horizon, closer to the energy needs of the system.

The actual amount of wind over the CEAP period is subject to multiple risks and may be reduced and/or delayed as a result of transmission access or changes in energy markets. While Avista's service area has significant wind potential, the ability to interconnect and deliver the wind to customers is limited without major transmission investments. If other utilities or developers export projects from Avista's transmission balancing area, Avista's ability to acquire low-cost wind projects for its customers will be limited until new transmission can be built.

Table 4: Wind Selections (MW)

Year	Washington Allocated Wind	System Allocated Wind (WA share)
2026	-	-
2027	-	-
2028	-	-
2029	200	-
2030	200	-
2031	100	66
2032	-	66
2033	-	104
2034	-	-

2035	-	-
Total	**500**	**236**

As mentioned earlier, Avista is not proposing any GHG-emitting resources or energy storage to directly serve Washington due to the wind, DR, and energy efficiency additions contributing to the additional resource adequacy needed to meet load growth.[138] For the wind additions, the total QCC is small compared to the total wind capacity, but it does satisfy most of the resource need meeting 63 MW toward the winter and 74-83 MW toward the summer resource adequacy metrics. However, wind does have a significant risk of not performing in severe cold and excessive heat. Regardless of contribution to capacity needs, relying on wind for resource adequacy creates risk to customers. As regional resource adequacy planning matures through the WRAP process in the WECC, energy storage may enter the resource need assessment to account for any lost capacity formally attributed to wind energy.

Resource Acquisition

The wind acquisitions discussed in this plan will be managed through a request for proposal (RFP) process. An all-source RFP is likely to be issued in 2025 to evaluate all resource options to meet specific energy and capacity requirements. Through this process, Avista may find an alternative to wind energy such as acquiring more regional hydroelectric generation, a combination of solar and energy storage, or a different wind source than included in this plan. Furthermore, the RFP may show the cost of new wind generation is not economic due to higher net customer costs, resulting in delayed acquisition.

The RFP process will also be combined with meeting system needs (i.e., Idaho) where other capacity resources such as natural gas, energy storage, or DR aggregation could be considered for meeting either the Washington or Idaho portion of system load. Based on information in this plan, and subject to changes due to load and resource availability, the all-source RFP will seek 116 MW of winter capacity by November 2029 and 125 aMW[139] of renewable energy as early as 2029.

[138] Avista does not model jurisdiction reliability metrics due to the system functions as one. It is possible without the 90 MW CT allocated to Idaho, the Washington portion of resources is not adequate if only Washington load and resources were available.

[139] Renewable generation is preferred between July and March as the other months typically have excess renewable energy from hydroelectric production.

Avista's RFP release will provide specific requirements subject to updated information once this IRP process is finalized.

G. Transmission & Distribution

Avista is planning significant changes to its transmission system over the next 10 plus years to enable access to energy markets and to integrate new resources. Large transmission development exceeds the planning horizon of this CEAP and often changes over time. The transmission projects under consideration are included in this plan, but not all are committed.

10-Year System Planning

Avista's system planning team develops a detailed 10-year System Plan and System Assessment with updates every two years. The System Assessment covering local planning, was released in November 2023, followed by the System Plan in February 2024. Both plans are in Appendix D.

The 10-year System Plan shows Avista's strategy to develop system reinforcements required to meet transmission system needs for load growth, adequate transfer capability, requests for generation interconnections, line and load interconnections, and long-term firm transmission service. The two-year System Assessment provides technical analysis demonstrating system performance and describes conceptual solutions to mitigate operational issues to maintain expected performance.

Blue Bird – Garden Springs 230 kV Project

Avista's system planning through the 10-year assessment identified transmission system needs for load growth across the south and west of Spokane. Studies show system operability is strained and results in reduced system flexibility, affecting safety, system resiliency, and ultimately service to customers. Continued load growth will amplify this situation.

The Blue Bird - Garden Springs 230 kV project was identified as the backbone segment of a broader West Plains Transmission Reinforcement project. The project's primary goal is to develop a new and independent 230 kV source west of Spokane. This goal will be addressed by sourcing 230 kV from BPA Bell - Coulee #5 230 kV Transmission Line to improve contingency performance and to increase system stability. The new 230 kV source will provide the required reliability and operational flexibility needed to serve current and forecasted loads.

An additional benefit of developing a new and independent 230 kV source west of Spokane is the increased transmission service capability this project is expected to bring. The location of this new 230 kV connection is anticipated to increase power transfer capability between Avista and BPA by 10-30% depending on the season.

North Plains Connector

The 2025 IRP evaluated a proposed regional transmission project to connect the Western and Eastern Interconnects. The project is developing a 3,000 MW capacity DC line between Colstrip, Montana and North Dakota with an on-line date of 2033. The end points in North Dakota would give Avista access to both the Midcontinent Independent System Operator (MISO) and Southwest Power Pool (SPP) markets to buy or sell power and provide access to generation resources in the mid-continent with different weather patterns. Avista studied this project in the IRP as a capacity only resource for resource adequacy to validate if the project cost could be justified based on this portion of the benefit.[140] An additional significant benefit is energy arbitrage by taking advantage of higher or lower prices in other markets and the Mid-Columbia market. These arbitrage benefits were not evaluated in the IRP as the analysis was still being conducted during the development phase. The capacity benefits from market access indicates participating in at least 300 MW of capacity from the North Plains Connector is beneficial to customers and was included in the 2025 IRP. If this project can be completed by 2033, it could replace capacity resources identified in the 2025 IRP's portfolio scenario analysis. Avista has not committed to this project but is actively following its progress and studying potential participation.

Colstrip Transmission System Upgrade

Avista and the other owners of the Colstrip Transmission System are evaluating upgrades to the existing 500 kV transmission lines and supporting its 230 kV and 115 kV infrastructure. These upgrades would increase power transfers out of Montana by approximately 900 MW. The purpose of this study is to better identify the simultaneous increases in transfer capability across the Montana to the Northwest and West of Hatwai WECC rated paths. Montana to Washington 500 kV transmission system upgrades were last studied by NorthWestern, BPA, and Avista in May 2012, as part of the Colstrip to Mid-Columbia Upgrade Project Study.

[140] The IRP analysis was conducted prior to the announcement by the DOE to allocate a $700 million Grid Resilience and Innovation Partnership (GRIP) grant to the project.

Lolo-Oxbow Upgrade and Optimization

Avista, as a prime recipient, in partnership with Idaho Power Company, is seeking grant funding for the Lolo - Oxbow Transmission Upgrade and Optimization project. This project will upgrade the Lolo - Oxbow 230 kV Transmission Line with high-capacity conductors, as well as wildfire resilient designs and materials. Additionally, the project includes integrating Idaho Power's new Pallette Junction Station and two SmartValve technology deployments. These improvements will increase interregional transfer capability by 450 MW between the Pacific Northwest and Mountain regions, presenting an opportunity to increase the build of renewable energy resources in the region.

The Lolo - Oxbow Upgrade and Optimization project would bring innovative technologies together resulting in improvements to interregional transfer capability by 450 MW from Avista to Idaho and up to 185 MW in the opposite direction. The two innovative technologies planned for this project are:

1) SmartValve technology that opens the door to dynamically controlling and optimizing power flows, and
2) Infravision technology that speeds transmission line construction with drone pull-line stringing instead of helicopter use.

The local communities and region would benefit from capacity upgrades enabling future generation interconnection opportunities to the Lolo - Oxbow 230 kV Transmission Line. If awarded, there will be community benefit funding available for up to $3.3 million. Additionally, through these upgrades, Avista will work towards further workforce development in energy-supportive roles, such as on-site equipment training, special operator training, and other job skill opportunities.

New Resource Interconnection

New resources may require an interconnect and additional reinforcements elsewhere in the system. When evaluating generic resources in the IRP, estimated costs are assigned to these resources as a placeholder for potential upgrades, but until specific resources are committed, the transmission upgrades are unknown. Further, the IRP identifies if there is not enough local capacity within an area where it is likely new resources would be located. Avista identified upgrades in Rathdrum, Idaho as a necessary improvement if additional generation capacity is chosen in northern Idaho.

When Avista evaluates projects within the RFP process, it ensures projects are progressing through the transmission cluster study process to confirm the project is deliverable to the system within necessary timelines. The cluster study process outlines the necessary system upgrades, construction timing, and costs to integrate proposed resources and the studies can be found on the Avista's transmission (OASIS) website.[141]

H. Alternative Compliance & Social Cost of Greenhouse Gas

Beginning in 2030, Avista's Washington electric retail sales must be greenhouse gas neutral, this means up to 20% of Washington's retail load can be offset with alternative compliance.[142] There are four main types of alternative compliance:

1. Compliance payment
2. Unbundled Renewable Energy Credits (RECs)
3. Investing in transformation projects
4. Using energy from a municipal solid waste facility[143]

To make progress toward the 2045 target, Avista assumes the amount of alternative compliance allowed will be lower each compliance period with 20% allowed for the 2030-2033 period and 15% between 2034 and 2037. Avista plans to use unbundled RECs or excess clean energy it controls to meet the 2030 neutral standard. Avista has access to three types of unbundled RECs:

1. RECs from excess energy beyond what will count toward "primary" compliance under the final clean energy "use" rules,
2. Renewable energy Avista owns and is allocated to Idaho customers, and
3. RECs purchased on the open market. (absent a federal or state law requiring retirement of those RECs).

[141] (Open Access Same-Time Information System), https://www.oasis.oati.com/avat/index.html.
[142] RCW 19.405.040 (1)(b).
[143] Using electricity from an energy recovery facility using municipal solid waste as the principal fuel source, where the facility was constructed prior to 1992, and the facility is operated in compliance with federal laws and regulations and meets state air quality standards. An electric utility may only use electricity from such an energy recovery facility if the department and the department of ecology determine that electricity generation at the facility provides a net reduction in greenhouse gas emissions compared to any other available waste management best practice. The determination must be based on a life-cycle analysis comparing the energy recovery facility to other technologies available in the jurisdiction in which the facility is located for the waste management best practices of waste reduction, recycling, composting, and minimizing the use of a landfill.

Avista will have significant RECs available from Idaho to sell to Washington customers at market prices. Table 5 is an estimate of the amount of alternative compliance Avista could utilize to meet the 2030 carbon neutral requirements.

Table 5: Alternative Compliance

Year	Alternative Compliance Percentage	Retail Load (aMW)	Maximum Alternative Compliance (aMW)
2030	20%	682	136
2031	20%	689	138
2032	20%	691	138
2033	20%	698	140
2034	15%	707	106
2035	15%	716	107

Transformation projects could be used for alternative compliance if cost-effective compared to unbundled RECs. To date, the transformation project requirements and accounting of the benefits toward alternative compliance are unknown, but Avista expects it may have some cost-effective options to use this mechanism from efforts in its Transportation Electrification Plan.

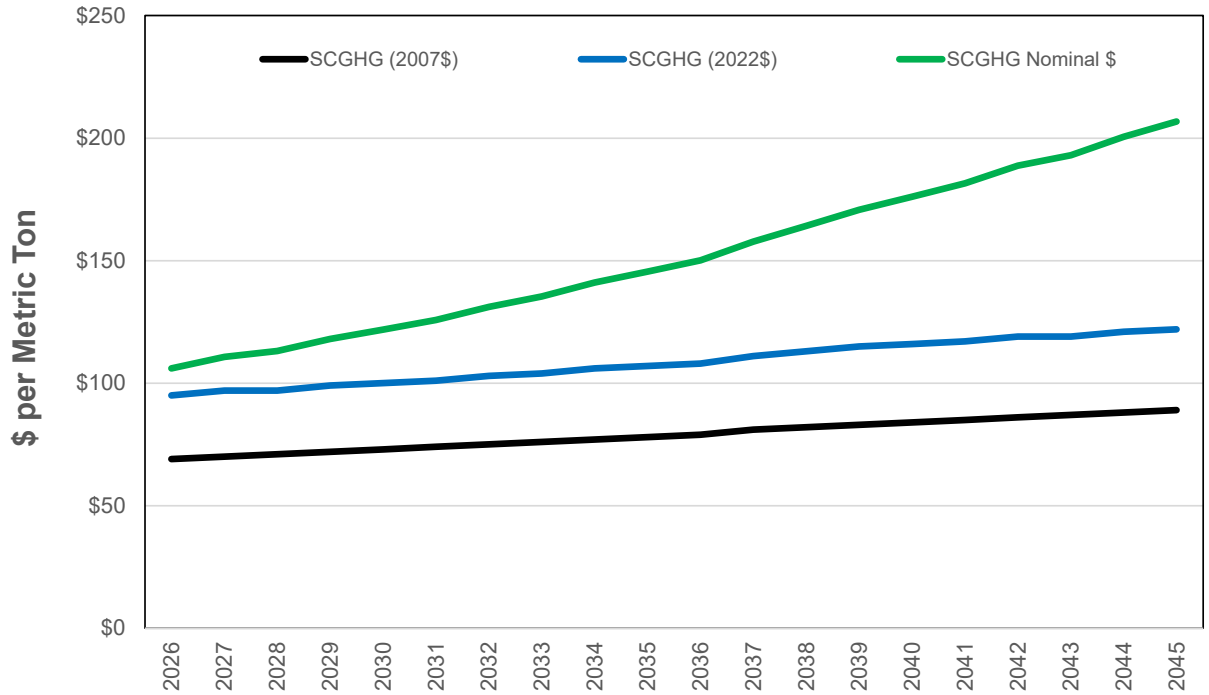
The last alternative compliance option is energy from a municipal solid waste facility, but this option has challenges. Avista currently purchases energy from a municipal solid waste facility, and it may meet this qualification in the future, but the output from the project is currently purchased as a PURPA resource through 2037. As a PURPA resource, it is deducted from retail load so counting the facility as alternative compliance would be double counting the resource.

Social Cost of Greenhouse Gas

Avista includes the Social Cost of Greenhouse Gas (SCGHG) within the portfolio model when it optimizes resource selection. Each resource with GHG emissions is assessed the cost as part of the portfolio optimization – see Figure 5 (green line) for pricing. The Washington share of existing resources and the potential new resources serving Washington are assessed this charge when optimizing the portfolio. The SCGHG is not included in Washington's share of resource dispatch within the modeling framework, but rather the cost of the Climate Commitment Act (CCA) emission allowances beginning in 2031. Due to uncertainty of how CCA allowance costs will be

effectively "charged" to customers, Avista does not include the CCA or SCGHG costs when forecasting future rates shown in the 2025 IRP Chapter 2.

Figure 5: Social Cost of Greenhouse Gas Prices



Customer Benefit Indicator Analysis

This CEAP includes forecasts of the relevant CBI impacts for supply- and demand-side resource selections from the 2025 IRP. The 2021 CEIP contained 14 CBIs, including 31 metrics for measuring the impact of those CBIs. Not all metrics are related to resource planning, but 11 do relate. This section demonstrates how the metrics may change with the 2025 IRP's resource strategy. Table 6 includes all metrics from the 2021 CEIP. Bolded CBIs are forecasted in this plan since they are relevant to resource planning. These metrics help measure the effects of the clean energy transition and broaden the focus on equity among customers.

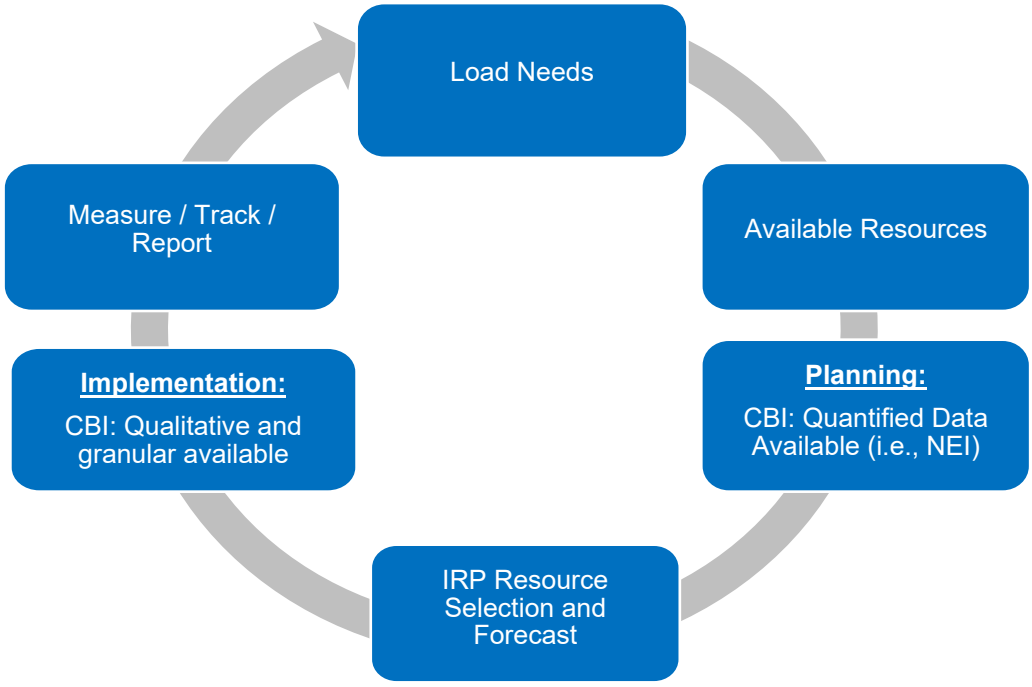
Table 6: Customer Benefit Indicators

Equity Area	Customer Benefit Indicator	Measurement / Metric
Affordability	(1) Participation in Company Programs	– Participation in weatherization programs and energy assistance programs (all and Named Communities)
		– Residential rebates provided to customers residing in Named Communities and rental units (Condition #17)
		– Saturation of energy assistance programs (all and Named Communities)
	(2) Number of households with a High Energy Burden (>6%)	– **Number and percent of households** (all customers, known low-income customers and Named Communities) (Condition #18)
		– **Average excess burden per household** (all customers, known low-income customers and Named Communities)
		– Number of households with high energy burden by Named Community subset (Condition #38)
Accessibility	(3) Availability of Methods/Modes of Outreach and Communication	– Number of outreach contacts
		– Number of marketing impressions
		– Increase in translation services
	(4) Transportation Electrification	– Number of trips provided by Community Based Organizations
		– Number of public charging stations located in Named Communities
	(5) Named Community Clean Energy	– **Total MWh of distributed energy resources 5 MW and under**
		– **Total MWh of energy storage resources under 5 MW and under**
		– Number of distributed renewable energy resources and energy storage resources (sites, projects, etc.,).
	(6) Investments in Named Communities	– Incremental spending each year in Named Communities
		– Number of customers/and/or Community Based Organizations served
		– **Quantification of energy/non-energy benefits from investments (if applicable)**
Energy Resiliency	(7) Energy Availability	– Average outage duration
		– **Planning reserve margin (resource adequacy)**
		– Frequency of customer outages

Energy Security	(8) Energy Generation Location	– **Percent of generation located in Washington or connected to Avista transmission**
	(9) Residential Arrearages and Disconnections for nonpayment (also found in Equity Area of Affordability)	– Number and percent of residential electric disconnections for nonpayment
		– Residential arrearages as reported to commission in Docket U-200281
		– Numbers and percent residential electric disconnects for non-payment by Named Community subset (Condition #22)
Environmental	(10) Outdoor Air Quality	– Weighted average days exceeding healthy levels
		– **Avista plant air emissions**
		– Decreased use of wood heat for home heating
	(11) Greenhouse Gas Emissions	– **Regional GHG emissions**
		– **Avista GHG emissions**
Public Health	(12) Employee Diversity	– Employee diversity representatives of communities served by 2035
	(13) Supplier Diversity	– Supplier diversity at 11 percent by 2035
	(14) Indoor Air Quality (Condition #24)	– Rank causes of indoor air quality (all and Named Communities)
		– Percentage of weatherization indoor air quality measures (all and Named Communities)

While Avista is committed to ensuring the equitable implementation of the specific actions identified in the 2021 CEIP and future CEIPs, there are circumstances where CBIs are not applicable to the resource planning process. In circumstances where CBIs are applicable to resource planning, Non-Energy Impacts (NEIs) and CBIs are utilized for evaluation and selection. Additionally, CBIs may be applicable to program implementation processes, which are outside the resource planning process. Figure 6 illustrates the planning process for resource needs, how those resources are secured and implemented, and how they impact the next IRP's load and resource needs. The applicability and timing of CBI inclusion is described below. Avista measures and tracks the impact of business decisions to focus on equitable outcomes.

Figure 6: Planning Process



CBIs Applicable to Resource Selection

While most of Avista's CBIs are not related to resource planning, this section addresses those CBIs related to resource planning. Avista's resource selection methodology uses resource costs and benefits, the NCIF, CETA requirements, and NEI values to inform resource outcomes, while avoiding any preconceived CBI targets or expectations. Constraints or requirements can be created in the PRiSM model to ensure certain metrics are met such as the PRM requirements or including financial incentives such as NEIs to incent certain decisions. These constraints may drive different outcomes as compared to traditional planning. The following section outlines CBI forecasts, while the specific data used to estimate the metrics and CBI values are included with the PRiSM model in the 2025 IRP Appendix G. These results can also be measured against a "Maximum Customer Benefits" scenario and are achieved through increasing CBI values to theoretical levels instead of cost-effective levels. In the end, it will be discretionary if resource selection and the expected CBI outcomes are justified as equitable.

CBI No. 2 – Number of Households with High Energy Burden

There are three forecastable metrics[144] related to household energy burden included within resource selection modeling, each excluding energy assistance funds:

- The number of households with energy burden exceeding 6% of income,
- Percentage of customers with excess energy burden, and
- Average excess energy burden.

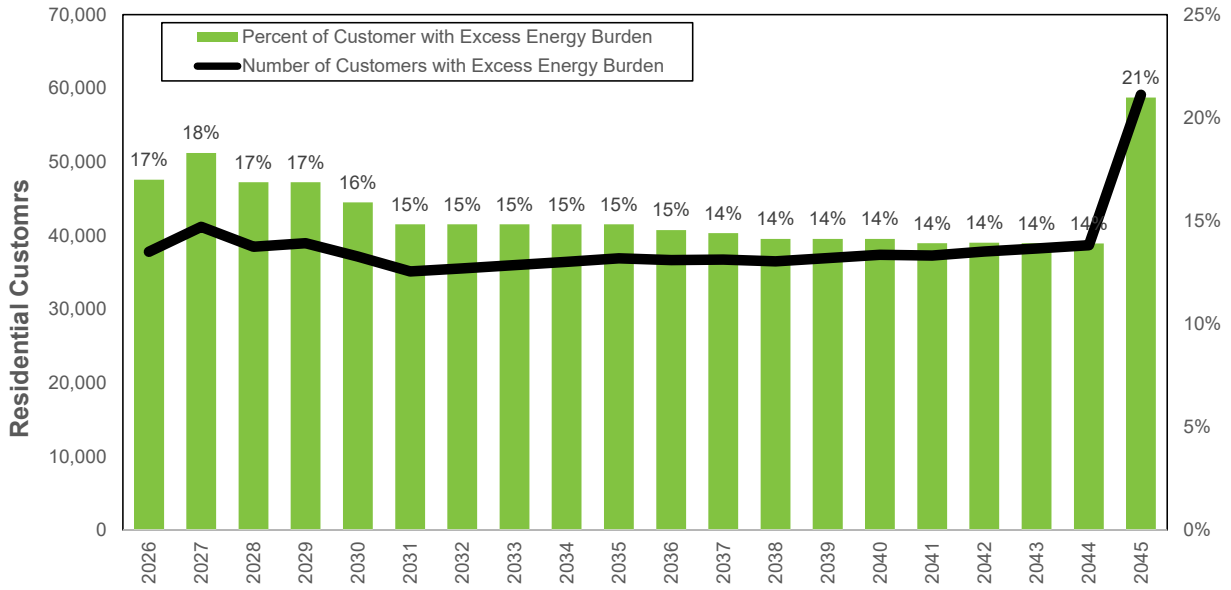
To assess current and future energy burden, data for customer income, energy usage, and energy rates is required. Customer income data was derived from a spatial analysis of incomes reported to Avista by customers enrolled in programs with income limits, census and third-party income data and was matched with usage and billing data. Total energy burden includes all fuels, natural gas and electric, at a specific location.[145] Forecasting this CBI requires assumptions regarding individual customer income and usage along with the cost of non-electric household fuels. To forecast energy burden in this analysis, customers are grouped by income, electric energy usage, and whether customers have electric only or combined electric and natural gas services. Customer income is escalated using the 2002-2022 historical income growth rate for each income group and customer usage[146] is forecasted using current energy use reduced by the amount of energy efficiency selected for a specific income group.[147] Lastly, the cost of the energy used by the customer is estimated using a rate forecast based on the resources selected through the IRP. The analysis does not consider additional energy assistance beyond the assistance provided by the development of a low-income community solar facility.

The first metric illustrates the forecast of the number of customers with excess energy burden (see Figure 7) over the IRP planning horizon. These customers have a combined energy bill between electric and natural gas exceeding 6% of their income to be included in this metric. Customers can fall into this metric due to high usage or low income. In 2026, approximately 38,000 customers in Washington out of 250,000 will be energy burdened. The absolute number of customers stays relatively flat until 2045, but as a percentage of energy total, customers with energy burden

[144] Separate tracking on a forecasted basis for known low-income and Named Communities cannot be completed until additional data is gathered.
[145] Currently the only non-electric household fuel expense included is natural gas. Estimated costs for other fuels such as fuel oil, propane, and wood should be included, but are not available at this time.
[146] This analysis does not include EV load in the energy usage calculation as it would unfairly place higher electric costs on the customer without considering other transportation costs not included in the calculation.
[147] Typical increases to energy usage (i.e., adding new technology and devices) for this purpose is being ignored.

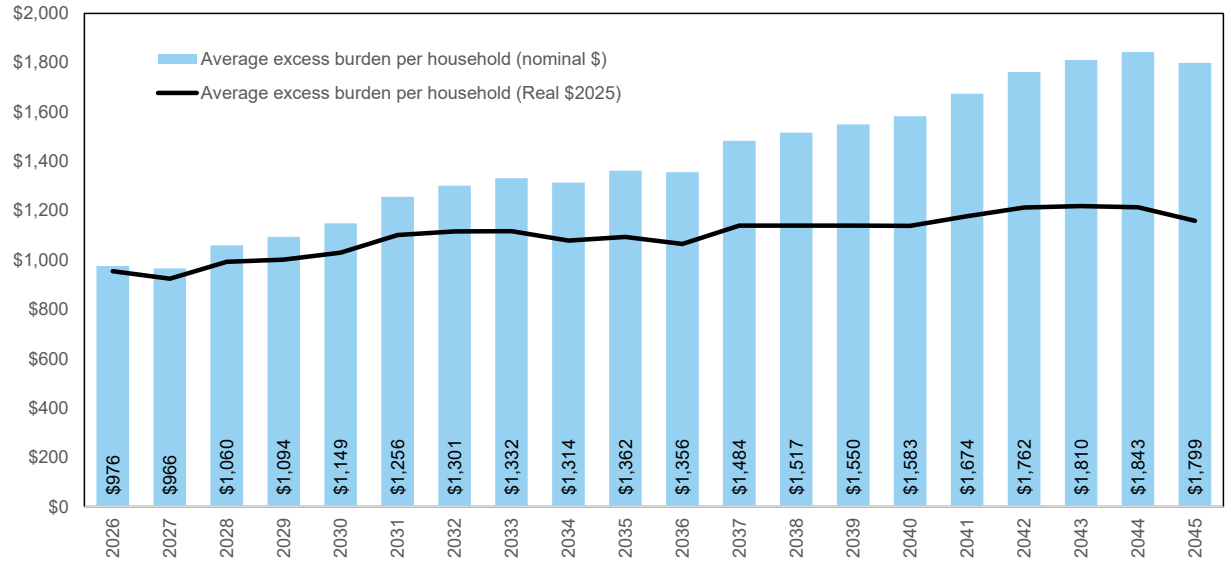
decreases until 2045. The increase in 2045 is due to high expected costs to comply with the 100% clean energy standard when significant resources are retired, and additional clean generation is added to ensure reliability and 100% clean energy in all hours. The 2045 costs are expected to create a disproportional energy burden to lower income customers to pay for 100% clean energy. To address this expected burden. Avista may not meet the 100% clean energy target and seek compliance through CETA's cost cap through future CEIP processes. Further, the main mechanism Avista can address this challenge is to deploy financial energy assistance to energy customers, but given the potential need due to high costs of meeting the 100% clean energy goal, energy assistance may reach 5% of revenue requirement cap. The only other ways to address energy burden within a resource plan is to use energy efficiency to lower energy use and develop dedicated resources for low-income customers. Both of these strategies are presumed in this plan, but all result in financial energy assistance, further creating pressures on retail energy pricing.

Figure 7: WA Customers with Excess Energy Burden (Before Energy Assistance)



The last customer energy burden metric is the amount of dollars per year of energy assistance the customer would need to reduce their energy burden to achieve the 6% level. The average excess energy burden growth is shown in Figure 8. This metric is expected to increase both in nominal and real (2025 dollars) values though the real increase is modest compared to the nominal increase at 1% a year above inflation. The difference between the two demonstrates the impact of inflation compared to the impact of rate increases.

Figure 8: Average Washington Customer Excess Energy Burden



CBI No. 5 – Named Community Clean Energy

This CBI monitors and prioritizes investments in DERs under 5 MW; specifically, generation and storage resource opportunities in Named Communities. This CBI has three metrics:

- Energy produced from DERs,
- DER energy storage capability, and
- Number of projects under 5 MW in Named Communities.

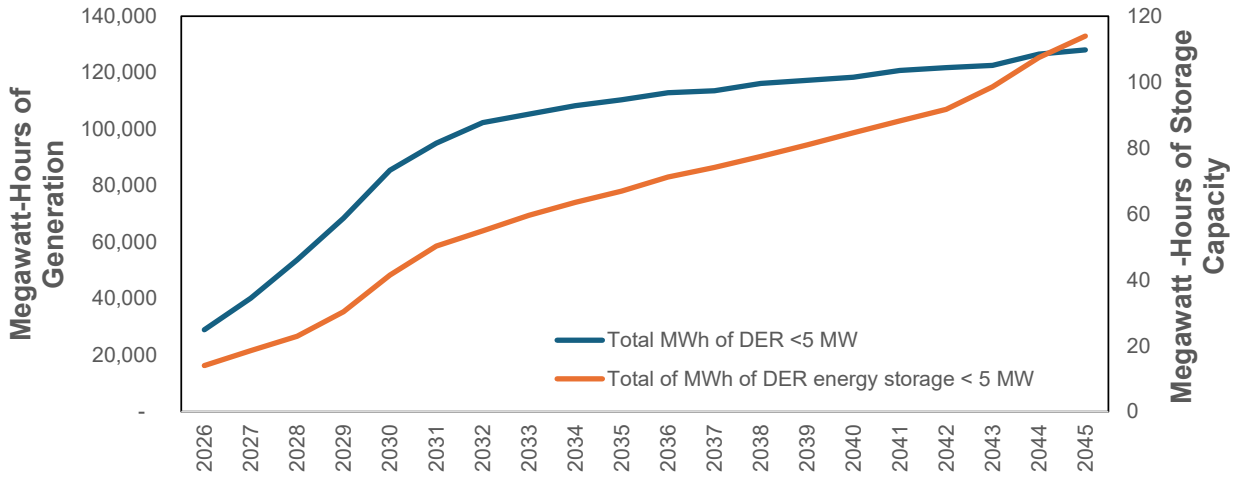
The 2025 IRP includes DER production and capacity, but identifying the number of projects is outside the planning scope and cannot be accurately forecasted. There are three methods for bringing these resources to the system. The first is through PURPA development. Historically, this method has brought the most non-solicited energy to Avista from developers building resources and selling the output to Avista using the federal regulation requiring utilities to purchase the output from qualifying facilities at the published avoided cost rates. The second method is from customers participating in Avista's net metering program. These customer resources are behind-the-meter and the energy produced is netted against their consumption.[148] The amount of these resources is outside of utility control and is based on whether the customer chooses to own their own generation. The last category is small generation owned or contracted by Avista, typically

[148] The amount of net metered generation in a Named Community was not available at the time of this report.

this includes community solar projects, but could also include other investments from the NCIF or cost-effective resource additions typically selected through an RFP process.

Named Community DER generation is shown in Figure 9 as the dark line. Most of the historical DER generation is hydro-based and incremental additions are projected to be from community solar projects funded by state incentives and Avista's NCIF, along with a forecast for net metered generation as part of the DER forecast (2025 IRP Appendix F). The orange line is the distributed energy storage forecast. In this case it is flat, as the IRP did not identify any new projects. However, projects funded by the NCIF, or projects determined by the Distribution Planning process, may increase this forecast. For example, the NCIF is contributing funds for a 250 kW/ 500 kWh battery at the Martin Luther King Jr. Center in Spokane, WA., along with a 100 kW of solar at the Family Outreach Center with 150 kW backup natural gas generation. Updates to this project can be found on Avista's website.[149]

Figure 9: Total MWh of DER in Named Communities



CBI No. 6 – Investments in Named Communities

This plan includes high level estimates for investments and benefits in Named Communities. This CBI includes three metrics:

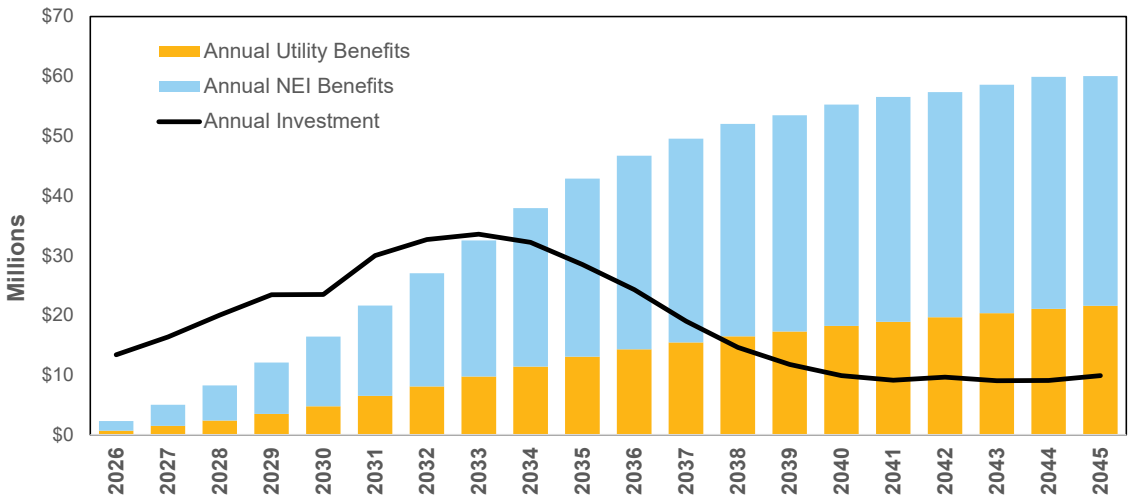
- Incremental spending each year in Named Communities,
- Number of customers and/or CBOs served, and
- Quantification of energy/nonenergy benefits from investments (if applicable).

[149] https://www.myavista.com/about-us/projects/mlk-community-center.

To address these CBIs, Avista includes the annual utility invested cost of resources in the 2025 IRP and compares these values to the annual utility benefits and non-energy impacts in Figure 10. The resources are selected based on a cost-effectiveness analysis including utility benefits (energy/capacity) and NEIs, except for the minimum spending constraint from the NCIF. Resource selection choices are driven by high non-energy impacts for energy efficiency in low-income areas. The total annual investments are driven by energy efficiency projects. Investments peak in 2033[150] and then decrease thereafter as there are fewer energy efficiency opportunities.

This CBI includes a third metric accounting for the number or sites and projections of future DERs. This forecast does not include this metric as the number of project sites will be determined during implementation.

Figure 10: Named Community Investment and Benefits



CBI No. 7 – Energy Availability

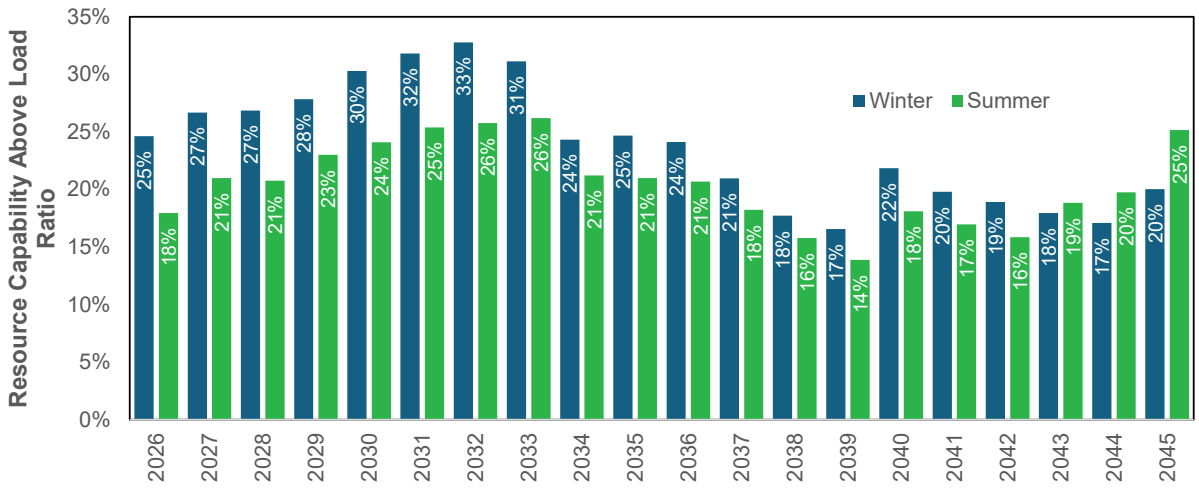
This CBI is designed to ensure Avista has a reliable system for all customers including Named Communities. It has three metrics:

- Average Outage Duration,
- Planning Reserve Margin (PRM) (Resource Adequacy), and
- Frequency of Customer Outages.

[150] 2030 investment is nearly the same as 2029 due to the incremental energy efficiency in 2030 being similar to 2029, but by 2031 investment increases again.

These metrics highlight customer reliability, but only one is related to resource planning. The other two are impacted by distribution system reliability from delivery system issues. The item applicable to IRP planning is the PRM where it is a minimum requirement for resource capability during peak events. This metric is one of a few CBIs applying to the full Avista system rather than just the State of Washington. Figure 11 shows the forecasted expected peak hour resource capability versus load. The PRM is a forecast comparing future peak loads and expected generation capability during peak hours using QCC values.[151] The PRM target for the resource plan is 24% in the winter and 16% in the summer. As seen in this chart, the winter PRM goes below the target due to more reliance on energy markets using the North Plains Connector transmission project beginning in 2033. Avista generally does not include market purchases in the PRM calculation explaining the reduced value while maintaining reliability. If this project is completed, Avista will increase its market power allowance and therefore result in lower PRM once the project is complete. If the North Plains Connector project is delayed or cancelled, the plan will be short capacity and alternative capacity resources will be required. Avista addresses this risk with a scenario in the 2025 IRP Chapter 10, by requiring additional energy storage.

Figure 11: Planning Reserve Margin



CBI No. 8 – Energy Generation Location

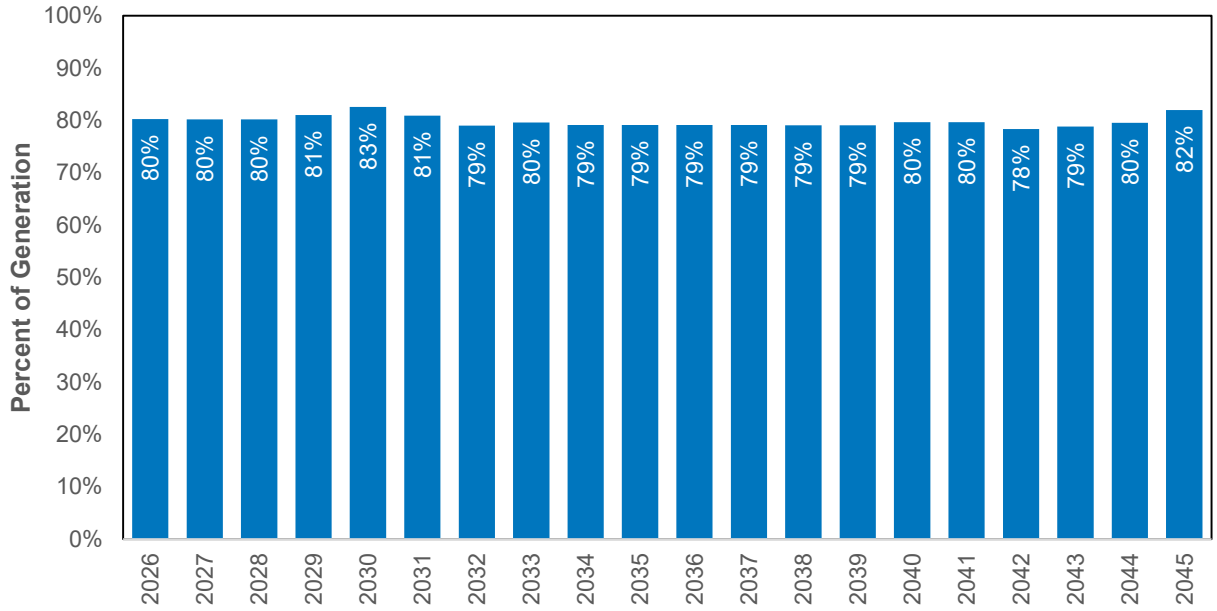
CETA encourages the use of local resources to enhance energy security. As such, this CBI will address the following metric:

[151] QCC values were derived by the WRAP with input from participating utilities and compiled by the program administrator – SPP.

- Percent of generation located in Washington or connected to Avista's transmission system.

To address energy security, Avista quantifies the amount of generation located within Washington State or directly connected to Avista's transmissions system used for customer needs. This metric is energy agnostic rather than clean energy focused. Figure 12 shows the IRP selected resource mix of energy created in either Washington or connected to Avista's transmission system. The amounts are shown as a percentage of total generation. New wind projects in Montana, outside Avista's system, keep the forecast stable over time.

Figure 12: Generation in Washington and/or Connected to Avista Transmission



CBI No. 10 – Outdoor Air Quality[152]

Avista's generation air emissions are forecastable within an IRP. The Outdoor Air Quality CBI measures the following:

- Weighted average days exceeding healthy levels, and
- Avista's Washington plant air emissions.

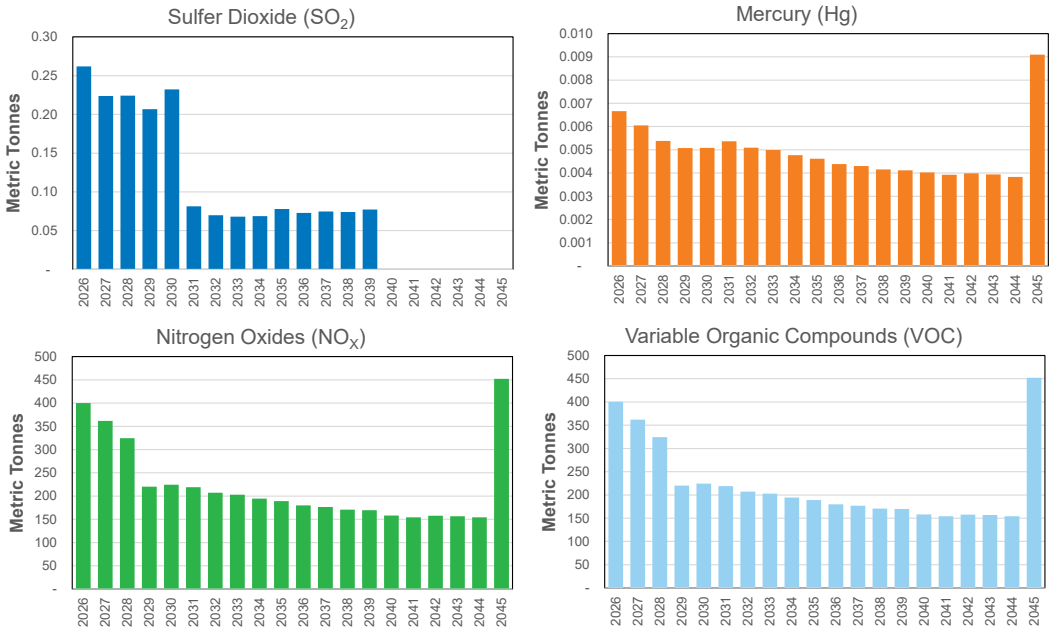
[152] The Company discussed the wood stove replacement program and proposed outdoor air quality metrics with its EEAG during its October 2021 and 2022 sessions, and with its EAG during its February 2022 Equity Lens session. The Department of Ecology joined the EAG's session to present outdoor air quality monitoring availability options. No additional metrics were identified through these sessions. Avista anticipates continued conversations with its advisory groups and the public pertaining to all CBIs as it works to develop its 2025 CEIP.

The impacts of unhealthy days within local communities are typically related to events outside of Avista's control and are after the fact calculations conducted by a third party. From an IRP perspective the "weighted average days exceeding healthy levels" metric cannot be forecasted in an IRP as multiple factors drive this metric, such as local weather conditions and wildfires.

The forecastable metrics include SO_2, NO_X, Mercury, and VOC emissions from Avista's Washington based plants. These forecasts are based on emission rates per unit of fuel burned. These emissions are regulated by local air authorities and plants meet all local laws and regulations for air emissions and are found to be at levels safe for the local population by the federal, state, and local regulating authorities. To ensure the emissions are safe, plants must either add controls to reduce emissions or have daily or annual operational limitations. Avista includes associated NEIs to ensure air quality improvements are considered in resource selection.

The Outdoor Air Quality metric measures total annual emission levels for Washington State based thermal facilities including the Kettle Falls Generating Station (KFGS), Kettle Falls CT, Boulder Park, and the Northeast CT. All metric results are forecasted to decline over the IRP planning horizon due to lower expected thermal dispatch hours and potential retirements of existing gas units through 2045 as shown in Figure 13. The significant increase in 2045 is due to additional biomass generation forecasted to assist in meeting the 100% clean energy target in 2045. Biomass generation is considered GHG neutral by Washington law, but biomass does have other air emissions. Furthermore, NO_X emissions do not rapidly fall due to the forecasted need of green hydrogen-based fuels, such as ammonia, to assist in meeting peak demand and replace aging natural gas resources. The amount of NO_X emissions will depend on technology and control systems once turbine manufacturers make hydrogen-fueled resources commercially available (post 2030) and the expected emissions from these plants will likely need to be revised in future resource plans due to new technology to capture these emissions.

Figure 13: Washington Located Air Emissions



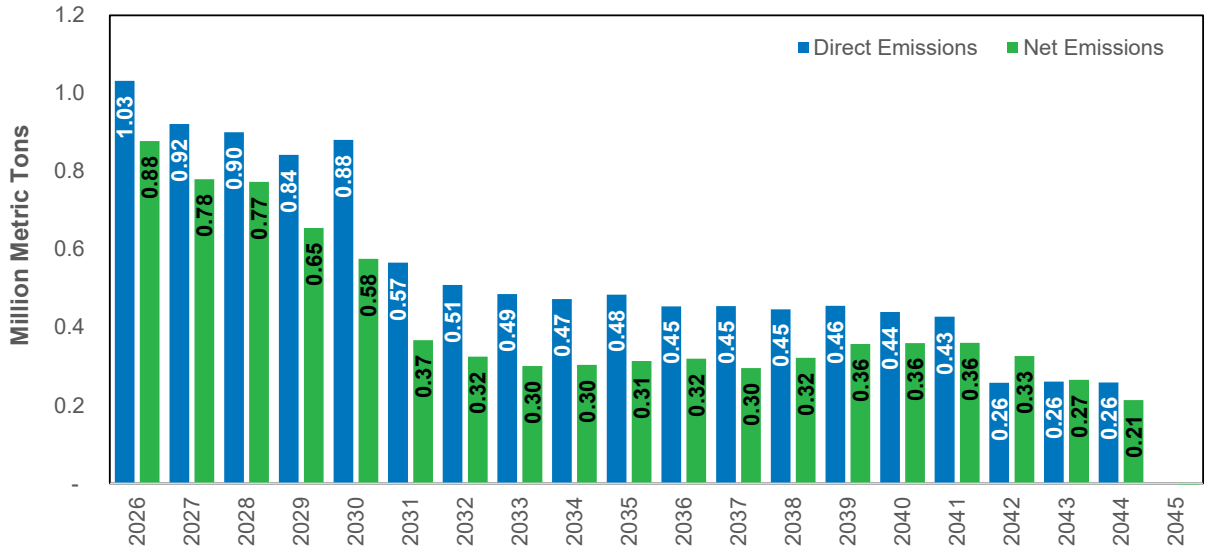
CBI No. 11 – Greenhouse Gas Emissions

There are two metrics for GHG Emissions covered in this section:

- Avista's GHG emissions, and
- Regional GHG emissions.

The first metric estimates the amount of direct emissions from Washington's share (utilizing the PT ratio) of power plants and how those GHG emissions change considering market transactions (labeled as "net emissions"). Figure 14 shows declining GHG emissions due to additional clean energy resources expected to be added to the Western Interconnect system and in turn will drive down the wholesale electric price and the need for GHG emitting resources in as many hours as the past. Net emissions are lower than direct emissions in the near-term as the calculation removes emissions related to power sold off the system. Later in the planning horizon, when surplus system sales decrease, Avista may need to purchase power causing net emissions to increase. This forecast includes emissions associated with those purchases. This CBI may be modified in the 2025 CEIP to reflect the required methodology of reporting emissions for the CCA.

Figure 14: Washington Direct and Net Emissions



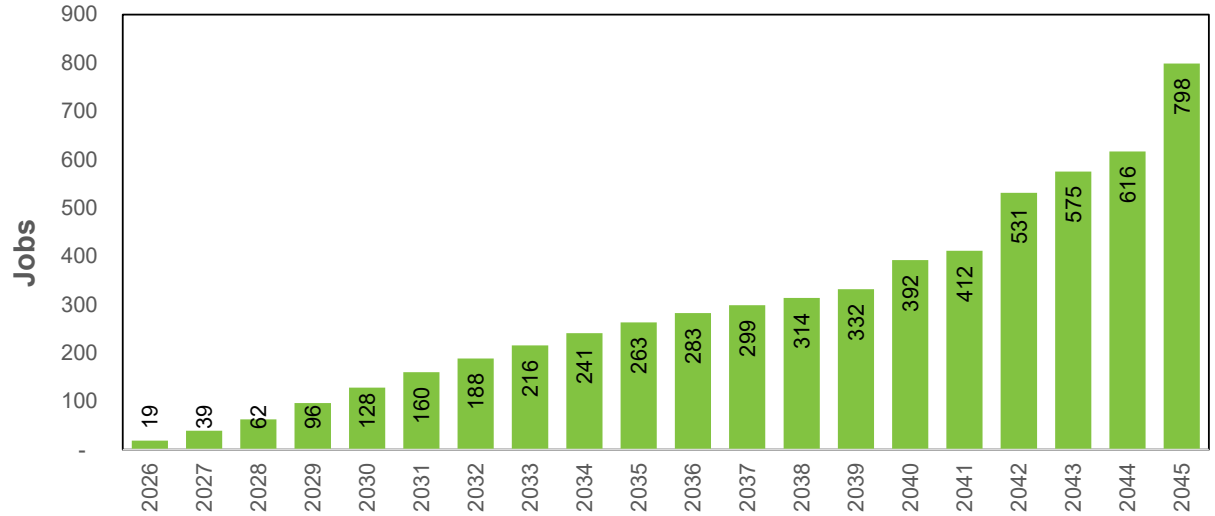
One of CETA's main purposes is to reduce state level GHG emissions. Electric power specifically related to eastern Washington is small in relation to total state emissions. The goal of the regional GHG metric is to place Avista's emissions in the context of all emissions allowing for a holistic analysis of GHG reductions. This CBI is to view the effects of electrification in reducing emissions from other sectors. Most of the information needed to track this CBI is not available on a regional basis or in a timely manner. Additionally, the Avista cannot forecast emissions for industries outside of Avista. Due to these factors, Avista will be proposing to remove this metric in its 2025 CEIP as it should be tracked at the state level as part of statewide CBIs.

Job Creation

Through the IRP's TAC and other customer engagement forums, an additional metric was discussed to estimate the number of jobs created by IRP resource decisions. Avista temporarily acquired the IMPLAN model to estimate economic benefits of new resources. IMPLAN is an economic impact model designed to estimate the impacts of investments in new generation or energy efficiency including job creation due to expected changes in the local economy. This model was used to estimate permanent jobs per million-dollar investment in each of the generation or energy efficiency technology areas of IRP resources. Created jobs include both direct and induced jobs. The job creation results are shown in Figure 15. This chart does not show lost jobs from resource retirements or for alternative resource choices. Avista will not propose to make this a CBI

in the 2025 CEIP due to the significant cost to develop and maintain this metric and is reviewing alternative methods to address job creation within the 2025 CEIP process.

Figure 15: Job Creation



CBIs Not Applicable to Resource Planning

The following CBIs are not related to the resource planning phase and will be further discussed in the 2025 CEIP. These items will be utilized in resource selection, program implementation, or evaluation. In accordance with the 2021 CEIP Condition No. 35, the following information is applicable to these CBIs.

CBI No. 1 – Participation in Company Programs

This CBI aims to increase overall participation levels for all customers in Avista's energy efficiency and energy assistance programs, with special emphasis on Named Communities. While the priority is to increase participation within Named Communities specifically, Avista will also consider the current participation levels in energy efficiency and energy assistance programs of all Washington customers as part of its baseline when measuring how participation increases. The intent of these efforts is to prioritize distributional equity by helping to address direct or indirect barriers impacting a customer's ability to participate in energy efficiency or energy assistance programs.

This metric emphasizes overall participation; however, the impact of these efforts is directly related to reducing customers' overall energy burden and making energy more affordable. Energy efficiency and energy assistance efforts have known energy and NEI values with direct benefits to

customers from both affordability and overall wellbeing. When combined with CBI No. 3 concerning availability of communication, Avista can monitor the successful steps contributing to increased participation. The Company will monitor the following metrics included in this CBI:

- Participation in weatherization, efficiency, and energy assistance programs for all customers and Named Communities,
- Saturation of energy assistance programs for all customers and Named Communities, and
- Residential appliance and equipment rebates provided to customers residing in Named Communities and rental units (Condition No. 17).

Tracking the metrics for CBI No. 1 requires data for individual customers, as well as each customer in a Named Community. This requires extensive data analysis utilizing Avista's Customer Care and Billing system (CC&B). In IRP planning, energy efficiency is forecasted based on a total energy savings by program type and by customer segment (i.e., residential and commercial customers) not at the customer level. Avista's advisory groups, such as the Equity Advisory Group (EAG), Energy Assistance Advisory Group (EAAG), and Energy Efficiency Advisory Group (EEAG) will continue to be instrumental in developing a method for prioritizing energy efficiency and energy assistance programs to ensure they are equitably distributed.

CBI No. 3 – Availability of Method/Modes of Communication

CBI No. 3 focuses on increasing access to clean energy and reaching customers who have not participated in Avista's energy efficiency and energy assistance programs due to language barriers or other limitations, such as not knowing about the programs or understanding the application process. Increased outreach should increase participation which will lead to lower energy usage and costs, while positively impacting accessibility and affordability. This CBI seeks to increase participation in energy efficiency and energy assistance programs by improving how customers hear about these programs. The metrics for this CBI are:

- Number of outreach contacts,
- Number of marketing impressions, and
- Translation services.

Barriers may limit access to participation in Company programs and make it more difficult and expensive for customers in Named Communities to receive assistance. Increased and expanded customer outreach will grow energy efficiency and energy assistance participation making energy service more affordable. Further, increased energy efficiency participation benefits all customers

by reducing the need for more generation. This CBI is not relevant to resource planning but rather to program implementation. Avista continually works with its advisory groups to improve upon its methods and modes of communication to increase participation.

CBI No. 4 – Transportation Electrification

CBI No. 4 considers Transportation Electrification efforts and the impacts on customers in Named Communities. Avista's Transportation Electrification Plan (TEP)[153] provides a path to a cleaner energy future by 2045 by electrifying transportation. The TEP outlines guiding principles, strategies, and an action plan with detailed program descriptions, cost and benefit estimates, and regular reporting details. The TEP has an aspirational goal of investing 30% of Avista's total transportation electrification spend on programs benefiting Named Communities. Avista's Tariff Schedule 77 and the TEP commit to regular reporting of Transportation Electrification (TE) efforts through several metrics.

- Avista will track transportation electrification in Named Communities with three metrics:
- Annual trips provided by Community Based Organizations (CBOs) using electric transportation,
- Annual passenger miles provided by CBOs using electric transportation, and
- Public charging ports available in Named Communities.

The impacts of transportation electrification are embedded in Avista's load forecast and resource planning processes. Program implementation requires focus on where the impacts of efforts will be located. Avista will continue collaboration with its advisory groups and collaborating with CBOs to ensure a focus on Named Communities throughout the TEP implementation process.

CBI No. 7 – Energy Availability

CBI No. 7 aims to ensure customers in Named Communities are not disproportionally impacted by delivery system or resource adequacy power outages due to their socio-economic or sensitivity factors. This CBI tracks the location of outages and will inform future implementation and system development to minimize the potential for outages.

Avista will measure the following metrics:

- Average Outage duration by Customer Average Interruption Duration Index (CAIDI) - Not included in resource planning,

[153] UTC Docket UE-200607, acknowledged by the Washington UTC on October 15, 2020.

- Frequency of Customer Outages by Customer Experiencing Multiple Interruptions (CEMI) - Not Included in resource planning, and
- Planning Reserve Margin (Resource Adequacy) - Included in resource planning.

Avista has a duty to provide safe and reliable energy to its entire customer base. Historical customer outage information provides customers with a measure of resiliency and reliability by calculating the time it takes to restore a customer's service from an outage but does not include the cause of the outage. Most outages are related to the distribution system and service can be interrupted by weather, equipment failure, maintenance, or other factors. Monitoring these two metrics will provide data to inform Avista where new distribution resources may be located to best address inequities. The newly formed Distribution Planning Advisory Group (DPAG) will provide insight into this distribution planning process.

CBI No. 9 – Residential Arrearages and Disconnections for Non-Payment

CBI No. 14 tracks residential arrearages and disconnections for non-payment. Connection to energy service was identified by interested parties as a key element of energy security. This CBI is not applicable to resource planning. For planning purposes, a certain level of price elasticity is included relating to the cost of resource selection and may ultimately impact arrearages and disconnections for non-payment. Resource decisions include the cost of arrearages, while energy efficiency evaluations include these savings by way of the NEI. Reporting this CBI keeps the issue at the forefront of affordability and/or energy burden conversations during implementation of future investments. Avista includes a utility NEI for a decrease in contact center calls for certain low-income energy efficiency measures to account for reductions in future disconnects.

CBI No. 12 – Employee Diversity and No. 13 Supplier Diversity

The purpose behind CBIs No. 11 and No. 12 are to generate awareness and to promote recognitional equity. Tracking employee and supplier diversity is a first step in recognizing the potential of systemic racism embedded within existing processes and procedures. Tracking these metrics will result in an increased focus towards identifying and changing policies to increase employee and supplier diversity to help eliminate inequities. This CBI is not intended to be utilized as a resource planning metric; however, as an implementation tool Avista includes diversity metrics in its selection criteria for resource selection as part of long-term resource procurement.

The EAG raised ending systemic racism as a major concern and discussed what Avista could do to help with this wide-ranging issue. CBI No. 11 is an initial attempt to track and improve Avista's employee diversity to match the diversity and genders of the communities it serves. This aspirational goal will be tracked by craft, non-craft, managers and directors, and executives for race and gender with a goal of matching the communities being served by 2035. CBI No. 12 focuses on the supplier side of diversity to help make the diversity of our suppliers closer to the communities we serve.

CBI No. 14 – Indoor Air Quality

In accordance with Avista's CEIP Condition 24, in its 2023 Biennial CEIP Update, it proposed and received approval to apply a new CBI for energy efficiency programs that helps to identify, measure, and apply metrics to existing low-income weatherization programs and energy efficiency programs. The Indoor Air Quality (IAQ) metrics are part of a Health and Safety NEI used to assess economic, health, and environmental burdens. The health and safety metrics include HVAC mechanical ventilation, natural ventilation, air infiltration, indoor air pollution contributors, and overall health and safety total home assessments. Based on the Washington Department of Commerce and ASHREA's 62.2 standard for low-income weatherization program metrics, Avista is now tracking the following data for this metric:

- Ranking of causes of IAQ (within & outside Named Communities),
- Percentage of weatherization IAQ measures (within & outside Named Communities).

Avista is currently tracking data for these metrics and will provide its first set of data in its 2025 CEIP.

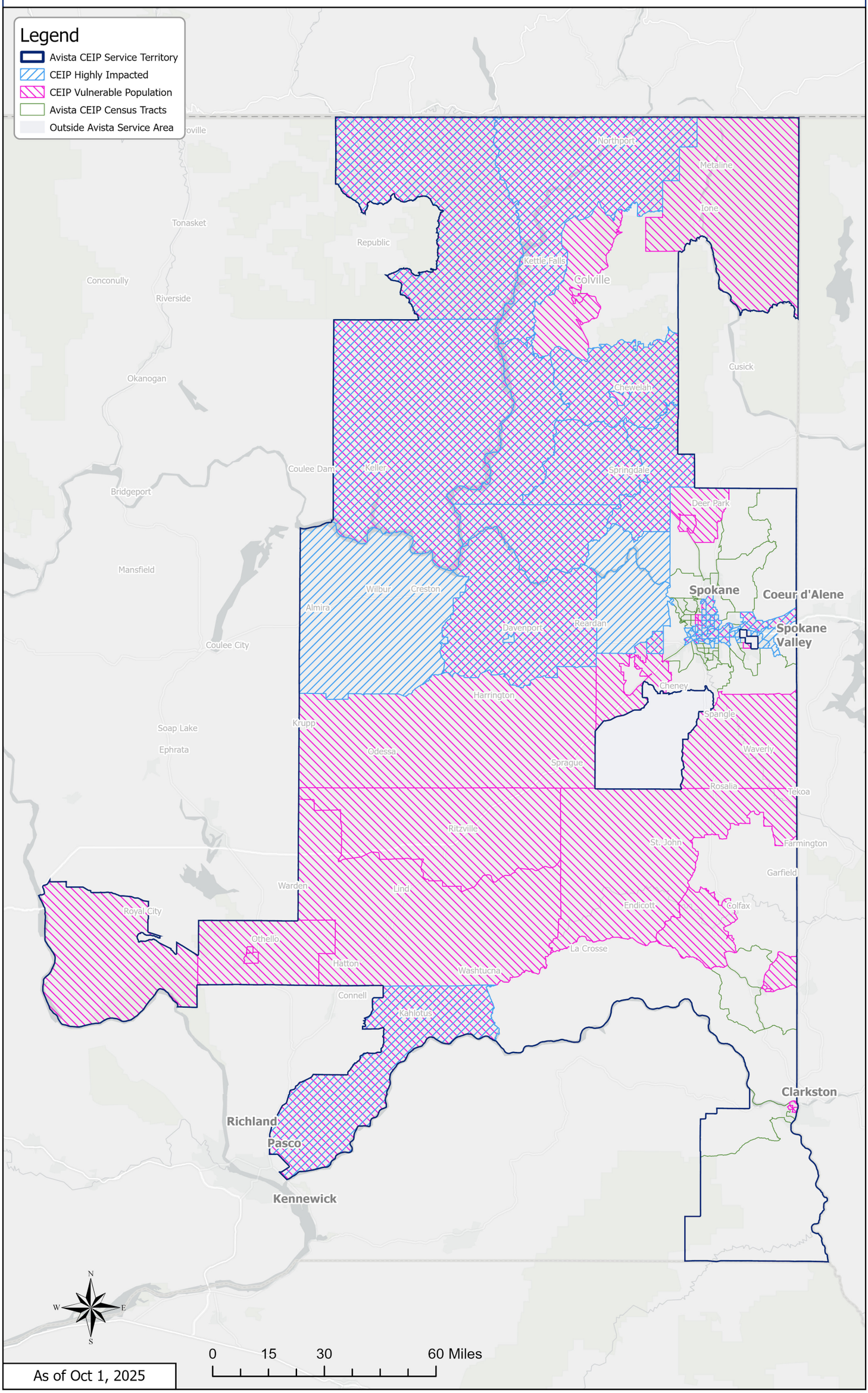
Appendix D – Avista's 2025 Equity Advisory Group Member List

Avista 2025 Equity Advisory Group (EAG) Members			
Area Represented	**Agencies/Organization**	**Name**	**Title/Position**
Tribal	Spokane Tribe member	Clyde Abrahamson	Retired
Ecology/ Environment	WA Department of Ecology	Brook Beeler	Regional Director
BIPOC (Black, Indigenous, and People of Color)	Red Cross	Karen Boone	Retired Professional, Volunteer
Clean Air	Spokane Clean Air	Margee Chambers	Rule Writer & SIP Planner
Colville, low income	Rural Resources - Community Action	Sandra Childers	Energy Assistance Team Lead
Medical Community	Providence	Tami Dillion	Manager Administrative Services
Primary Education	Spokane Public Schools	Andrew Gardner	Athletics/Activities Program Manager
Energy and rental assistance	SNAP	Carmen Groom	Energy Manager
2SLBGTQIA+	Spectrum Center	KJ January	Director, Advocacy and Engagement
Mobile Home Park, low income	Takesa Village (Homeowners Cooperative)	Cindy Kimmet	Resident, Rules Chair, community member
Seniors	Aging & Long-Term Care of Eastern WA (ALTCEW)	Jean Kindem	Retired, Senior Advocate
Education/ Disabled	NEWESD101	Connie Kliewer	Director, Center for Special Education Services
Rural Communities	Community Advocate	Sue Lani Madsen	Self-employed journalist, rancher, and semi-retired architect
Public Health Equity	Spokane Regional Health District	Olly Murphy	Health Equity Specialist & Civil Rights Coordinator
Government Agency/City Library Services	Spokane Public Library	Vanessa Strange	Adult Services Manager
Ethnoecology and Faith Based Community	Rural Community Member	Lynn Suksdorf, PhD	Rural Community Member
Othello, School, English as 2nd Language	Hiawatha Elementary School	William von Bracht	Principal
Small business/ Community Organizing	Vision Properties	Latrice Williams	Vision Properties Broker/Owner

EAG Contact	Ana Matthews, Customer Engagement Manager | ana.matthews@avistacorp.com | (509)495-7979
EAG Facilitator	Amber Lenhart, Founder & Principal, Social Impact Partners Northwest | amber@sip-nw.org
EAG Email	ceta@avistacorp.com
EAG Web	www.myavista.com/eag

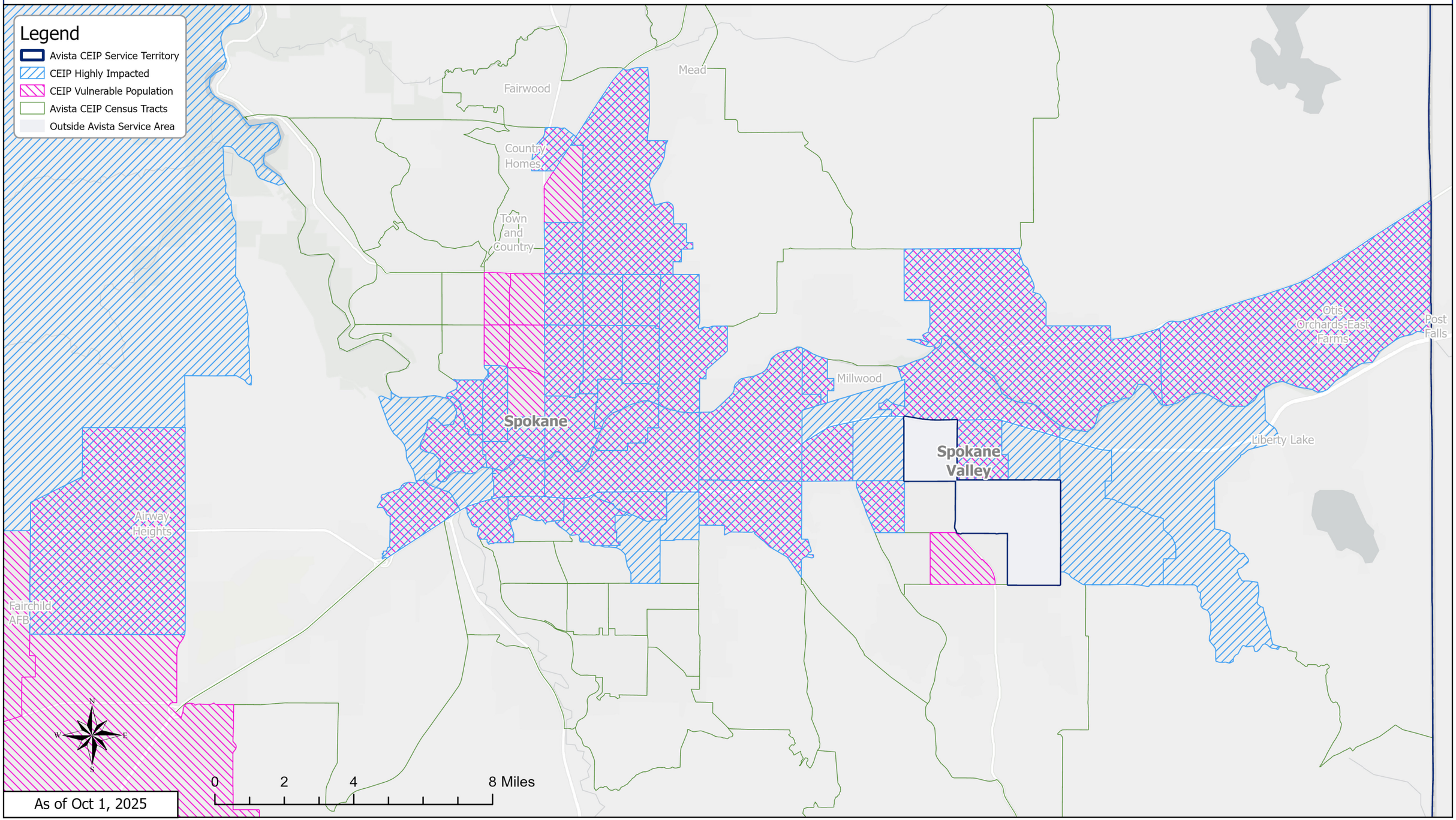
Appendix E – Avista's 2025 Named Communities Maps

Named Communities - Electric Service Area

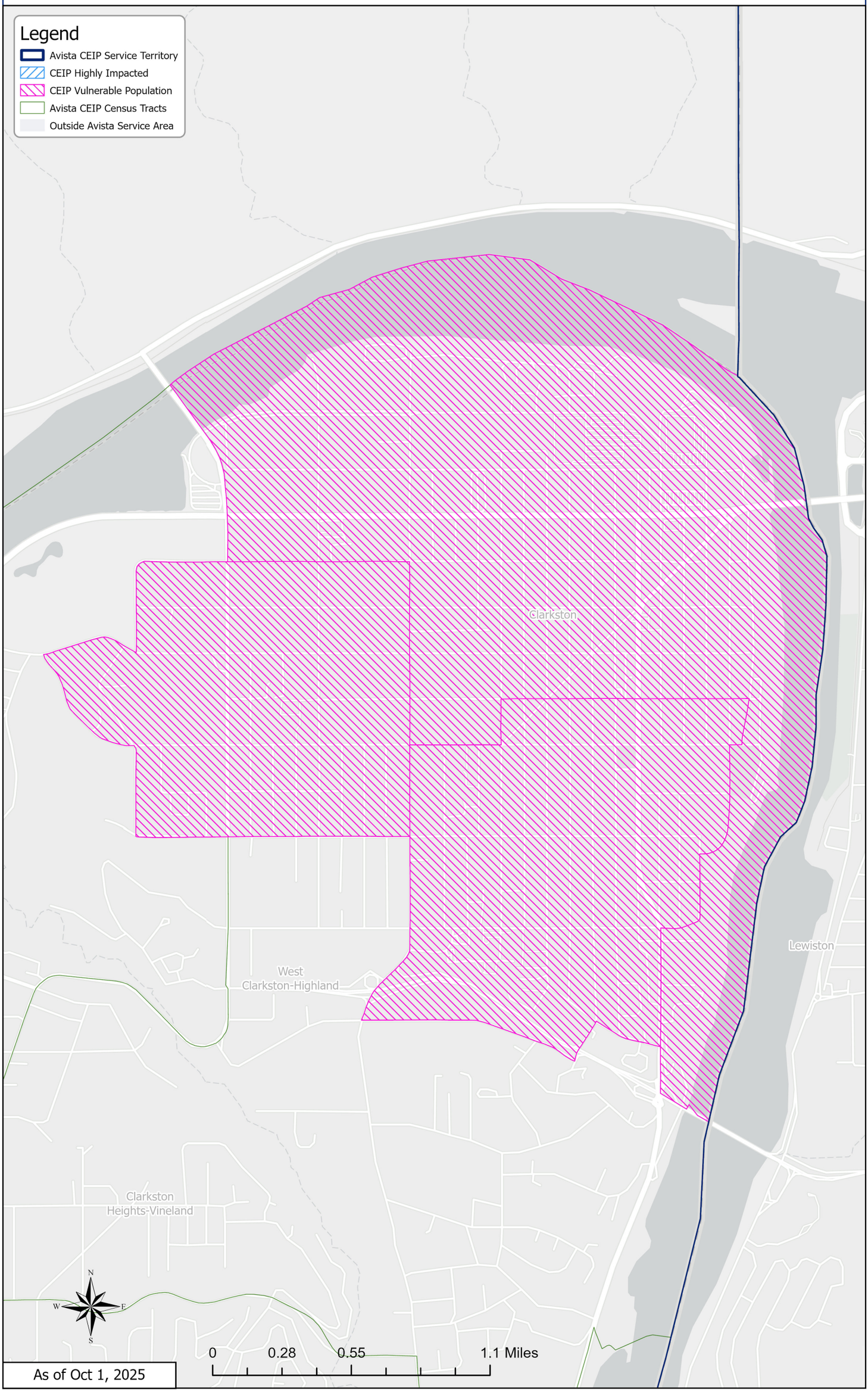


As of Oct 1, 2025

Named Communities - Spokane Metro



Named Communities - Clarkston



As of Oct 1, 2025

Appendix F – Avista's 2021 vs 2025 Customer Benefit Indicator Matrix

Avista's 2026-2029 CEIP Proposed 13 CBIs & 60 Metrics			
Equity Area	**Customer Benefit Indicator**	**2025 CEIP Metric Proposal**	**Rationale**
Affordability	(1) Participation in Company Programs Metrics: 6	Participation in weatherization programs and energy assistance programs (All and NC) | 4	Retain
		Saturation of energy assistance programs (All & NC) | 2	Retain
	(2) Energy Burden (>6%) Metrics: 6	PBR: Average energy burden by census track after energy assistance (all & NC) | 2	Replace with PBR, original metric is reported in annual LIRAP report
		PBR: Number & percentage of high energy burden by census track after energy assistance (all & NC) | 4	Replace with PBR, original metric is reported in annual LIRAP report
Accessibility	(3) Outreach and Communication Metrics: 4	Number of outreach contacts | 1	Retain
		Number of marketing impressions | 1	Retain
		Number of translation services (Condition #19) | 1	Retain
		Number of unique languages translated (Condition #19) | 1	Retain
	(4) Transportation Electrification Metrics: 3	Number of trips & miles provided by CBOs | 2	Retain
		Number of charging stations located in NC | 1	Propose to remove the word "public" as the public data is inconsistent and overly burdensome/manual to calculate.
	(5) Investments in Named Communities Metrics: 14	PBR: Number and percentage of NC enrollments in Distributed Energy Resource programs: Energy Efficiency, Electric Transportation, Net Metering, Demand Response | 8	PBR metric is a more meaningful and wholistic metric
		PBR: Percentage of NC utility spend in Distribution Energy Resource programs: Energy Efficiency, Electric Transportation, Net Metering, Demand Response | 4	PBR metric is a more meaningful and wholistic metric
		Incremental spending each year in Named Communities | 1	Retain
		Number of customers/and/or Community Based Organizations served | 1	Retain

Energy Resiliency	(6) Energy Availability Metrics: 6	Average outage duration w/o major event days for all customers & NC | 2	Retain
		Reserve margin winter/summer | 2	Update verbiage to match what is actually reported
		Frequency of customer outages for all customers & Named Communities (CEMI0) (Condition#21) | 2	Retain
Energy Security	(7) Generation Location Metrics: 1	Percent of generation located in Washington or connected to Avista transmission | 1	Retain
	(8) Disconnections for Nonpayment Metrics: 3	Modify 2021 metric, Percentage of disconnects for nonpayment by month by census tract for All & NC | 3	Remove number of disconnects as it is not as representative as the percentage. Suggest to remove KLI as under CETA we are tracking all and NC which aligns with the PBR metrics
Environmental	(9) Outdoor Air Quality Metrics: 4	Avista plant air emissions by type | 4	Retain
	(10) Greenhouse Gas Emissions Metrics: 1	Avista GHG emissions, Align with CCA reporting | 1	Retain, modify to adopt the CCA reporting calculation
Public Health	(11) Employee Diversity Metric: 7	Percentage of corporate suite employees, senior management and employees who identify as a person of color and/or a woman or non-binary | 6 Percentage of total employees that opt out from providing information either through human resource data or surveys | 1	PBR metric is a more wholistic metric
	(12) Supplier Diversity Metrics: 1	Supplier diversity percentage spend | 1	Retain
	(13) Indoor Air Quality (Condition #24) Metrics: 4	Rank causes of indoor air quality (All & NC) | 2	Retain
		Percentage of weatherization indoor air quality measures (All & NC) | 2	Retain

Avista's 2022-2025 CEIP	**Avista's 2026-2029 CEIP**
Existing 14 Customer Benefit Indicators & 84 Metrics	**Proposed 13 CBIs & 60 Metrics**

Equity Area	Customer Benefit Indicator	2021 CEIP Metrics w/Conditions	Rationale	2025 CEIP Metric Proposal
Affordability	(1) Participation in Company Programs Metrics: 8	Participation in weatherization programs and energy assistance programs (All & NC) | 4	Retain	-
		~~Residential rebates provided to customers residing in Named Communities and rental units (Condition #17) | 2~~	NC residential rebates are already reported in the ACR/BCR	-
		Saturation of energy assistance programs (All & NC) | 2	Retain	
	(2) Households with a High Energy Burden (>6%) Metrics: 16	Number and percentage of households (All , ~~known low-income customers~~ & NC) (Condition #18) | 6	Replace with PBR, original metric is reported in annual LIRAP report	PBR: Average energy burden by census track for all customers & NCs after energy assistance | 2
		~~High energy burden by census, NC by highest/lowest median, over 65, homes before 1980, owner/renter, KLI (Condition #38) | 7~~	CBIs should ensure that ALL named communities, regardless of their specific characteristics, receive the benefits of CETA. For this reason, this metric is not useful or actionable for program design.	
		Average Excess Burden by All, NC, KLI | 3	Replace with PBR, original metric is reported in annual LIRAP report	PBR: Number and percentage of high energy burden by census track for all customers & NCs after energy assistance | 4
Accessibility	(3) Availability of Methods/Modes of Outreach and Communication Metrics: 4	Number of outreach contacts | 1	Retain	No Change | 1
		Number of marketing impressions | 1	Retain	No Change | 1
		Number of translation services (Condition #19) | 1	Retain	No Change | 1
		Number of unique languages translated (Condition #19) | 1	Retain	No Change | 1
			Retain	No Change | 2

	(4) Transportation Electrification Metrics: 3	Number of trips & miles provided by CBOs | 2		
		Number of ~~public~~ charging stations located in Named Communities | 1	Propose to remove the word "public" as the public data is inconsistent and overly burdensome/manual to calculate	Number of charging stations located in NC | 1
	(5) Named Community Clean Energy Metrics: 3	~~Total MWh of distributed energy resources 5 MW and under (Condition #26) | 1~~	PBR metric is a more meaningful and wholistic metric	PBR: Number and percentage of NC enrollments in Distributed Energy Resource programs: Energy Efficiency, Electric Transportation, Net Metering, Demand Response | 8
		~~Total MWh of energy storage resources under 5 MW and under (Condition #26) | 1~~	PBR metric is a more meaningful and wholistic metric	PBR: Percentage of NC utility spend in Distribution Energy Resource programs: Energy Efficiency, Electric Transportation, Net Metering, Demand Response | 4
		~~Number of distributed renewable energy resources and energy storage resources (sites, projects, etc.,). (Condition #26) | 1~~	PBR metric is a more meaningful and wholistic metric	
	(6) Investments in Named Communities Metrics: 5	Incremental spending each year in Named Communities | 1	Retain	No Change | 1
		Number of customers/and/or Community Based Organizations served | 1	Retain	No Change | 1
		~~Quantification of energy/non-energy benefits from investments (if applicable) | 3~~	NCIF EE spend is already quantified in the ACR, and the NCIF Community spend is reported in the CEIP and CETA Cost Recovery Tariff	
Energy Resiliency		Average outage duration w/o major	Retain	No Change | 2

	(7) Energy Availability Metrics: 13	event days (All & NC) | 2		
		~~Planning~~ Reserve margin (resource adequacy) winter/summer | 2	Update verbiage to match what is actually reported	Reserve margin winter/summer | 2
		Frequency of customer outages (CEMI0) (All & NC) (Condition #21) | 2	Retain	No Change | 2
		Energy resilience CEMI0 by census, NC by highest/lowest median, over 65, homes before 1980, owner/renter, KLI (Condition #38) | 7	CBIs should ensure that ALL named communities, regardless of their specific characteristics, receive the benefits of CETA. For this reason, this metric is not useful or actionable for program design.	
Energy Security	(8) ~~Energy~~ Generation Location Metrics: 1	Percent of generation located in Washington or connected to Avista transmission | 1	Retain	No Change | 1
	(9) ~~Residential Arrearages and~~ Disconnections for nonpayment (also in Affordability) Metrics: 16	~~Residential arrearages[1] as reported in Docket U-200281, | 8~~	Arrears are already reported in Docket U-200281 and potentially in U-210800.	
		~~Number and~~ percentage of disconnects for nonpayment by month census tract, All, ~~KLI,~~ NC ~~(Condition #22) | 8~~	Remove number of disconnects as it is not as representative as the percentage. Suggest to remove KLI as under CETA we are tracking all and NC which aligns with the PBR metrics	Percentage of disconnects for nonpayment by month by census tract for All & NC | 3
Environmental	(10) Outdoor Air Quality Metrics: 6	~~Weighted average days exceeding healthy levels* | 1~~	Already reported by the WA department of ecology; discussed removal with EAG, EEAG, and EAAG	
		Avista plant air emissions by type | 4	Retain	No Change | 4
		~~Decreased use of wood heat for home heating | 1~~	Avista no longer participates in the program with Spokane Regional Clean Air	

	(11) Greenhouse Gas Emissions Metrics: 2	~~Regional GHG emissions* | 1~~	Already reported by the WA department of ecology; discussed removal with EAG, EEAG, and EAAG	
		Avista GHG emissions | 1	Retain, modify to adopt CCA reporting calculation	Align with CCA reporting | 1
Public Health	(12) Employee Diversity Metric: 1	Employee diversity representative of communities served by 2035 | 1	PBR metric is a more wholistic metric	Percentage of corporate suite employees, senior management and employees who identify as a person of color and/or a woman or non-binary | 6 Percentage of total employees that opt out from providing information either through human resource data or surveys | 1
	(13) Supplier Diversity Metrics: 1	Supplier diversity percent spend | 1	Retain	No Change | 1
	(14) Indoor Air Quality (Condition #24) Metrics: 4	Rank causes of indoor air quality (All & NC) | 2	Retain	No Change | 2
		Percentage of weatherization indoor air quality measures (All & NC) | 2	Retain	No Change | 2

Appendix G – Avista's Draft 2026/2027 Biennial Conservation Plan

Draft 2026-2027 Washington

Energy Efficiency Biennial Conservation Plan

November 1, 2025

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All forward-looking statements contained in this document are based on underlying assumptions (many of which are based, in turn, upon further assumptions). These statements are subject to a variety of risks, uncertainties, and other factors. Most of these factors are beyond Avista's control and may have a significant effect on the company's operations, financial condition, or cash flows, which could cause actual results to differ materially from those anticipated in its statements.

Such risks, uncertainties, and other factors include, among others, those contained within the company's most recent annual report on Form 10-K, or quarterly report on Form 10-Q, filed with the Securities and Exchange Commission. Those reports are available at avistacorp.com.

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Definitions

TABLE 1: DEFINITIONS OF SELECT TERMS USED IN AVISTA'S 2026-2027 BIENNIAL CONSERVATION PLAN

Electric Conservation Terms	
EIA Target	All cost-effective conservation potential as required by RCW 19.285. Includes the Pro-Rata share from Avista's Conservation Potential Assessment (CPA), plus other programs/measures with confident savings omitted from the CPA subject to the Energy Independence Act (EIA), such as distribution-level efficiency, pilots with uncertain savings, and additional portfolio buildout.
EIA Penalty Threshold	As approved by the Commission, which may rely on standard practice to set Investor-Owned Utilities' conservation targets. For purposes of Avista's BCP, this is the EIA target without regional savings from the Northwest Energy Efficiency Alliance (NEEA).
Decoupling Penalty Threshold	Five percent of the EIA Target, as originally defined in Docket UE-140188, Order 05.
Total Local Biennium Target	EIA Penalty Threshold plus Decoupling Penalty Threshold.
Total Conservation Goal	EIA target plus Decoupling Penalty Threshold plus any additional targets identified by the utility outside of the EIA Target.
Natural Gas Conservation Terms	
Two-Year Conservation Target	All cost-effective conservation potential as required by RCW 80.28.380. Includes the estimated savings achievable from Avista's CPA and adjustments made for expected site-specific conservation opportunities.
Decoupling Commitment	Five percent of the Two-Year Conservation Target, as established in Dockets UE-140188 and UG-140189, Order No. 05, with incremental penalties established in Dockets UE-190334, UG-190335, and UE-190222 (consolidated), Order No. 09.
Total Local Biennium Target	Two-Year Conservation Target plus Decoupling Commitment.
Total Conservation Goal	Two-Year Conservation Target plus Decoupling Commitment plus any additional targets identified by the utility.

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Energy Efficiency Regulatory Framework

Also known as I-937, the EIA requires electric utilities serving at least 25,000 retail customers to obtain 15 percent of their electricity from new renewable resources such as solar, wind, and qualifying biomass by 2020, and to pursue all conservation efforts that are cost-effective, reliable, and feasible. Codified as RCW 19.285, with compliance rules adopted by the Washington Utilities and Transportation Commission (UTC or Commission) via WAC 480-109, Acquisition of Minimum Quantities of Conservation and Renewable Energy, the EIA serves as a foundation for Avista's conservation efforts. References to I-937 and EIA are used interchangeably within this *2026-2027 Biennial Conservation Plan (BCP)*.

The process of developing the 2026-2027 *BCP* is consistent with prior Commission orders, specifically its approval, with conditions, of Avista's previous *BCP*s in Docket Nos. UE-100176, UE-111882, UE-132045, UE-152076, UE-171091, UE-190912, UE-210826, and UE-230897. For natural gas, this process is consistent with the requirements provided in RCW 80.28.380 as well as prior UTC approval, with conditions, in Docket Nos. UG-210827 and UG-230898.

For natural gas, the target requirements are provided in RCW 80.28.380 as follows:

> *Each gas company must identify and acquire all conservation measures that are available and cost-effective. Each company must establish an acquisition target every two years and must demonstrate that the target will result in the acquisition of all resources identified as available and cost-effective. The cost-effectiveness analysis required by this section must include the costs of greenhouse gas emissions established in RCW 80.28.395. The targets must be based on a conservation potential assessment prepared by an independent third party and approved by the commission. Conservation targets must be approved by order by the commission. The initial conservation target must take effect by 2022.*

This *Biennial Conservation Plan* is provided in fulfillment of these requirements.

While not solely focused on energy efficiency, Senate Bill 5116, or the Clean Energy Transformation Act (CETA), outlines requirements for utilities in Washington to eliminate coal-fired resources from electric power supply by 2025, attain a carbon neutral electric supply by 2030, and achieve 100 percent non-emitting electricity supply by 2045. It also requires utilities to ensure the benefits of clean energy are equitably distributed to all Washington customers, particularly those who are members of Named Communities and have therefore experienced barriers to equitable participation in company efficiency programs. This *BCP*, as well as the electric *Annual Conservation Plan (ACP)* included as Appendix B, provides details on programs designed to help ensure these benefits encompass Named Communities, as required by WAC 480-100-610(4).

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Executive Summary

In compliance with RCW 19.285.040, RCW 80.28.380, and WAC 480-109-120(1), Avista presents its 2026-2027 *Biennial Conservation Plan* for its electric and natural gas energy efficiency programs. This plan describes the efforts of Avista, in consultation with interested external parties, to estimate a 10-year achievable conservation potential, ascertain a biennial acquisition target, identify qualifying measures to be counted toward the acquisition target, determine how claimed acquisition will be measured, and establish an understanding of related procedural issues. In its *BCP*, Avista states its conservation targets and describes how they were developed, as well as its plans to ensure equitable distribution of energy and non-energy benefits through the efficiency-related portions of its Clean Energy Implementation Plan (CEIP).

Avista's energy efficiency expectations over the biennium are founded upon the pursuit of achieving all cost-effective conservation measures and operating within the prevailing market and economic conditions. A two-year planning summary of the estimated conservation acquisition, as well as budgets, is provided in Appendix A. Also included are the company's 2026 Energy Efficiency *Annual Conservation Plans* (*ACP*s), in accordance with WAC 480-109-120(2), for both electric and natural gas (see Appendices B and C), which provide the details regarding the various program offerings used for achieving these targets and how savings will be defined and presented. Reporting standards and participation from non-company parties are also described.

As detailed further within this *BCP*, the EIA requires utilities to establish a minimum electric acquisition standard for conservation resources for each designated biennium. For the 2026-2027 biennium, Avista's EIA target, which represents the overall conservation to be obtained by the company through its programs and measures as well as regional market transformation efforts through NEEA, is 73,672 MWh. When coupled with the additional five percent decoupling penalty threshold[1] of 3,684 MWh, the company's total local biennium target becomes 77,356 MWh, and an additional 500 MWh anticipated for distribution efficiency brings Avista's total conservation goal to 77,856 MWh for the biennium. Table 2 below provides a breakdown of these targets, including the EIA penalty threshold, which is subject to penalties if not achieved by the company, pursuant to RCW 19.285.060; this threshold does not include NEEA savings.[2]

TABLE 2 – BIENNIAL CONSERVATION TARGET

2026-2027 Biennial Conservation Target (MWh)	
EIA Target	73,672
Distribution Efficiency	500
Decoupling Penalty Threshold	3,684

[1] As part of the General Rate Case Settlement Agreement in Docket Nos. UE-140188 and UG-140189, the company agreed, in consideration of receiving a full electric decoupling mechanism, to increase its electric energy conservation achievement by five percent over the conservation target approved by the commission, beginning with the 2016-2017 biennial target.

[2] See Docket No. UE-171091, *Report on 2018 Washington State Investor Owned Utility Energy Efficiency Joint Advisory Group Activities and Outcomes*.

Total Conservation Goal	77,856
Excluded Programs (NEEA)	14,892
Total Local Biennium Target	77,356
EIA Penalty Threshold	58,780

It is important to note that because the EIA target is established based on Northwest Power and Conservation Council (NWPCC or Council) methodologies and the council's Regional Technical Forum (RTF) Unit Energy Savings (UES) values, those same methodologies and savings are employed, to the extent possible, in measuring the savings eligible to achieve that target. The planning effort has, with a few isolated exceptions, adopted the same approach to generate the best prediction of how 2026 portfolio performance will be retrospectively measured. The use of RTF UES values also assists in the management of the company's Evaluation, Measurement, and Verification (EM&V) expenses by reducing the costs associated with impact evaluation. The relationship between the regional utilities and the RTF is, however, a symbiotic one, and any impact evaluations performed on a current RTF measure will be shared with the RTF to help improve the quality of the regionally deemed UES.

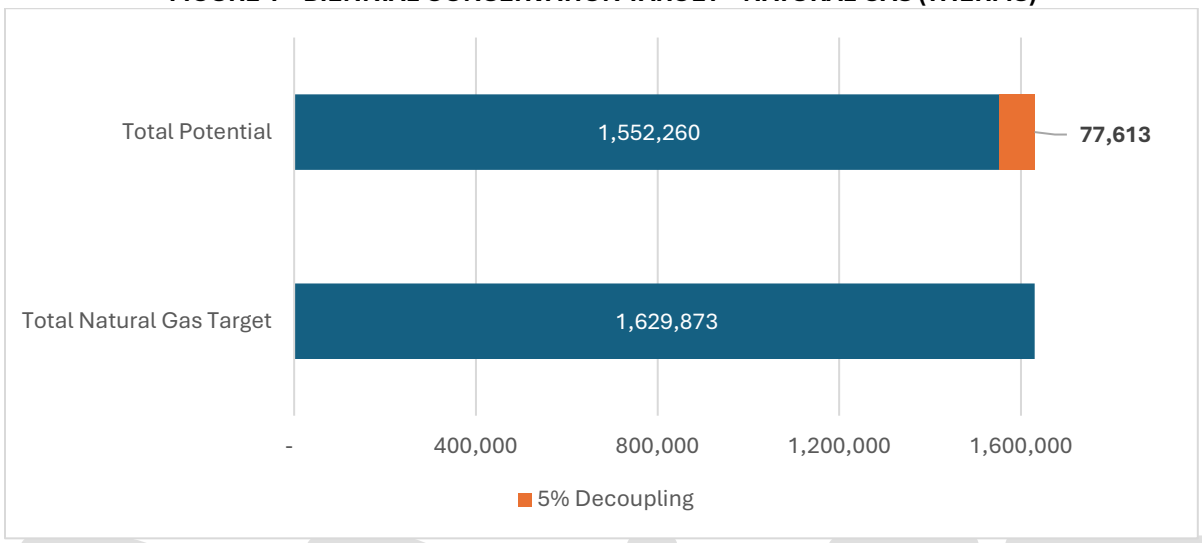
Avista has a long history of providing equitable energy assistance, as evidenced by its well-established low-income programs for bill assistance, weatherization, and conservation education and outreach, in addition to the Avista Foundation's work in serving vulnerable populations. The company's commitment to equity for all customers, with particular emphasis for those residing in Named Communities, is demonstrated through existing programs, such as Low-Income Weatherization and Multifamily Direct Install, and the development of new programs and solutions to reduce customers' energy burden. Participation in all energy efficiency programs by customers residing in Named Communities will be a priority for the company throughout 2026-2027 and participation rates will be tracked to ensure the benefits of these programs are equitably distributed, as further described within the 2026 ACP.

Avista recognizes inequities among its customers and within its service territory and understands that, historically, energy decision-making processes have been inaccessible for individuals and communities to participate in meaningfully. Over the 2026-2027 biennium, the company will focus on the tenets of procedural justice and distributional equity, particularly through its EAG and EEAG working groups. These groups will strive to establish authentic relationships with communities and participants, mitigate concerns and foster trust, and use available resources to be transparent about levels of participation.

For 2026-2027, Avista's natural gas target, as required by RCW 80.28.380, is informed by the company's 2025 natural gas CPA and includes an additional five percent decoupling commitment.[3] The CPA found that 1,552,260 therms were anticipated as available in the biennium, and after adding the five percent the total local biennium target, which represents the overall conservation to be obtained by the company, is 1,629,873 therms.

[3] As established within Avista's 2019 General Rate Case (GRC), Dockets UE-190334, UG-190335, and UE-190222 (*Consolidated*), Final Order 09.

FIGURE 1 – BIENNIAL CONSERVATION TARGET – NATURAL GAS (THERMS)



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The End-Use Efficiency Plan

Electric 10-Year Conservation Potential

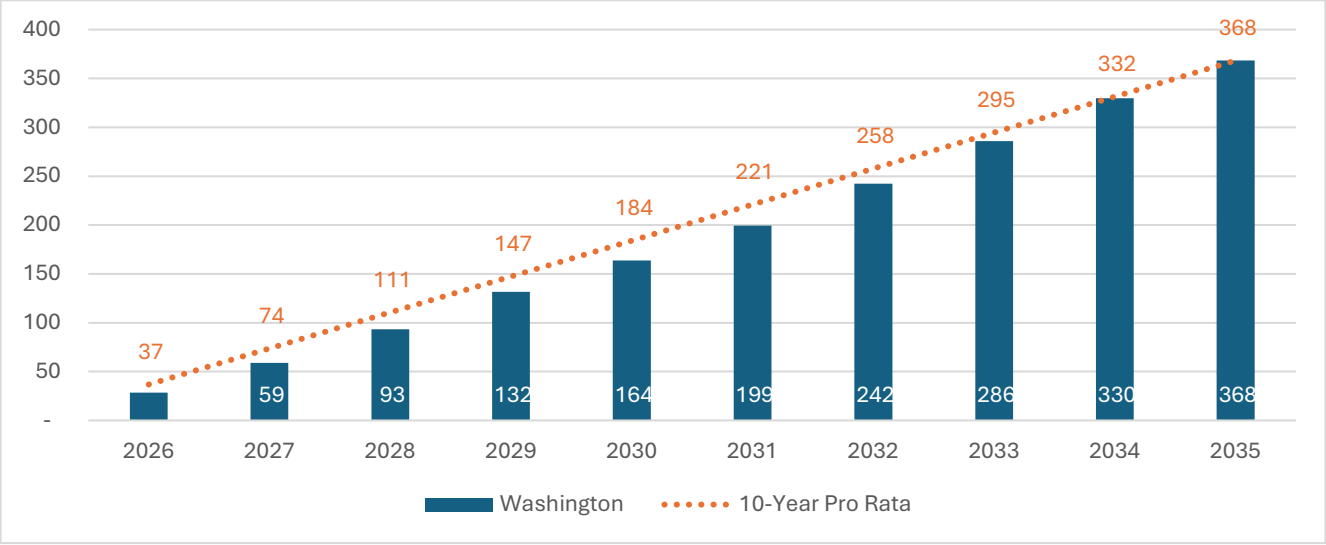
Avista contracted with an independent third-party consultant to assist in developing a CPA as part of its *Integrated Resource Plan* (*IRP*) process. The CPA identifies the 10-year potential for energy efficiency and provides data on resources specific to Avista's service territory for use in the resource selection process and in accordance with the EIA energy efficiency goals. The CPA considers the impacts of existing programs, the influence of known building codes and standards, technology developments and innovations, changes to the economic influences, and energy prices.

The result of this study was the identification of 368,000 MWh of cost-effective conservation over the 10-year period, inclusive of low-income, residential, and commercial/industrial sectors. Figure 2 illustrates the cumulative level of conservation identified in the CPA study and included in Avista's *IRP*.

Energy Efficiency Target Setting for the 2026-27 Biennium

Avista sets its electric conservation targets consistent with RCW 19.285.040, which requires that the biennial target be no lower than the qualifying utility's pro-rata share of the two-year period of its cost-effective conservation potential for the subsequent 10-year period. The result of this method is a pro-rata conservation amount of 73,672 MWh for the biennium. Avista further adjusts this amount to include an additional five percent commitment related to use of its decoupling mechanism for electric rates and any identified distribution savings. The result of these adjustments is a total conservation goal of 77,856 MWh. Avista has included in its *BCP* an estimated 79,476 MWh of qualifying energy efficiency for the 2026-2027 biennium.

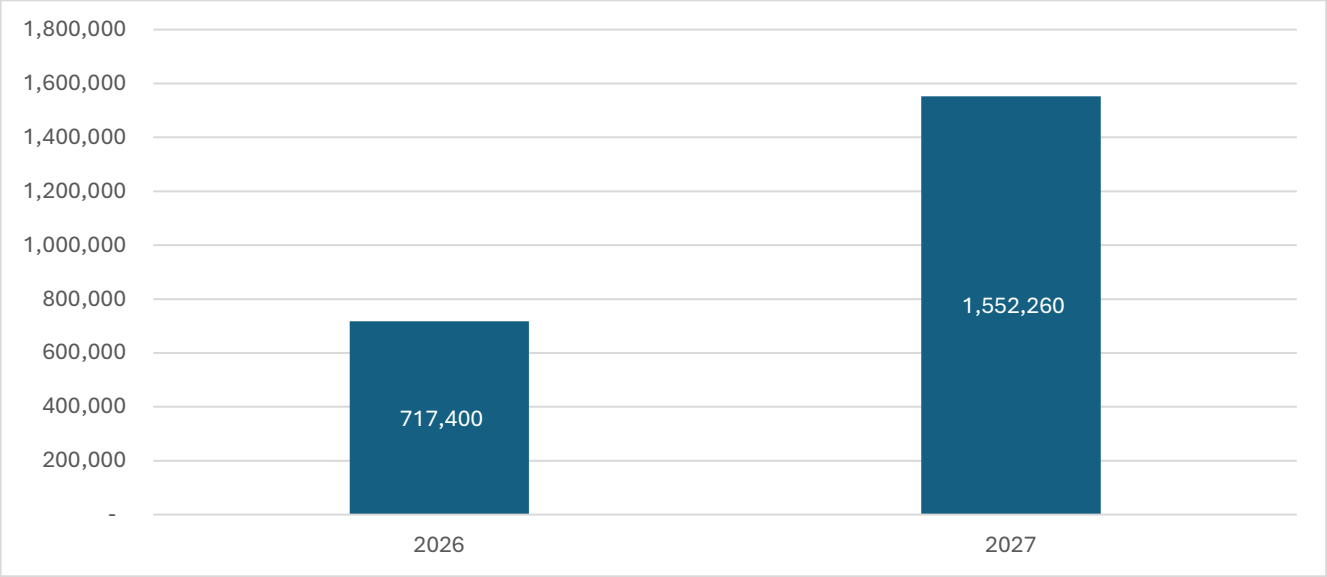
FIGURE 2 – 10-YEAR CUMULATIVE CONSERVATION POTENTIAL – ELECTRIC (GWH)



For 2026-2027, Avista set its natural gas target according to the 2027 cumulative potential as identified in the 2025 CPA. The estimated level of incremental conservation is estimated to be 717,400 therms in 2026 and 834,860 in 2027. The total for these two periods is 1,552,260 therms and represents the target set for the biennial period before the additional five percent decoupling

commitment. Figure 3 illustrates the two-year natural gas conservation savings potential.

FIGURE 3 – TWO-YEAR CONSERVATION POTENTIAL – NATURAL GAS (THERMS)



Conservation Potential and Conservation Targets

The CPA is a 20-year potential study for energy efficiency and an estimate of potential by end-use, specific to Avista's circumstances and service territory, used to inform the company's *IRP* in accordance with I-937 and other agreements. Within the electric and natural gas CPAs, energy efficiency measures applicable to and within Avista's service territory were identified and analyzed both for lost opportunity and retrofit. Since the CPA is inclusive of all energy efficiency potential, regardless of how it is delivered, regional savings that will be acquired through NEEA[4] are included.

Specific to electric, and to maintain consistency with the NWPPC's Power Plan, savings estimates referring to an adjusted market baseline or equivalent were used to develop targets and will be used to claim savings resulting from program operations during this biennium. Avista will look first to UES within the Regional Technical Forum for claimed savings, and then to the company's Technical Reference Manual or other resources.

Site-specific program acquisition will be based on verified savings estimates resulting from an independent third-party evaluation. In situations where a new measure or piece of equipment is implemented, UES may be obtained from the RTF, the CPA, or from other sources based on the best science available until an impact evaluation can be completed to provide better estimates.

Energy efficiency measures and equipment analyzed within the CPA were evaluated using the Council's cost-effectiveness methodology, which employs the *California Standard Practice Manual* with some exceptions, such as the inclusion of non-energy benefits and the use of gross

[4] NEEA's net market effects include natural adoption (if NEEA and Avista have a program operating in the market) that occurs within Avista's service territory and will be counted towards the company's non-penalty targets. NEEA will report code changes, savings estimates, and attribution linkages that Avista will use to report savings.

acquisition. The avoided costs used to evaluate measures and equipment include components for energy, carbon, capacity, risk, and transmission and distribution losses.

Energy Efficiency Portfolio – Program Summary

In addition to supporting outreach, infrastructure, and educational programs, Avista offers a wide range of electric and natural gas efficiency programs. These are comprehensively reviewed on an annual basis as part of the business planning process, which establishes an operational plan for achieving all cost-effective conservation through available or contemplated tools. To do this, the process establishes metrics for the continuous adaptive management of the energy efficiency portfolio to include budgets, labor and physical equipment requirements, and general infrastructure needs. Both short- and long-term threats and opportunities are assessed, and these analyses lead to updated strategic plans, all of which are incorporated into the company's *ACP*s.

Avista's 2026 *ACP*s contain the results of these efforts and are incorporated by reference and attached as Appendices B and C. They provide a bottom-up approach to program implementation intended to not only drive participation but also acquire savings to be counted toward the company's target through existing programs, expansion of existing programs, and the development of new programs. In addition to savings derived from conventional programs, Avista will utilize investments in Named Communities through the Named Communities Investment Fund (NCIF) during the 2026-2027 biennium to derive savings that have historically been excluded from Avista's portfolio because they did not pass cost effectiveness tests. These efforts provide tangible benefits for communities that otherwise might not be able to participate in conservation programs, furthering the equitable distribution of benefits from the company's transition to clean energy.

Tables 3 and 4 below provide a breakdown of the anticipated savings and associated budget for Avista's electric and natural gas portfolios, respectively, for the 2026-2027 biennium. It is important to note that the electric portfolio expected savings are above the targets set for Avista within this *BCP*, as the company believes it will not only be able to achieve the conservation identified within its CPA, but may also exceed these goals through its development of effective programs and continuous adaptive management of these offerings.

TABLE 3 – ELECTRIC PORTFOLIO SAVINGS AND BUDGET BY SECTOR

Sector	MWh	Budget
Low-Income Programs	1,047	$4,275,292
Named Communities Investment Fund	TBD	$4,000,000
Residential Programs	20,141	$4,099,254
Commercial/Industrial Programs	43,430	$11,900,848
NEEA	14,858	$3,078,276
CPA, EM&V	NA	$1,409,798

Third Party Implementation	NA	$4,523,125
Labor, Marketing, General Implementation	NA	$10,028,396
Outreach	NA	$252,000
Pilot Programs	TBD	$1,922,315
Total	**79,476**	**$45,586,504**

TABLE 4 – NATURAL GAS PORTFOLIO SAVINGS AND BUDGET BY SECTOR

Sector	Therms	Budget
Low-Income Programs	32,810	$ 6,311,985
Residential Programs	1,199,630	$ 6,515,332
Commercial/Industrial Programs	244,146	$ 1,040,158
NEEA	14,554	$ 1,216,573
CPA, EM&V	NA	$ 156,644
Third Party Implementation	NA	$ 2,269,826
Labor, Marketing, General Implementation	NA	$ 916,885
Outreach	NA	$ 28,000
Pilot Programs	TBD	$ 843,975
Total	**1,491,140**	**$ 19,299,379**

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The company's current portfolio of efficiency programs is broadly applicable across all customer segments. The overall portfolio contains individual market segments for commercial/industrial, general residential, and low-income customers, as well as offerings specifically developed for customers in Named Communities. Each portfolio applies a segment/project-specific strategy to deliver savings opportunities to that particular customer population. Efficiency programs are offered either through standard offers or prescriptive programs, as well as through a site-specific or custom program for commercial/industrial measures not otherwise available in a prescriptive program. Certain programs are offered through direct-install channels, as well as through midstream channels, through which Avista partners with distributors to ensure efficient equipment is offered to contractors and customers. Program offering assumptions, including measure life, UES values, and incremental costs are derived from either the RTF UES workbooks or from EM&V documentation. Detailed descriptions of individual programs are contained within the 2026 Electric and Natural Gas *ACP*s, which are included as Appendices B and C.

Avista retains the option to develop and revise programs as necessary over the course of the 2026-2027 biennium, in order to adaptively manage the programs and their elements. This ongoing portfolio management may include the launching or termination of program offerings or eligible

measures without the adjustment of the biennial acquisition target. In addition to the predominately incentive-based efficiency measures offered through Avista programs, the company also funds and is an active participant in the achievement of energy efficiency through regional market transformation. This activity occurs through the NEEA portfolio of market transformation ventures, achieving resource acquisition from throughout the region. Avista also contributes data and expertise, along with other utility partners, in the continuous process of developing sound methodologies for the attribution of the energy savings from these programs to individual utilities and jurisdictions in a manner that is additive to local utility programs.

For the 2026-2027 biennium, Avista's total conservation goal of 77,856 MWh has increased in comparison to the previous biennial total conservation goal of 66,543 MWh. Market conditions continue to create headwinds for customers, including inflation, economic uncertainty, and labor shortages. However, the company is confident its planned program offerings provide ample and adaptive efficiency opportunities for customers. Avista continues to deliver efficiency choices that meet customers' evolving energy needs while prioritizing affordability. Highlights include engagement with commercial customers to create a robust pipeline of site specific projects, continued strong distribution savings, and greater-than-anticipated participation in Home Energy Reports (HERs), small business lighting, and midstream programs. More information on expected savings and outcomes can be found in the 2026 Electric *ACP*. Avista is confident it will be able to exceed its electric conservation goals during the coming biennium.

In relation to natural gas savings measures, Avista has set a conservation goal of 1,552,260 therms for the 2026-2027 biennium. As with electric programs, market conditions – including inflation, economic uncertainty, and labor shortages – remain a hurdle for customer participation. Additionally, new regulations and recent building codes focused on decarbonization may cause hesitation among customers to spend capital dollars on natural gas efficiency upgrades. Overall, natural gas efficiency measures tend to be more limited than electric measures, and can often be more expensive to implement, creating barriers to participation and savings. Nonetheless, Avista is well-positioned to adaptively manage these challenges, and has continued to develop a robust portfolio of natural gas efficiency measures to strive for achieving its conservation goals. More information on these efforts and projected savings can be found within the 2026 Natural Gas *ACP*.

Avista will continue to work with UTC staff and with its Energy Efficiency Advisory Group (EEAG) throughout the biennium to obtain input regarding potential program changes or additions to meet its biennial targets. The company regularly consults with its EEAG on matters pertaining to its energy efficiency programs to gain advice and guidance on issues as they arise. In addition, Avista has committed to notifying the Commission of any significant unplanned changes in incentives or program eligibility that occur during the year. The same process will be followed through 2026 and 2027.

Avista's Commitment to Equity in Energy Efficiency

The Clean Energy Transformation Act provides guidance to utilities for expanding their energy efficiency efforts toward customers who have experienced barriers to participation, to ensure equitable benefits of clean energy are realized by all Washington customers. For Avista, this emphasis is consistent with the company's work to ensure all customers can equitably participate in its programs.

The company has a long history of providing equitable energy assistance, as evidenced by its well-established low-income programs for bill assistance, weatherization, and conservation education and outreach, in addition to the Avista Foundation's work in serving vulnerable populations. As part of its program planning process, Avista's customer solutions team evaluates potential impacts on Named Communities when considering potential program design, development, and implementation. The team factors key equity components into its program planning, like affordability, access to programs, community investment, environmental impacts, and public health benefits. Through guidance from the company's many advisory groups – including the Equity Advisory Group (EAG), Energy Assistance Advisory Group (EAAG), and Energy Efficiency Advisory Group (EEAG) – Avista continues to learn and implement best practices for engaging underserved and adversely affected populations.

Avista's commitment to equity for all customers, with particular emphasis for those residing in Named Communities, is demonstrated by the employment of a dedicated CETA program manager who manages the company's Named Communities Investment Fund. The company continues to modify and optimize existing programs, such as Low-Income Weatherization and Multifamily Direct Install, to better serve customers in Named Communities, while continuing to develop new programs and solutions to reduce customers' energy burden. Avista's Clean Energy Implementation Plan was also developed as a result of CETA, which provides an overview for moving toward the 2030 and 2045 clean energy requirements of WAC 480-100-610(2) and (3). The CEIP describes interim and specific clean energy targets as well as specific actions demonstrating progress toward these goals for the next four years. It also identifies Customer Benefit Indicators (CBIs) that Avista has adopted and will track to ensure all customers are equitably benefiting from the transition to clean energy.

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Energy Efficiency Equity Highlights

Named Communities Investment Fund: As part of Avista's first approved CEIP,[5] the company established an allocation of funding intended to implement programs and projects that specifically benefit Named Communities. Approximately 40 percent of the total $5 million approved (and incorporated within Avista's electric energy efficiency tariff Schedule 90), or $2 million on an annual basis, is designated as funds to be used for energy efficiency purposes. This funding can be used for energy efficiency and health and safety efforts exclusively within Named Communities, for programs and projects that reduce customers' energy burden, and as assistance for organizations that serve members of Named Communities. This is a multifaceted approach that provides opportunities for customers who have historically experienced barriers to participating in such programs and encourages significant improvements to properties that are in need of efficiency enhancements.

When awarding NCIF funding, Avista draws on the priorities identified by the EAG, as well as the specific actions, CBIs, and equity focus areas outlined in its CEIP. The list below outlines the energy efficiency initiatives identified by the EAG that shape the NCIF funding framework.

[5] See Docket No. UE-210628.

1. Improve awareness and energy efficiency opportunities for the Spokane Tribe, residents of multifamily buildings, and residents of manufactured homes
2. Increase the tree canopy
3. Increase access to energy efficiency products and appliances
4. Increase awareness and engagement in energy efficiency programs
5. Match funds for energy efficiency grant applications to community-based organizations and tribal partners
6. Improve energy efficiency for those without stable housing

Avista continues to discuss programs with its advisory groups to increase the number of participating households located in Named Communities and is moving forward with these programs, which are described in more detail in the 2026 Electric *ACP*.

Overview of NCIF-Supported Programs:

- Home Insulation Program (HIP): HIP is a direct install program with air sealing measures designed to deliver energy savings for customers who live in single family homes, condominiums, and multi-family properties of up to four units. Avista anticipates that most program offerings will be available at low or no cost to participants, supported by enhanced rebates funded through NCIF. Avista also anticipates the implementor will be able to deliver sustained energy savings through innovative marketing and delivery approaches that overcome market barriers typically encountered by residential customers, especially those residing in Named Communities.
- Low-Income Weatherization Program: Low-income programs are offered via partnerships between Avista and eight Community Action Agencies (CAAs), including one Tribal Housing Authority, each of which holds a bi-annual contract with Avista. This funding offers significant flexibility for CAAs to deliver weatherization services tailored to the specific needs of each low-income client, using a combination of the most suitable measures for their home.
- Multi-Family Building Upgrades in Named Communities: A provision for Named Communities in the recently launched Multifamily Energy Excellence Program (MEEP) provides assistance for landlords with demonstrated need, as well as for HVAC and other efficiency upgrades. NCIF awards may provide partial or full funding for the owner's portion of the cost.

These programs are described in more detail in the 2026 Electric and Natural Gas *ACP*s.

Connected Communities: This five-year demonstration project is a partnership between Edo, Avista, McKinstry, Pacific Northwest National Laboratory (PNNL), and Urbanova. Participant recruitment focuses on equity across demographics, particularly on highly impacted and vulnerable populations in Avista's Named Communities, including those in the East Central, the Logan, and the Cliff-Cannon neighborhoods of Spokane, Washington. The project explores and demonstrates clean, equitable products and solutions for customers. Its goal is to optimize grid utilization, increase resiliency, and reduce energy burden through control of HVAC systems in small and large commercial buildings and through smart thermostats and batteries in residential homes.

Future Equity Endeavors

CETA includes an expanded definition of "public interest" considered by the Washington UTC to be inclusive of equity considerations when evaluating the impact of actions proposed by electric investor-owned utilities (IOUs). The law also requires the UTC to evaluate policies and actions related to IOU implementation of equity requirements. Over the 2025-2027 biennium (July 2025-June 2027), the UTC will publish guidance on equity via four policy statements, each covering a unique aspect of energy equity:

1. Recognition justice: focuses on gaining an understanding of historic and ongoing inequities and seeks to reconcile them
2. Procedural justice: focuses on inclusive decision-making processes
3. Distributional equity: focuses on ensuring marginalized and vulnerable populations do not receive an inordinate share of the burdens, and are not denied access to benefits
4. Restorative justice: focuses on interventions to disrupt and address distributional, recognitional, or procedural injustices and to correct them through laws, rules, and policies

Avista recognizes inequities among its customers and within its service territory and understands that, historically, energy decision-making processes have been inaccessible for individuals and communities to participate in meaningfully. Over the 2026-2027 biennium, the company will focus on the tenets of procedural justice and distributional equity, particularly through its EAG and EEAG working groups. These groups will strive to establish authentic relationships with communities and participants, mitigate concerns and foster trust, and use available resources to be transparent about levels of participation. Furthermore, there will be a concentrated effort to ensure the equal distribution of benefits and burdens across populations. Ideas for achieving these goals will be discussed during regularly scheduled EAG and EEAG meetings and carried out by both group participants and company staff.

Collaborative Engagement and Public Participation

Avista has included ongoing active involvement of interested parties within its business planning and operational processes since 1992. Extensive engagement, as well as multiple opportunities for public participation, have been incorporated into the development of this *BCP* and associated issues through multiple processes, including Avista's *IRP* Technical Advisory Committee (TAC), the EAG, and the EEAG.

Avista's EEAG consists of interested regulatory, consumer, and energy industry participants. Avista works collaboratively with its EEAG to seek timely input in its program planning processes and maintains regular communication with members. In preparation for the 2026-2027 *BCP* and pursuant to Docket UE-230897, Order No. 01, issued by the Commission on January 17, 2024, Avista hosted webinars to inform the advisory group of its *BCP* progress and allow time for input and feedback. On June 25, 2025, Avista hosted a webinar to discuss the 2026-2027 draft CPA target, consistent with conditions 3c and 3f of the *BCP* conditions (Attachment A to Order No. 01). On August 25, 2025, Avista hosted a second webinar to share draft program details, including budgets, with the EEAG(in accordance with condition 3f).

Details of the company's next CEIP, including specifics around planned NCIF spending and energy efficiency targets, were also shared at Avista's Q3 2025 Public Participation Meeting[6] on August 27, 2025. While Avista received minimal input on its clean energy targets, participant questions were primarily focused on maintaining affordability while simultaneously balancing clean energy needs and consistent energy generation. Avista is taking this feedback into account by developing more programs and services to help customers reduce their energy cost burden.

In addition to the EEAG, Avista also receives input and feedback from its EAG that helps to inform its planning for the *BCP*; engagement from this group is mostly focused on programs and projects for customers in Named Communities. Members of the EAG are charged with making decisions about how to spend the $500,000 in NCIF funding that is specifically designated for community-identified investments, as well as providing feedback regarding programs and projects being considered for NCIF funding. During meetings held the first half of 2024, members of the EAG also developed areas of prioritization for energy efficiency projects. The group employed a results-based accountability review and prioritization process; the EAG's prioritization matrix is actively used by the energy efficiency CETA program manager to inform the implementation of programs and projects that are most aligned with the EAG's guidance.

Advisory group members are continuously invited to participate in the *IRP* process through attending TAC meetings where the CPA is discussed. As part of its CPA process, which is then used as the basis for the 2026-2027 BCP targets, Avista's draft CPA was presented to the TAC on May 7, 2024; topics discussed at this meeting included the vendor's study objectives, methodology, program characterization, and draft results summary for electric efficiency measures as well as potential demand response measures. An energy efficiency update was then provided to TAC at its September 17, 2024, meeting. Members of Avista's EEAG, as well as members of the public, are continuously invited to participate in multiple meetings associated with the TAC, including public meetings on Avista's electric and natural gas *Integrated Resource Plans*.

- The electric TAC meetings ran from September 26, 2023, through September 17, 2024
- The general public electric *IRP* meeting was held on November 13, 2024
- The natural gas TAC meetings ran from February 14, 2024, through January 22, 2025 (AEG presented the natural gas CPA on January 9, 2025)
- The general public natural gas *IRP* meeting was held on November 13, 2024

The status of target achievement and associated updates will be provided to interested parties in several ways over the 2026-2027 compliance period. Both the EEAG and EAG will continue to be invited and encouraged to provide input into the company's development of *ACP*s and *BCP*s. This planning process plays a critical role in guiding Avista's business operations for the following year. Avista also provides monthly updates and other documents with planning, programmatic, and statistical updates, tariff rider balances, updates on savings acquisition, and an annual report containing final results each year. Feedback on the draft report is sought from EEAG members prior to filing the annual report.

[6] As part of its CETA (and CEIP) efforts, Avista holds community input meetings at least four times per year to share relevant information and collect public feedback. Presentations and recordings for all past meetings can be found at https://www.myavista.com/about-us/washingtons-clean-energy-future/public-participation-meetings.

Cost-Effectiveness

Avista uses the Total Resource Cost (TRC) test, as modified by the Council, to evaluate cost-effectiveness of its electric programs. The Council-modified calculation of TRC includes quantifiable non-energy benefits and/or impacts, a risk adder, and a 10 percent conservation benefit adder. The Council does not include a net-to-gross adjustment. In addition to the Council-modified TRC, Avista provides calculations of the Program Administrator Cost test (also called the Utility Cost Test, or UCT), Ratepayer Impact Measure (RIM) test, and Participant Cost Test (PCT). For natural gas programs, the TRC is the primary test used in assessing the portfolio's cost-effectiveness.

Overall conservation cost-effectiveness will be evaluated at the portfolio level on an annual basis, separately for both electric and natural gas programs. Costs included in the portfolio level analysis include conservation-related administrative costs. Avista will continue to evaluate measure- and program-level cost tests and will seek the best information available for accurate and applicable savings for electricity measures, looking first to the council's RTF. If Avista uses savings amounts for prescriptive programs that have not been established by the RTF, such estimates will be based on a rigorous impact evaluation that has verified savings levels as assessed by a third-party evaluator, which will be presented to the advisory group for feedback.

Avista's cost-effectiveness methodology has been included within the *ACP*s (Appendices B and C). For the 2026-2027 biennium, Avista estimates that its electric program will achieve a TRC cost-effectiveness ratio of 1.47 and a UCT cost-effectiveness ratio of 1.67. For the natural gas program, Avista estimates cost ratios of 1.47 for TRC and 1.02 for UCT.

Demand Response Pilot Programs

Avista's two Time-Of-Use (TOU) Pilot Programs, as well as a Peak Time Rebate (PTR) Pilot Program, were initially implemented during the 2024-2025 biennium and are scheduled to conclude on June 1, 2026. Within six months of the pilot conclusion, Avista will publish a comprehensive final report detailing the performance and providing recommendations regarding future implementation. The reports will assess whether the pilots should transition into full program offerings in the company's demand response portfolio, be modified, or be discontinued based on observed outcomes and customer engagement. Until a formal determination is made, Avista will continue to offer the pilots to currently enrolled customers. However, enrollment will remain closed to new participants.

The goal of the pricing pilot is to determine if Avista should offer an opt-in TOU and/or a PTR Program to all residential and/or general service customers. The pilot will measure the value of time-of-use rates and peak time rebates for residential and general service customers and encompasses the following three objectives:

- System cost minimization: Reduce costs to serve customers by improving capacity utilization and encouraging economic conservation and peak sharing.
- Customer choice: Offer customers options to help them manage energy bills.
- Equity and accessibility: Design and offer rates and programs that consider needs and effects on low-income/vulnerable populations and highly impacted communities.

Detailed pilot rate plans are outlined in Avista's Washington Tariff Schedules 07, 08, 17, 18, and 84. These schedules were filed with the UTC and became effective on June 1, 2023, in accordance with the Commission's Final Order in Dockets UE-200900, UG-200901, and UE-200894.

- Schedules 07 and 08 pertain to residential TOU rate options
- Schedules 17 and 18 pertain to general service TOU rate options
- Schedule 84 pertains to Peak Time Rebate

In addition to these pilot programs, Avista has committed to piloting a load-flexibility program in support of WAC 194-24-180, which is a new water heater standard requiring all electric tank style water heaters sold in Washington to be equipped with a CTA-2045 communication interface. This commitment is referred to in Condition #12 of the CEIP. To meet this condition, Avista is partnering with NEEA and other utilities to pilot this technology in the region, which will provide economies of scale as well as broader learnings for all project sponsors. More information about this partnership is included in the NEEA section below.

Distribution Savings

Avista continues to review the feasibility of pursuing cost-effective conservation in the form of reductions in electric power consumption, resulting from increases in the efficiency of energy use at electric power production facilities it owns in whole or in part. Avista meets with its generation engineering team on an annual basis to discuss potential projects that may lead to greater energy efficiency at facilities it manages or owns.

Currently, the company is focused on reconductor projects for all installed and energized equipment, from the substation feeder breaker down to the customer transformer. This "reconductoring" involves replacing existing line sections with larger wire. This increases the capacity of the line segment and reduces line losses. Although the primary driver for reconductoring is area load growth, a side benefit is a reduction in line losses. More information on the specific distribution savings for this project can be found in the 2026 Electric *ACP*.

NEEA Biennial Target and Programs

Avista supports regional market transformation efforts by participating in NEEA activities and programs. A portion of the company's I-937 energy savings target is fulfilled by efforts from NEEA programs for accelerating the adoption of energy-efficient equipment, as well as from codes and standards programs. For the 2026-2027 biennium, NEEA forecasts that Avista will receive 14,892 MWh toward its energy savings target, which includes 10,687 MWh from program measures and 4,205 MWh from codes and standards.

Avista participates in several of the programs offered by NEEA by incorporating those initiatives into its local offerings. Residential program measures such as ductless heat pumps, heat pump water heaters, lighting, and other programs have been made available to customers through buy-down, rebate, and direct-installation programs, as well as other channels. Avista also participates in NEEA offerings through regional efforts by continuing to fund NEEA initiatives through its funding contract. Avista will continue to evaluate the need for incorporating NEEA initiatives into the company's local program portfolio. Table 5 identifies the NEEA programs that Avista

participates in from a local and regional level.

TABLE 5 – AVISTA PARTICIPATION IN NEEA PROGRAMS AND INITIATIVES

Sector	Program	Method of Participation
Residential	Ductless Heat Pumps	Locally and through regional efforts
	Extended Motor Products	Locally and through regional efforts
	Heat Pump Water Heaters	Locally and through regional efforts
	Manufactured Homes	Locally and through regional efforts
	Refrigerators/Freezers	Locally and through regional efforts
	Clothes Washers	Locally and through regional efforts
	Clothes Dryers	Locally and through regional efforts
	Room Air Conditioners	Through Avista's allocated share of regional NEEA funding
	Televisions	Through Avista's allocated share of regional NEEA funding
Commercial	Extended Motor Products	Locally and through regional efforts
	High Performance HVAC	To be determined
	Luminaire Level Lighting Controls	Locally and through regional efforts

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2026-2027 biennial savings derived from NEEA programs are expected to be 14,892,000 kWh, which breaks down across each year as follows:

TABLE 6 – NEEA PROGRAMS EXPECTED KWH SAVINGS, 2026

NEEA Sectors	aMW @ Site	MWh @ Site	kWh @ Site
Residential	0.65	5,694	5,694,000
Commercial	0.15	1,314	1,314,000
Industrial	-	-	-
Total	0.80	7,008	7,008,000

TABLE 7 – NEEA PROGRAMS EXPECTED KWH SAVINGS, 2027

NEEA Sectors	aMW @ Site	MWh @ Site	kWh @ Site
Residential	0.70	6,132	6,132,000
Commercial	0.20	1,752	1,752,000

Industrial	-	-	-
Total	**0.90**	**7,884**	**7,884,000**

For natural gas programs, NEEA forecasts Avista will receive a total of 13,800 therms during the 2026-2027 biennium. NEEA's current forecast reflects savings streams from programs in the implementation portion of its portfolio. In 2024, NEEA's Natural Gas Board of Directors asked NEEA to redirect its portfolio in response to House Bill 1589, which restricts incentive activities in residential markets for certain utilities in Washington. NEEA pivoted its investment strategy in response, focusing on four key categories: commercial gas technologies; fuel-neutral opportunities; dual-fuel technologies and systems; and advancing building codes and product standards. NEEA is making progress toward building out the gas portfolio in the early years of the 2025-2029 funding cycle; however, the shift to a different set of market transformation opportunities has created a delay in the development of a gas portfolio and the resulting energy savings to report in this forecast window.

NEEA has two programs in the portfolio—Efficient Rooftop Units and Advanced Commercial Water Heaters—that are in early development state and, at this point, are difficult to forecast funder-level savings. NEEA expects significant savings based on site-level demonstration and adoption efforts in both the Advanced Commercial Water Heating and Efficient Rooftop Unit programs, respectively. NEEA also expects two additional programs to advance in its portfolio – dual-fuel residential HVAC and High Efficiency Dedicated Outdoor Air System. Given the change in focus on commercial opportunities and that many projects are in early demonstration stages, NEEA's forecast is limited to advancement in building energy codes, state standards and insights into the market adoption of efficient rooftop units.

TABLE 8 – NEEA MIDPOINT THERM SAVINGS ESTIMATES

		2026	2027	TOTAL
	Total	**6,600**	**7,200**	**13,800**
Programs	Efficient Rooftop Units	900	1,500	2,400
	Gas High Performance DOAS	TBD	TBD	TBD
	Residential Dual-fuel HVAC	TBD	TBD	TBD
Codes & Standards	Commercial Kitchen Equipment	3,100	3,200	6,300
	Residential New Construction	TBD	TBD	TBD
	Commercial New Construction	2,600	2,500	5,100

End-Use Load Flex Kickstart Projects

In addition to NEEA's portfolio of core market transformation programs and standards, and in response to a new permanent standard for grid-enabled water heaters (WAC 194-24-180), which went into effect on January 1, 2023, NEEA has also proposed a suite of End-Use Load Flex Kickstart Projects. The suite of projects includes:

1. An end-use load flexibility workgroup and portfolio development effort
2. An effort to influence equipment manufacturers to adopt open-source Universal

Control Module smart controls in residential water heating and space conditioning equipment

3. Research and documentation projects to prioritize products and projects for future investment in end-use flexible load market transformation programs

As of June 2025, the project has completed several tasks, including the development of a workplan; the launch of field studies on CTA-2045 water heater modules and demand response capable line-voltage thermostats; the identification of key program metrics; the compilation of a North American demand response program matrix with an in-depth analysis of high-performing programs; and the implementation of a member utility grid operator and utility staff survey on demand response priorities and current operations. Testing results and research outcomes will inform Avista's RFP evaluation and the next IRP cycle. Future work is under discussion at NEEA to continue market transformation efforts for connected load flex devices. Additional updates will be provided in future *ACP* and *BCP* documents.

2026-2027 Projected Funding

This funding estimate for NEEA activities in the 2026-2027 biennium is based on Avista's service territory allocation of 7.81% for natural gas programs and 3.63% for electric programs.

TABLE 9 – NEEA BUDGET

	2026	2027
Electric	$1,539,138	$1,539,138
End-Use Load Flex[7]	TBD	TBD
Natural Gas	$551,691	$551,691
Total	$2,090,829	$2,090,829
Biennium Total		$4,181,657

Utility Evaluation, Measurement, and Verification

EM&V is intended to represent the comprehensive analyses and assessments necessary to supply salient information to interested parties that adequately determines the energy efficiency acquisition of Avista's energy efficiency programs as well as providing real-time information for program management. EM&V, as described below and taken as a whole, is analogous with other industry standard terms such as *portfolio evaluation* or *program evaluation*.

Avista is committed to using independent third-party EM&V consultants and evaluators for the various analyses required to substantiate the I-937 portfolio over the biennium. The role of EM&V for validation of the conservation acquisition is critical to the reporting phase of the *BCP*, and the processes and protocols for conservation evaluation will continue to be refined. The existing

[7] At the time of writing, Avista is in negotiations with NEEA to determine scope and funding for 2026.

EM&V documents, including the EM&V framework and annual EM&V plans, will be reviewed and updated as necessary to improve their benefit to the energy efficiency programs and Avista's customers.

The RTF, as an advisory committee to the council, is a valued source of information relating to the measurement of energy savings – but it's not the only source. The RTF provides UES references suitable for consideration in Avista's acquisition planning relative to each biennium. In cases where Avista uses RTF UES values and delivers programs in a manner consistent with the RTF's defined delivery mechanism, the evaluation efforts are limited to verification of participation that would be applied to the associated UES. RTF assumptions may be updated with Avista-specific assumptions (e.g., actual vs. forecasted purchases) to come up with an RTF-consistent UES that is more appropriate for Avista. Furthermore, since the RTF evaluation process incorporates a market-adjusted baseline, applications of RTF UES values are not subject to net-to-gross adjustment. Avista may elect to evaluate, refer to, and use RTF or other sources of energy efficiency metrics with equal merit. Information from the RTF, the council's power plan, NEEA, and other data sources are used in Avista's TRM to compile, catalog, and track electrical energy efficiency measures. Key criteria available from the RTF include measure costs, savings, non-energy impacts (NEIs), estimated useful lifetimes, and measure discontinued thresholds. Program-specific savings amounts, whether established by the RTF or other means, are subject to rigorous and frequent impact evaluation that serves to verify or adjust appropriate energy savings levels.

For the 2026-2027 biennium, Avista will spend a sufficient amount of its conservation budget on evaluation, measurement, and verification, including a reasonable proportion on independent, third-party EM&V engagement. The company will also continue to provide opportunities for its advisory group to review the EM&V protocols to allow for continuous collaboration and improvement of these processes.

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Compliance and Other Key Issues

In this *BCP*, Avista has stated its targets and described how these targets have been developed, consistent with RCW 19.285 and WAC 480-109. In Appendices B and C, the company provides its *ACP*s, which further elaborate on the programs designed to achieve these targets, as well as how these savings will be defined and presented. Reporting standards and participation from non-company parties' involvement have also been described.

As stated above, cost-effectiveness and other prudence-related issues pertaining to cost recovery will be based on the company's 2026-2027 *Biennial Conservation Report* (*BCR*). Avista will file supporting evidence to demonstrate the prudency of its electric energy efficiency expenditures for its 2026 and 2027 program years within the *BCR*. Avista maintains full responsibility to manage its energy efficiency portfolio to meet the targets included herein and will inform the Commission in a timely manner if there is an expectation that the I-937 target will not be achieved.

Regarding CETA compliance, Avista reported on progress related to CBIs in its 2024 *Annual Conservation Report*, which was filed on May 30, 2025.

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Conclusion and Contact Information

Avista respectfully requests the Commission approve its 10-year conservation potential and the biennial conservation targets set forth in this document. The company's proposed energy efficiency acquisition for the 2026-2027 biennium is based on a CPA completed by a third-party consultant, applying a methodology consistent with the Council's power plan.

Avista's energy efficiency programs are funded through tariff rider Schedule 91 for electric service and Schedule 191 for natural gas. Additionally, general program design information, including details about eligibility requirements and incentives, are maintained within Avista's Schedule 90 for electric service and Schedule 190 for natural gas. For the 2026-2027 compliance period, no changes were requested to the company's Schedules 90 or 190 in order to accommodate the company's plans for the upcoming biennium; these schedules have been included as appendices to this BCP. For Schedule 91and 191, rate adjustments to ensure the necessary funding will remain available to support Avista's energy efficiency endeavors into the upcoming biennium were made in accordance with WAC 480-109-130 and the company's 2024-2025 BCP Conditions,[8] with new rates effective August 1, 2025 and November 1, 2025, respectively.[9][10] The company and its EEAG will continue to monitor these balances and propose any modifications to the Commission as necessary, pursuant to WAC 480-109-130(2).

For additional supporting information, please see the following appendices:

- Appendix A – Washington Two-Year Planning Summary
- Appendix B – 2026 Electric Energy Efficiency Annual Conservation Plan
- Appendix C – 2026 Natural Gas Energy Efficiency Annual Conservation Plan
- Appendix D – NEEA Electric Savings Forecast
- Appendix E – NEEA Natural Gas Savings Forecast
- Appendix F – 2024-2025 Compliance Record
- Appendix G – Schedule 90 Electric Energy Efficiency Programs (Washington)
- Appendix H – Schedule 190 Natural Gas Efficiency Programs (Washington)

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[8] Docket UE-230-897, Order 01, Attachment A, Condition 12(d); Docket UG-230898, Order 01, Attachment A, Condition 12(d).
[9] Docket UE-250417.
[10] Docket UG-250418.

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Appendix A – Washington Two-Year Planning Summary

Programs	MWh Savings	Estimated Electric Budget	Therm Savings	Estimated Natural Gas Budget	Total Budget
Low-Income Programs					
Low-Income Programs	1,047	$3,050,648	32,810	6,311,985	9,362,633
Named Communities Investment Fund	-	$4,000,000	-	-	4,000,000
Low-Income Programs Total	**1,047**	**$7,050,648**	**32,810**	**$6,311,985**	**13,362,633**
Residential Programs					
Appliances	335	$126,513	2,195	21,280	147,793
ENERGY Star Homes	18	$32,823	591	2,646	35,469
Home Energy Audit	30	$-	-	-	-
Home Energy Reports	11,373	$-	634,097	-	-
Home Insulation Program	1,088	$2,269,304	75,558	2,468,280	4,737,584
Multi-Family Windows	145	$58,618	9,272	33,960	92,578
On-Bill Repayment	-	$22,834	-	-	22,834
Residential Midstream	7,129	$1,542,060	441,336	3,373,626	4,915,686
Single Family Windows	23	$47,102	36,581	615,541	662,643
Residential Programs Total	**20,141**	**$4,099,254**	**1,199,630**	**$6,515,332**	**10,614,586**

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Programs	MWh Savings	Estimated Electric Budget	Therm Savings	Estimated Natural Gas Budget	Total Budget
Commercial/Industrial Programs					
Building Operator Certification	849	$1,427	-	-	1,427
Direct Install Lighting	10,278	$5,138,889	-	-	5,138,889
Exterior Lighting	2,604	$677,363	-	-	677,363
Green Motors	2	$428	-	-	428
Grocer	126	$59,996	-	-	59,996
Interior Lighting	6,637	$1,470,607	-	-	1,470,607
Non-Residential Midstream	1,150	$298,676	112,336	392,905	691,581
Non-Residential Shell	74	$876	65,843	416,369	417,245
Pay for Performance	8	$6,058	-	-	6,058
Site Specific	21,701	$4,246,528	65,967	230,884	4,477,412
Commercial/Industrial Programs Total	**43,430**	**$11,900,848**	**244,146**	**$1,040,158**	**12,941,006**

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Programs	MWh Savings	Estimated Electric Budget	Therm Savings	Estimated Natural Gas Budget	Total Budget
Portfolio Support					
NEEA	14,892	$3,078,276	14,554	$1,216,573	4,294,849
CPA, EM&V	-	$1,409,798	-	$156,644	1,566,442
Third Party Implementation	-	$4,620,325	-	$2,269,826	6,890,151
Labor	-	$4,030,321	-	$250,432	4,182,452
Marketing	-	$1,512,000	-	$168,000	1,680,000
General Implementation	-	$4,486,075	-	$498,453	4,984,528
Outreach	-	$252,000	-	$28,000	280,000
Pilot Programs	-	$1,922,315	-	$843,975	2,766,290
Portfolio Support Total	**14,892**	**$21,311,110**	**14,554**	**$5,431,903**	**26,644,712**
Totals Included in Cost Effectiveness	64,618	$39,176,115	1,476,586	$17,082,187	56,160,001
Portfolio Totals	**79,510**	**$45,586,504**	**1,491,140**	**$19,299,379**	**64,787,582**
Estimated EM&V Percentages		1.78%			

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Appendix B – 2026 Electric Energy Efficiency ACP

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Draft 2026 Washington Electric

Energy Efficiency Annual Conservation Plan

November 1, 2025

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All forward-looking statements contained in this document are based on underlying assumptions (many of which are based, in turn, upon further assumptions). These statements are subject to a variety of risks, uncertainties, and other factors. Most of these factors are beyond Avista's control and may have a significant effect on the company's operations, financial condition, or cash flows, which could cause actual results to differ materially from those anticipated in its statements.

Such risks, uncertainties, and other factors include, among others, those contained within the company's most recent annual report on Form 10-K, or quarterly report on Form 10-Q, filed with the Securities and Exchange Commission. Those reports are available at avistacorp.com.

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Introduction

Avista Utilities' *Annual Conservation Plan* (*ACP*) is provided in alignment with RCW 19.285.040 and WAC 480-109-120(2), and in accordance with the requirements outlined in Order 01 in Docket UE-230897, through which the Commission approved Avista's 2024-2025 *Biennial Conservation Plan* (*BCP*), subject to conditions.[1]

The 2026 *ACP* outlines Avista's energy efficiency program offerings and provides details on verifying and reporting savings. The plan is based on two key principles: the first is to pursue all cost-effective kWh savings by offering financial incentives for implementing energy-saving measures, and the second is to use the most effective mechanism to maximize delivery of energy efficiency services to customers, while ensuring that all customers enjoy equitable access to programs. These mechanisms include prescriptive programs or standard offers such as high-efficiency appliance rebates; site-specific or customized analyses at customer premises; midstream incentives, which go directly to HVAC and hot water heating equipment distributors; regional market transformation efforts in partnership with other utilities; direct-install programs that leverage third-party installers and implementers; low-income weatherization services through local Community Action Agencies (CAAs); new programs to serve energy needs for members of Named Communities; a multi-channel communication effort; and support for cost-effective appliance standards and building codes.

The business planning process for Avista's energy efficiency program portfolio builds on the company's electric *Integrated Resource Plan* (*IRP*) and *Conservation Potential Assessment (CPA)* processes. These are overall resource planning processes completed every two years that integrate energy efficiency and generation resources into a preferred resource scenario. The purpose of this process, and resulting plan, is to create an operational strategy for reaching the aggregate targets identified within the *IRP* in a manner that is cost-effective – and that considers all aspects of customer value.

This *ACP* also represents a planning process that relies on meaningful and extensive engagement from Avista's Energy Efficiency Advisory Group (EEAG) as well as its Equity Advisory Group (EAG). Avista consults with these advisory groups multiple times throughout the course of a year – seeking input and guidance on best practices for new programs, as well as advice on possible changes to existing programs and services – to ensure that everyone, particularly those who have been most vulnerable to pollution and/or climate change, has a pathway to participate in programs that help save energy.

The budgetary projections established as part of Avista's biennial planning process, and in this 2026 *ACP*, are tracked continuously as part of the company's adaptive management of its programs and associated costs. Revisions to the conservation tariff rider funding mechanisms contained within the Schedule 91 electric tariff are completed on an annual basis, if needed, pursuant to WAC 480-109-130(2). These adjustments to the tariff rider surcharges are made with

[1] Docket UE-230897, Order 01, Attachment A contains the approved Conditions for 2024-2025 Avista Electric Biennial Conservation Plan.

the objective of moving these balances toward zero and reflecting, at all times, the most appropriate collection rate in support of Avista's energy efficiency programs in accordance with WAC 480-109-130.

Definitions

Table 1 below provides a list of definitions for select terms used throughout Avista's 2026 *ACP*. These terms are specific to the conservation standards set forth within the Energy Independence Act (EIA) and affirmed through previous planning cycles.[2]

TABLE 1 – ELECTRIC CONSERVATION TERMS

Electric Conservation Terms	
EIA Target	All cost-effective conservation potential as required by RCW 19.285. Includes the Pro-Rata share from Avista's CPA, plus other programs/measures with confident savings omitted from the CPA subject to the EIA, such as distribution-level efficiency, pilots with uncertain savings, and additional portfolio buildout.
EIA Penalty Threshold	As approved by the Commission, which may rely on standard practice to set Investor Owned Utilities' conservation targets. For purposes of Avista's ACP, this is the EIA target without regional savings from the Northwest Energy Efficiency Alliance (NEEA).
Decoupling Penalty Threshold	Five percent of the EIA Target, as originally defined in Docket UE-140188, Order 05.
Total Local Biennium Target	EIA Penalty Threshold plus Decoupling Penalty Threshold.
Total Conservation Goal	EIA target plus Decoupling Penalty Threshold plus any additional targets identified by the utility outside of the EIA Target.

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[2] See Docket UE-190912, *Commission Staff Comments Regarding Electric Utility Conservation Plans Under the Energy Independence Act, RCW 19.285 and WAC 480-109 (2020-2021 Biennial Conservation Plans)*; December 5, 2019, pg. 4.

Executive Summary

The 2026 *ACP* provides details on programs and initiatives the company intends to offer to customers to achieve eligible acquisition savings as it enters the first year of the 2026-2027 biennium. For 2026, Avista has identified estimated conservation savings of 45,279 megawatt-hours (MWh) from local efforts as well as 7,008 MWh from regionally acquired savings through the Northwest Energy Efficiency Alliance (NEEA)[3], combining for a total estimated savings of 52,287 MWh. To accomplish these savings, the company anticipates approximately $26 million in expenditures. This amount includes a budget of $2 million for programs that serve Named Communities,[4] as well as over $2.1 million for low-income programs. Additionally, the company estimates spending approximately $960,000 for new pilot programs and nearly $1.54 million to fund NEEA regional market transformation efforts.

Table 2 provides the estimated conservation achievement (in MWh) and anticipated expenses for each market sector in Avista's program portfolio, as well as estimated expenses for Evaluation, Measurement, and Verification (EM&V).

TABLE 2 – 2026 PORTFOLIO SAVINGS AND BUDGET BY SECTOR

	MWh	Budget
Low-Income Programs	734	$2,137,646
Named Communities Investment Fund	TBD	$2,000,000
Residential Programs	14,113	$2,872,424
Commercial/Industrial Programs	30,432	$8,339,147
Energy-Efficiency Pilot Programs	TBD	$961,158
NEEA	7,008	$1,539,138
Third-Party Implementation	-	$2,323,790
General Implementation, Labor, Marketing, and Outreach	-	$5,091,048
CPA, EM&V[5]	-	$704,899
Total	52,287	$25,969,249

As Avista enters the first year of its biennial period, its energy efficiency programs remain well positioned to achieve the biennial conservation target identified through its CPA process.[6] Market

[3] To achieve consistency with other Washington investor-owned utilities, Avista has included "Program Measures" and savings from "Codes & Standards Measures."

[4] Funded through Avista's Named Communities Investment Fund (NCIF), as described within the 2021-2024 CEIP and incorporated within the company's tariff Schedule 90, Electric Energy Efficiency Programs.

[5] EM&V expense are estimated based on current 2024-2025 EM&V contract.

[6] See Avista's 2026-2027 BCP, filed in conjunction with this ACP, for information regarding the full biennium.

conditions that have continued to create headwinds for customers remain – including inflation, economic uncertainty, and labor shortages – however, the Company is confident that the planned program offerings provide ample and adaptive efficiency opportunities for customers. Avista continues to deliver efficiency choices that meet customers' evolving energy needs while prioritizing affordability, particularly for customers in Named Communities. 2026 will mark the beginning of the Company's 2026-2029 Clean Energy Implementation Plan (CEIP) period, and with it, Avista's energy efficiency team continues to develop and employ solutions that extend the benefits of clean energy to Named Communities within Avista's service territory, ensuring equitable benefits for all. Avista will continue to take an aggressive approach to energy savings acquisition in 2026, optimizing customer incentives while maintaining cost-effectiveness and preserving affordability.

Cost-effectiveness remains a key indicator of Avista's energy efficiency portfolio performance. While Avista pursues all cost-effective measures, the company also retains flexibility in its program design so that meaningful energy efficiency can be attained by all customers. Avista's energy efficiency program portfolio includes a segment of programs tailored to serve the unique energy needs of income-qualified customers, as well as customers who are members of Named Communities. Table 3 illustrates a summary of the portfolio cost-effectiveness for each sector and Table 4 outlines the biennial conservation targets by category.

TABLE 3 – PORTFOLIO COST-EFFECTIVENESS BY SECTOR

	Low-Income/ Named Communities	Residential	Commercial/ Industrial	Total
Total Resource Cost	1.66	2.41	2.29	2.13
Utility Cost Test	0.51	2.43	2.42	2.01

TABLE 4 – 2026-2027 BIENNIAL CONSERVATION TARGET

2026-27 Biennial Conservation Target	Savings (MWh)
EIA Target	**73,672**
Distribution Efficiency	500
Decoupling Threshold	3,684
Total Conservation Goal	**77,856**
Excluded Programs (NEEA)	14,892
Total Local Biennium Target	**77,356**
EIA Penalty Threshold	**58,780**

The level of conservation estimated to be achieved in 2026 (and further, throughout the 2026-2027 biennium) will have a direct impact on the balances within the energy efficiency tariff rider (Schedule 91). To appropriately and adequately meet the anticipated costs of achieving the savings targets outlined in this 2026 *ACP* and associated 2026-2027 *BCP* – in addition to remedying an existing underfunded balance – Avista filed revisions to its Schedule 91 on May 30,

2025, in accordance with WAC 480-109-130.[7] The new collection rates for Schedule 91 were approved effective August 1, 2025. Tariff rider balance estimates for 2026 are shown in Table 5 below.

TABLE 5 – 2026 TARIFF RIDER BALANCE ESTIMATES

Estimated Electric Energy Efficiency Balances	(Underfunded)/Overfunded
Estimated Balance at January 1, 2026	$(16,103,710)
Tariff Rider Funding	$35,001,339
Annual Expenditures	$25,969,249
Estimated Balance at December 31, 2026	$(7,071,620)

The estimate for the 2026 budget is approximately $454,000 lower than those in the 2025 *ACP*. This difference is mainly driven by the Company's ability to adaptively manage the portfolio, using more cost-effective programs to achieve savings targets. There has been a general reduction in direct install lighting, which creates recognizable cost savings. This reduction is offset by the addition of Home Energy Reports (HERs) as a permanent program – which is generally inexpensive to implement but highly effective in achieving energy savings – as well as an overall shift to more cost-effective programs within the portfolio. The company will continue to track and monitor its tariff schedule balances, notifying its EEAG in the event of any significant deviations in the amount of actual spend compared to estimates.[8]

Clean Energy Transformation Act

Avista continues to engage its Equity and Energy Efficiency Advisory Groups to provide input and guidance for Avista's CETA-related energy efficiency activities. These groups advise Avista on best and emerging practices for program outreach and help prioritize funding for community-based projects, as the company continues to ensure that energy and non-energy benefits of clean energy are equitably extended to all customers, especially to customers who are members of Named Communities.

In late 2023, Avista launched the Named Communities Investment Fund, which allocates up to $5 million annually for projects that have direct benefits to customers in Named Communities. Of that $5 million, $2 million is funded through the energy efficiency tariff rider and managed by Avista's CETA program manager. Projects funded through the NCIF include measures such as HVAC replacement, building shell improvements, and lighting upgrades that would otherwise be unaffordable for organizations in need of upgrades. Improvements are also planned for multiple low-income housing complexes, community centers, homeless centers, and Tribal facilities in need of upgrades – all meaningful investments in Named Communities. The NCIF is also leveraged to offer low-cost or no-cost efficiency measures for residences in Named Communities, playing a

[7] See docket UE-250417.

[8] See Docket UE-230897, Order 01, Attachment A, Condition 3(d). Avista will continue this previously conditioned practice regardless of whether it is maintained as a condition for its 2026-2027 BCP.

significant role in reducing energy burden for people residing in these homes.

Avista also continues to leverage CETA resources, including the estimated energy burden for all customers who are members of Named Communities within the company's service territory, to help inform program design and outreach plans. Details about programs for Named Communities that Avista is designing and implementing can be found beginning on page 34. Avista will continue to track progress on Customer Benefit Indicators (CBIs) for CETA achievements in 2026. Table 6 below provides the forecasted costs and benefits of specific energy efficiency targets for the 2026-2027 biennium, as provided within the company's 2026-2029 CEIP (filed on October 1, 2025).

TABLE 6 – FORECASTED COSTS & BENEFITS OF SPECIFIC ENERGY EFFICIENCY TARGETS

Target	Estimated Cost	Benefit Population	Benefit Type	Benefit Measurement
2026-2027: 73,672 MWh	$52,000,000	All Customers	Energy	CBI: Participation in Company Programs
				CBI: Investments in Named Communities
				CBI: Energy Burden
			Non-energy	NEI: $/kWh per applicable measure
2028-2029: 73,672 MWh	$53,500,000	All Customers	Energy	CBI: Participation in Company Programs
				CBI: Investments in Named Communities
				CBI: Energy Burden
			Non-energy	NEI: $/kWh per applicable measure

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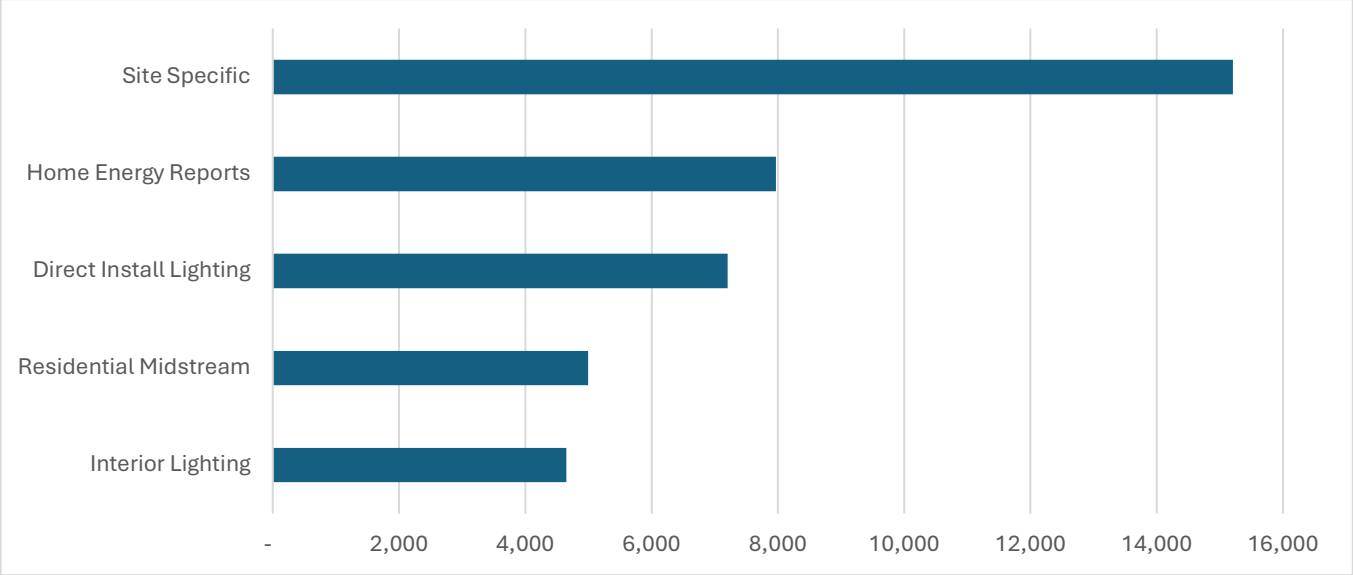
Energy Efficiency Portfolio Overview

Avista's energy efficiency portfolio is composed of residential, low-income, and commercial/industrial programs, as well as programs to benefit Named Communities. For 2026, the company anticipates approximately 45,000 MWh of I-937 qualified savings from its program offerings. These savings are derived from utility-specific conservation. Figure 1 below illustrates the major categories from which those savings are achieved.

FIGURE 1 – SAVINGS FROM TOP 5 ENERGY EFFICIENCY PROGRAMS (MWH)



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Overall Energy Efficiency Budget Projections

Avista's budget process is consistent with the company's commitment to achieve all cost-effective energy efficiency measures and to maximize the value of the portfolio without budgetary constraints. This process assumes prudently incurred expenditures will be fully recoverable through the conservation tariff rider and that revisions in the tariff rider surcharge will be timely enough to maintain a materially neutral tariff rider balance. The budget is thus a product of the planning process rather than a planning objective. The company recognizes that customer demand and market factors exist outside of the budgeting process and forecasted expenses may be higher or lower than actual results. The forecasted budget does not represent an expectation or commitment to limit expenses to the planned amounts, nor does it represent any minimum commitment or achievement of savings for any given program.

The overall 2026 budget projection is summarized in Table 7, which includes elements of the energy efficiency budget that have been designated as "supplemental" to indicate program elements that are not included in the cost-effectiveness calculation. These supplemental costs include NEEA funding, as well as funds for third-party CPA and EM&V studies.

TABLE 7 – ENERGY EFFICIENCY BUDGET SUMMARY

	2026 Washington Electric Budget	Supplemental Budget	Non-Supplemental Budget
Total Incentives	$15,349,217	$-	$15,349,217
Program Labor	$1,966,010	$-	$1,966,010
Pilot Programs	$961,158	$-	$961,158
Total Non-Labor/Non-Incentive	$7,692,865	$3,126,037	$4,566,828
Total	$25,969,249	$3,126,037	$22,843,212

Program-by-program details of the expected incentive expenditures for 2026 are provided in greater detail in Table 8.

Direct incentive expenditures represent the estimated incentives that will be paid to customers directly or indirectly for participation in energy efficiency programs. The overall level of expense is highly correlated to programs' throughput and energy acquisition and, based on customer participation, the amounts are subject to change.

TABLE 8 – CUSTOMER DIRECT INCENTIVE EXPENDITURE DETAIL

Energy Efficiency Program	Direct Incentive Expenditures
Low-Income and Equity Programs	
Low-Income	$2,137,646
Named Communities Investment Fund	$2,000,000
Total Low-Income and Equity Incentives	**$4,137,646**
Residential Programs	
Appliances	$88,650
ENERGY Star Homes	$23,000
Home Insulation Program	$1,590,144
Multi-Family Weatherization	$41,075
On-Bill Repayment	$16,000
Residential Midstream	$1,080,550
Shell	$33,005
Total Residential Incentives	**$2,872,424**
Commercial/Industrial Programs	

Building Operator Certification	$1,000
Direct Install Lighting	$3,600,915
Exterior Lighting	$474,641
Grocer	$42,040
Green Motors	$300
Interior Lighting	$1,030,482
Non-Residential Midstream	$209,288
Non-Residential Shell	$614
Pay for Performance	$4,245
Site Specific	$2,975,622
Total Commercial/Industrial Incentives	**$8,339,147**
Total of All Incentives	**$15,349,217**

Non-incentive expenses, including both non-supplemental and supplemental expenditures, are detailed to a lower level of aggregation and broken out by portfolio in Table 9. The expenses are allocated to programs based on the percentage of overall avoided cost achieved through each program's energy efficiency achievements. An exception to this allocation methodology is that third-party non-incentive payments are directly attributable to the programs they originate from.

TABLE 9 – NON-INCENTIVE UTILITY EXPENSE DETAIL

Expense Type	Washington Electric Portfolio	Supplemental Budget	Non-Supplemental Budget
NEEA	$1,539,138	$1,539,138	$-
CPA, EM&V	$704,899	$704,899	$-
Third Party Implementation	$2,323,790	$-	$2,323,790
Outreach	$126,000	$126,000	$-
Labor, Marketing, General Implementation	$4,965,048	$756,000	$4,209,048
Pilot Programs	$961,158	$-	$961,158
Total	**$10,620,032**	**$3,126,037**	**$7,493,995**

Residential Portfolio Overview

Avista's residential portfolio is comprised of several approaches to engage and encourage customers to make energy efficiency improvements in their home. The Midstream program is the

largest contributor of kWh savings to the residential portfolio and includes incentive offerings for HVAC and water heating measures.

Windows and ENERGY STAR Manufactured homes incentives are offered through a long-standing prescriptive rebate model. Avista also recently launched its Home Insulation Program, a direct-install offering for insulation and air sealing measures for residential customers in Washington. The On-Bill Repayment (OBR) Program provides customers access to a simple and convenient financing option for efficiency upgrades at an affordable interest rate. These programs are supplemented by educational and outreach efforts, including a residential Home Energy Audit Program.

Participation in all programs by customers residing in Named Communities will continue to be a priority for the company in 2026. Participation rates for customers in Named Communities will be tracked to ensure that benefits of these programs are equitably distributed.

For 2026, Avista anticipates 14,113,230 kWh to be achieved through residential programs with an expected spend of $2,872,424. Table 10 summarizes 2026 residential program savings and incentive spending estimates.

TABLE 10 – RESIDENTIAL PROGRAMS OVERVIEW

Residential Programs	Electric Program Savings (kWh)	Expected Incentive Spend
Appliances	235,035	$88,650
ENERGY Star Homes	12,554	$23,000
Home Energy Audit	20,743	$-
Home Energy Reports	7,969,000	$-
Home Insulation Program	762,510	$1,590,144
Multi-Family Windows	101,800	$41,075
On-Bill Repayment	NA	$16,000
Residential Midstream	4,995,456	$1,080,550
Single Family Windows	16,132	$33,005
Total Residential	**14,113,230**	**$2,872,424**

Residential Marketing

Avista has a robust residential marketing strategy. Historically, the company utilized traditional marketing tactics like broadcast and print media. Over the past several years, residential marketing tactics have shifted to align with commercial approaches. The company has expanded its use of digital, search, streaming, and video sharing platforms, in addition to organic and unpaid tactics. Education and awareness messaging focuses on energy-saving tips, available rebate

programs, and customer success stories.

In 2024, Avista launched the “Power of Change” campaign to reach customers on social media channels, streaming and digital platforms, and YouTube. The campaign provides energy efficiency tips and promotes rebates and programs. It is designed to increase customer awareness and engagement with energy efficiency, ideally helping to drive program participation. Its creative collateral is approachable and seasonally relevant, designed to reach customers in target demographics with customized messaging. Through this campaign, Avista is reaching out to customers on the platforms they are increasingly turning to for trusted communication. It increases their exposure to energy efficiency messaging and provides relatable content through both static and motion ads. Due to its continued success, the “Power of Change” campaign has been extended through at least 2026.

FIGURE 2 – RESIDENTIAL “POWER OF CHANGE” DIGITAL ADVERTISING CAMPAIGN EXAMPLES

Residential Programs

Residential Prescriptive Program

Program Description

Prescriptive measures offer a simple pathway to encourage customers to adopt qualifying efficiency measures. Prescriptive programs do not require a pre-installation contract, instead offering a fixed incentive amount for eligible measures. Measures offered through prescriptive programs are evaluated based on the typical application of that measure by program participants. Prescriptive measures are generally limited to those that are low-cost, offer relatively homogenous performance across the spectrum of likely applications, and would not significantly benefit from a more customized approach. Specific plans for Avista's Prescriptive Program are enumerated in this section.

TABLE 11 – RESIDENTIAL PRESCRIPTIVE PROGRAM METRICS

Projected Program Metrics	
Overall kWh Savings	247,589
Incentives	$111,650
Non-Incentive Utility Costs	$45,065
Total Costs	**$156,715**

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Residential Appliance Program

Program Description

Residential appliance measures are intended to motivate customers to purchase appliances that demonstrate higher than average energy efficient performance by meeting ENERGY STAR criteria for efficiency. ENERGY STAR acts as an independent third-party, maintaining a website of qualified products and verifying the performance of various appliances. Customers are asked to provide an ENERGY STAR certificate for each appliance, along with application and purchase documentation.

Program Eligibility

All Washington residential electric customers who purchase ENERGY STAR certified front-load clothes washers, dryers, refrigerators, and freezers are eligible for appliance rebates.

Program Revisions

The Residential Appliance Program will retain its existing measures through the 2026 program year. While no new measures are being introduced at this time, program staff are actively reviewing RTF findings and exploring additional opportunities to expand offerings. The clothes washer and dryer measures are under consideration for sunset in 2027, and customers will begin to be informed that rebate submission deadlines for these items may be approaching. Final decisions regarding measure updates will be made following further evaluation in late 2026.

Residential ENERGY STAR Manufactured Homes Program

Program Description

ENERGY STAR-certified manufactured homes measures encourage customers who are buying a new manufactured home to invest in an energy-efficient product. The ENERGY STAR designation allows buyers to easily identify manufactured homes that are holistically more energy efficient than standard construction. The ENERGY STAR program ensures that certified manufactured homes represent a meaningful improvement over non-certified manufactured homes. ENERGY STAR partners with the Northwest Energy Efficient Manufactured Housing Program (NEEM) to provide independent, third-party certification of manufactured homes. NEEM's process includes inspections at manufacturing plants to ensure that homes meet program requirements.

Program Eligibility

Eligibility includes all Avista residential electric customers who purchase a certified ENERGY STAR or ENERGY STAR with NEEM+ manufactured home.

Program Revisions

No revisions to this program are planned for 2026.

Residential Window Measures

Program Description

This program encourages customers to improve their home's shell or exterior envelope with upgrades to windows and storm windows. Energy efficiency marketing efforts build considerable awareness of opportunities in the home and drive customers to Avista's website for rebate information. Vendors generate participation in the program using rebates as a sales tool for their services. Other communications the company uses to encourage program participation includes utility website promotion, vendor training, and presentations at various customer events throughout the year.

Program Eligibility

All Avista Washington residential electric customers who install qualified windows and meet all program requirements for installation are eligible for the program. Self-install options for windows and storm windows will also continue. Rebates are offered on a per-window basis and are tiered, offering a higher rebate for a lower u-factor rating.

TABLE 12 – RESIDENTIAL SINGLE FAMILY WINDOW MEASURES

Projected Program Metrics	
Overall kWh Savings	16,132
Incentives	$33,005
Non-Incentive Utility Costs	$7,326
Total Costs	**$40,331**

TABLE 13 – RESIDENTIAL MULTIFAMILY WINDOW MEASURES

Projected Program Metrics

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Overall kWh Savings	101,800
Incentives	$41,075
Non-Incentive Utility Costs	$46,228
Total Costs	**$87,303**

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Home Insulation Program

Program Description

This program, launched in August of 2025, offers a direct-install insulation and air sealing service for residential customers. The program is intended to deliver energy savings while increasing customer engagement and satisfaction through innovative marketing and delivery approaches.

Program Implementation

Avista is partnering with Resource Innovations and C+C as third-party implementers for the program. Their delivery model includes onsite audits to assess insulation needs and identify air sealing opportunities in walls, attics, and floor spaces. The implementers will enforce program guidelines with Avista's trusted network of trade allies, who will then install appropriate energy-saving measures at each residence.

Avista anticipates that most program offerings will be available at low or no cost to participants, supported by enhanced rebates funded through the Named Community Investment Fund for customers residing in Named Communities.

TABLE 14 – HOME INSULATION PROGRAM

Projected Program Metrics	
Overall kWh Savings	762,510
Incentives	$1,590,144
Non-Incentive Utility Costs	$346,264
Total Costs	**$1,936,408**

Program Eligibility

This program is available to residential customers in Washington who use Avista electricity as their primary heating source and live in single-family homes, condominiums, or multifamily properties of up to four units. Eligibility is determined by meeting pre- and post-installation R-value requirements for insulated areas, which may include floors, attics, and walls. For customers residing in Avista's Named Communities who use electric heat, the program offers enhanced rebates and includes an air purifier as an additional benefit.

Residential Midstream Program

Program Description

Common barriers to participation in traditional downstream rebate programs include: a lack of customer awareness of rebate programs; language and technology barriers; and distributors' tendency to stock low-cost, low efficiency units because of the high cost of energy-efficient equipment. Prior to the implementation of Avista's Midstream Program, customers who requested high-efficiency equipment often had to wait weeks for the equipment. By focusing efforts on distributors directly, Avista's Midstream Program leverages distributors' recognized influence over contractors and specific equipment sales while mitigating many participation barriers. Distributors work with contractors to submit claims for Avista customers, and claims are then paid promptly. This approach benefits both the customer as well as the company. Customers have improved equitable access, as they may receive an incentive without having to complete any paperwork or have background knowledge of the rebate program, and Avista gains additional savings without the burden of customers having to submit paperwork to the utility.

TABLE 15 – MIDSTREAM RESIDENTIAL PROGRAM METRICS

Projected Program Metrics	
Overall kWh Savings	4,995,456
Incentives	$1,080,550
Non-Incentive Utility Costs	$1,195,468
Total Costs	$2,276,018

Program Eligibility

Residential customers are eligible for the program if they have Avista electric service and install qualifying equipment through a participating contractor. Avista's implementation partner, Energy Solutions, engages in outreach and education for distributors, who utilize a software system to enter and track claims. Avista has provided basic data to Energy Solutions to enable verification of customer eligibility primarily at the time of claim submittal.

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On-Bill Repayment Program

Program Description

Avista continues to partner with Puget Sound Cooperative Credit Union (PSCCU) to offer the On-Bill Repayment (OBR) Program, which provides a funding solution for Washington State customers who need capital to implement energy efficiency projects.

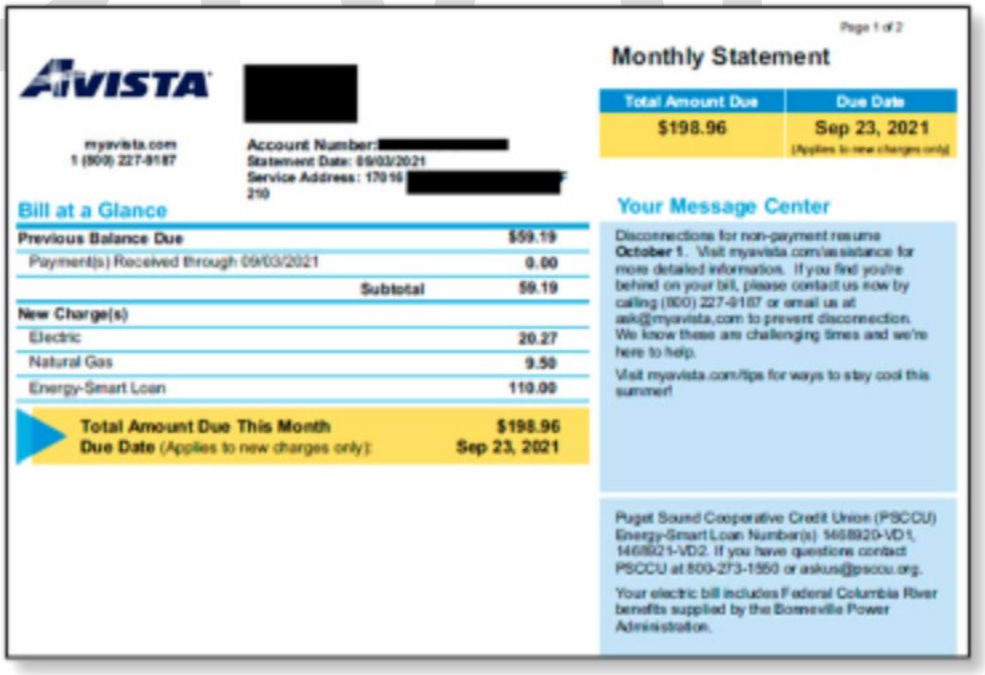
TABLE 16 – ON-BILL REPAYMENT PROGRAM METRICS

Projected Program Metrics	
Overall kWh Savings	-
Incentives	$16,000
Non-Incentive Utility Costs	$-
Total Costs	**$16,000**

PSCCU offers Energy-Smart Loans for energy-efficient projects to home and business owners in Washington State, along with personalized underwriting practices and interest rates that are lower than other options in the finance market. Participants reap immediate benefits from energy efficiency upgrades. Paying the loan back on their Avista bill further provides participants with the ease and convenience of one less bill to manage.

Customers' Energy-Smart Loan installments are billed monthly as a line item on the Avista bill until either the term of the loan is completed or Avista is otherwise instructed by PSCCU to remove the loan from the bill. Extra principal payments or early loan payoffs are made directly to PSCCU.

FIGURE 3 – ON-BILL REPAYMENT BILL EXAMPLE



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AVISTA

Monthly Statement

Total Amount Due	Due Date
$198.96	Sep 23, 2021

myavista.com
1 (509) 227-9187

Account Number: [redacted]
Statement Date: 09/03/2021
Service Address: 17016 [redacted] 210

Bill at a Glance

Previous Balance Due	$59.19
Payment(s) Received through 09/03/2021	0.00
Subtotal	59.19
New Charge(s)	
Electric	20.27
Natural Gas	9.50
Energy-Smart Loan	110.00
Total Amount Due This Month	$198.96
Due Date (Applies to new charges only):	Sep 23, 2021

Your Message Center

Disconnections for non-payment resume **October 1**. Visit myavista.com/assistance for more detailed information. If you find you're behind on your bill, please contact us now by calling (800) 227-9187 or email us at ask@myavista.com to prevent disconnection. We know these are challenging times and we're here to help.

Visit myavista.com/tips for ways to stay cool this summer!

Puget Sound Cooperative Credit Union (PSCCU) Energy-Smart Loan Number(s) 1468920-VD1, 1468921-VD2. If you have questions contact PSCCU at 800-273-1550 or askus@psccu.org.

Your electric bill includes Federal Columbia River benefits supplied by the Bonneville Power Administration.

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PSCCU's favorable interest rates are further lowered by Avista subsidies to allow more customers access to energy efficiency project funding.

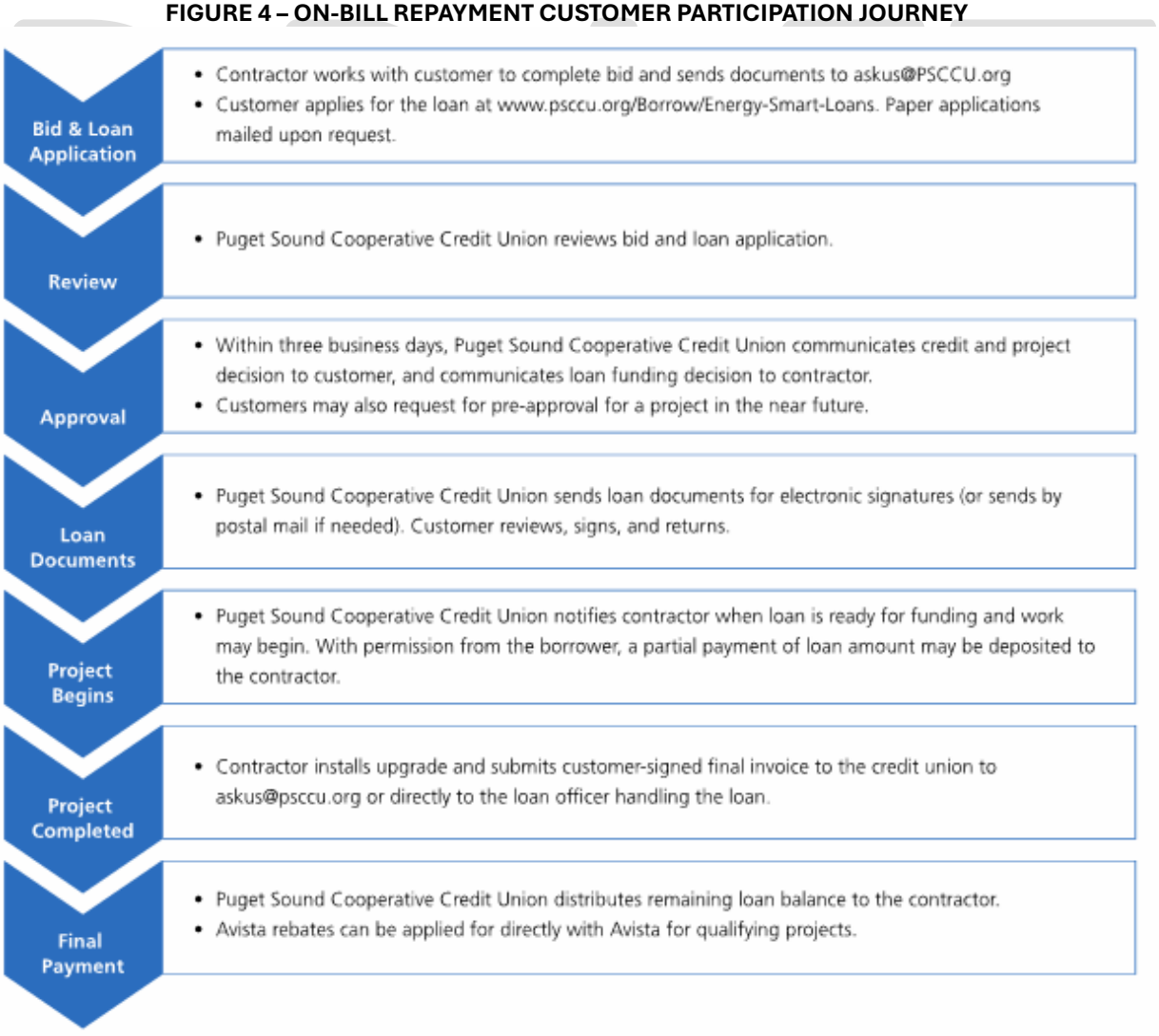
TABLE 17 – ON-BILL REPAYMENT PROGRAM RATES AND TERMS

Loan Amount	$1,000 – $30,000 Residential	$5,000 – $75,000 Small Business
Interest rate	Up to 7.50% APR	Up to 7.50% APR
Term	Up to 15 years	Up to 15 years
Recording fee	$700 UCC filing fee*	Varies*
Example	$15,000 loan at 7.50% APR; 180 payments at $139.05 per month	

* Fees can be paid up front or added to the loan at the borrower's discretion.

Participation in the OBR Program is outlined below.

FIGURE 4 – ON-BILL REPAYMENT CUSTOMER PARTICIPATION JOURNEY



Energy-Smart Loans through Avista's OBR Program are intended for customers who need assistance for upfront capital for the purchase of energy efficiency equipment and related labor.

However, the program is not intended to divert income-qualified customers from obtaining no-cost weatherization services through their local Community Action Agency (CAA). To this end, processes are in place to ensure that income-qualified customers are directed to Community Action Agencies (CAAs) for qualification. Income-qualified customers may apply for an Energy-Smart Loan and participate in the OBR program if they choose to do so, after all other options have been shared with them.

Program Eligibility

Residential and small business customers in owner-occupied buildings may be eligible for OBR; funded measures must be fueled by Avista. An eligible projects list created by Avista and supported by Washington State's Clean Energy Fund program guidelines is maintained on both Avista's and PSCCU's websites; customers can refer to the list when considering this funding solution for their project.

Program Revisions

Avista will offer a loan rate of 7.5% for the OBR program in 2026. Avista recognizes the key to the program's success is Avista's trade allies, who will help promote and deliver the program. Multi-channel Avista marketing efforts also drive customers to the OBR Program.

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Home Energy Audit Program

Program Description

The Home Energy Audit Program is designed to educate and drive customer engagement around conservation and promote Avista's energy efficiency programs and renewable-energy options. Energy savings are captured for direct-installation measures. Additional energy savings have been observed as a result of program participants implementing recommended efficiency measures. Some of these measures qualify for Avista rebates, and savings are captured through those programs.

TABLE 18 – HOME ENERGY AUDIT PROGRAM METRICS

Projected Program Metrics	
Overall kWh Savings	20,743
Incentives	$-
Non-Incentive Utility Costs	$1,399
Total Costs	**$1,399**

Key components of this program include (a) providing customers with a home assessment from a knowledgeable and qualified home inspector with energy auditor credentials, (b) direct installation measures such as pipe wrap and LEDs, (c) marketing efforts to drive customers to the program, and (d) energy efficiency education that includes increasing awareness of behavioral impacts on energy use as well as awareness of Avista's rebate programs, products, and services. The Avista website also communicates program requirements and highlights opportunities for customers. Customers participating in the program receive a comprehensive and detailed Home Energy Assessment Report that includes energy savings measures targeted to the specific home, as well as direct installation and leave-behind materials.

Program Implementation

Avista anticipates continued growth in demand for the Home Energy Audit Program in early 2026, driven by weather-related factors and expanded marketing efforts. In 2025, demand exceeded auditor capacity, a trend expected to persist into 2026. To enhance accessibility and reduce wait times, Avista has partnered with Homeboost to introduce a do-it-yourself audit option. This offering enables customers to complete an audit using a mailed kit and mobile application, generating results comparable to the traditional in-home audit. Both options will be available in 2026, providing greater flexibility for participants. Avista projects approximately 2,027 audits will be completed during the program year.

Program Eligibility

This program is applicable to residential customers who use Avista electricity as their primary heating source.

Home Energy Reports Program

Program Description

Avista launched its HERs program in the second quarter of 2025 to randomly selected residential dual-fuel and electric only customers. Leveraging a data-driven approach, the reports deliver personalized insights into household energy usage identify opportunities for savings. The reports align with the information available on Avista's website, which customers can access by logging into their MyAccount.

Unlike the website, which allows customers to pull detailed information on demand, the HERs proactively push tailored content directly to customers. This multichannel strategy is designed to enhance customer engagement and promote energy savings through increased awareness and behavior change.

The HERs program began as an educational initiative but is expected to generate measurable energy savings. Avista plans to seek support from the EEAG before 2026 to transition the program from educational to claimable status. If consensus is reached, Avista intends to claim both electric and natural gas savings. Otherwise, the program will continue to operate as an educational offering. The program is currently scheduled to run through Q2 2027.

TABLE 19 – HOME ENERGY REPORTS PROGRAM

Projected Program Metrics	
Overall kWh Savings	7,969,000
Incentives	$-
Non-Incentive Utility Costs	$224,278
Total Costs	**$224,278**

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Pilot Programs for 2026

Time-of-Use and Peak Time Rebate Pilot Programs

Program Description

The goal of these pilots is to determine if Avista should offer an opt-in TOU and/or a PTR Program to all residential and/or general service customers. The pilot will measure the value of time-of-use rates and peak time rebates for residential and general service customers and encompasses the following three objectives:

- System cost minimization: Reduce costs to serve customers by improving capacity utilization and encouraging economic conservation and peak sharing.
- Customer choice: Offer customers options to help them manage energy bills.
- Equity and accessibility: Design and offer rates and programs that consider needs and effects on low-income/vulnerable populations and highly impacted communities.

Avista's two Time-of-Use (TOU) Rate Pilots and the Peak Time Rebate (PTR) Pilot are scheduled to conclude on June 1, 2026, following a two-year operation period. Within six months of the pilot conclusion, Avista will publish a comprehensive final report detailing the performance and providing recommendations regarding future implementation. The reports will assess whether the pilots should transition into full program offerings in their current form, be modified, or be discontinued based on observed outcomes and customer engagement. Until a formal determination is made, Avista will continue to offer the pilots to currently enrolled customers. However, enrollment will remain closed to new participants.

Detailed pilot rate plans are outlined in Washington Tariff Schedules 07, 08, 17, 18, and 84. These schedules were filed with the Washington Utilities and Transportation Commission and became effective on June 1, 2023, in accordance with the Commission's Final Order in Dockets UE-200900, UG-200901, and UE-200894.

- Schedules 07 and 08 pertain to residential TOU rate options
- Schedules 17 and 18 pertain to general service TOU rate options
- Schedule 84 pertains to Peak Time Rebate

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Hybrid Heat Pump Study

Program Description

Avista is halfway through a two-year study evaluating the performance differences between cold climate heat pumps and standard heat pumps, both utilizing a natural gas furnace as backup heating. The study is scheduled to conclude Q4 2026, with final measurement and verification expected by March 2027. The primary objective is to assess the feasibility of incorporating these technologies into Avista's energy efficiency program offerings. In addition to technical performance, the study aims to better understand the economic, environmental, behavioral, and emotional factors that influence customer decision-making when considering major HVAC upgrades. Avista is also exploring customer perceptions of home comfort associated with each system type to support broader clean energy transition efforts.

Avista, working with third-party HVAC and EM&V contractors, installed 12 heat pump systems (six cold-climate and six with natural gas back-up furnaces), and performance monitoring equipment in homes with existing natural gas furnaces with central air-conditioning in fall of 2024. Monitoring equipment was also installed to collect performance data across two heating and cooling seasons.

In 2025, half of the homes in each group received weatherization upgrades to evaluate the impacts of heat-pump sizing. The pilot is supported by an $800,000 budget.

In addition to its own hybrid heat pump study, Avista is actively supporting and participating in a parallel research initiative by the Energy Trust of Oregon (ETO). Like Avista's study, the ETO study is still underway and focuses on evaluating hybrid electric and gas systems in low- to moderate-income households across Oregon.

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Low-Income and Named Communities Portfolio Overview

Low-Income Weatherization Program

Program Description

Low-income programs are offered through a collaborative effort via partnerships between Avista and eight Community Action Agencies (CAAs), including one Tribal Housing Authority, each of which holds a bi-annual contract with Avista. This funding offers significant flexibility for CAAs to deliver weatherization services tailored to the specific needs of each low-income client, using a combination of the most suitable measures for their home.

TABLE 20 – LOW-INCOME PROGRAM METRICS

Projected Program Metrics	
Overall kWh Savings	733,803
Incentives	$2,137,646
Non-Incentive Utility Costs	$190,809
Total Costs	**$2,328,455**

As trusted partners in Avista's low-income energy efficiency programs, Community Action Agencies (CAAs) play a vital role in identifying and qualifying eligible customers, often leveraging referrals from their bill assistance programs. They also coordinate multiple funding sources to deliver comprehensive solutions that address each household's unique energy needs. Together, Avista and its partner agencies share a common goal: to improve home energy efficiency, reduce energy bills, and alleviate energy burden for income-qualified customers.

Agencies serving Avista's Washington service territory receive an annual aggregate funding allocation of $4.25 million. This funding supports a comprehensive range of services, including energy efficiency upgrades, health and safety improvements, necessary home repairs, agency administration, and overall program support. It applies to both electric and natural gas weatherization programs across the state.

Avista does not require agencies to serve a specific number of homes based on heating fuel type. Instead, in alignment with 2024-25 BCP Condition 9(b) and the broader goals of the Clean Energy Transformation Act, priority is given to households with high energy use, high energy burden, or other qualifying characteristics, such as seniors, individuals with disabilities, and Native American communities.

Although funding is allocated to individual agencies, Avista maintains flexibility to respond to evolving needs within the communities served, ensuring that resources are directed where they can have the greatest impact.

The budgets allocated to each agency represent annual funding levels, but they remain flexible and may be adjusted at Avista's discretion. In 2026, Avista will initiate new two-year agreements with participating agencies, aligning with the 2026–2027 biennium. This two-year budget structure

allows agencies to access future-year funds in advance, enabling them to continue serving Avista customers without disruption as they transition into a new contract cycle.

Because many external funding sources operate on a fiscal year while Avista's utility funding is typically based on a calendar year, utility dollars are often deployed later in the year. This shift in funding availability supports a more consistent and continuous use of utility funds throughout the year, helping establish a regular cadence for utility billing and avoiding a concentration of expenses in the latter half of the calendar year.

Table 21 shows the 2026 budgeted annual funding allocation by agency and counties served. Please note the contract amounts below include funding for both electric and natural gas weatherization programs.

TABLE 21 – LOW-INCOME PROGRAM FUNDING BY COMMUNITY ACTION AGENCY

Agency	County	Funding
Spokane Neighborhood Action Partners (SNAP)	Spokane	$3,000,000
Rural Resources Community Action	Ferry, Lincoln, Pend Oreille, Stevens	$250,000
Community Action Center	Whitman	$300,000
Opportunities Industrialization Council	Adams, Grant	$125,000
Spokane Indian Housing Authority	Stevens County	$85,000
Northwest Community Action Center	Klickitat, Skamania	$35,000
Benton Franklin County Community Action	Franklin	$35,000
Community Action Partnership	Asotin	$400,000
Set aside/TBD	–	$20,000
Total		**$4,250,000**

Agencies are authorized to allocate up to 30 percent of these funds for administrative cost reimbursement. Additionally, Avista permits up to 30 percent of the contract value to be used for health, safety, and essential home repairs. This discretionary funding provides agencies with the flexibility to address critical needs that prepare homes for energy efficiency upgrades and help ensure the long-term durability of installed measures.

TABLE 22 – LOW-INCOME APPROVED MEASURES AND DIRECT CUSTOMER BENEFITS

	Projected Participation		Funding	Per-Unit kWh Savings	Direct Benefit to Customer
Air Infiltration – Electric	62	Units	Fully Fund	803	$1,612.90
ENERGY STAR-Rated Refrigerator	12	Units	Fully Fund	39	$640.55
Windows (ENERGY STAR-Rated; u-factor .30)	65,483	Sq. Ft.	Fully Fund	6 per Sq. Ft.	$20.45 per Sq. Ft.
Attic Insulation	26,385	Sq. Ft.	Fully Fund	1 per Sq. Ft.	$1.76 per Sq. Ft.
Duct Insulation	17,705	Sq. Ft.	Fully Fund	3 per Sq. Ft.	$3.05 per Sq. Ft.
Floor Insulation	24,209	Sq. Ft.	Fully Fund	1 per Sq. Ft.	$3.03 per Sq. Ft.
Wall Insulation	10,729	Sq. Ft.	Fully Fund	2 per Sq. Ft.	$2.17 per Sq. Ft.

Duct Sealing	4	Units	Fully Fund	710	$654.20
LED lamps	30	Units	Fully Fund	9	$1.10
Door Sweep – CFM50 reduction – Leave Behind	1	Units	Fully Fund	16	$20.00
Storm Windows (Low-E Rated)	0	Sq. Ft.	Fully Fund	6 per Sq. Ft.	$10.47 per Sq. Ft.
Air Source Heat Pump	41	Units	Fully Fund	878	$483.28
Ductless Heat Pump (Single Head)	4	Units	Fully Fund	3,016	$6,286.70
Conversion to Air Source Heat Pump	15	Units	Fully Fund	7,234	$7,819.50

In the 2026 program year, many common electric efficiency improvements will remain fully funded. Health, safety, and repair projects will also be eligible for full funding; however, no more than 30 percent of the annual contract may be allocated to these projects, and they must be paired with a qualifying efficiency measure. Avista will continue to fully fund direct-install LED measures and will assess projected participation, per-unit kWh savings, and direct customer benefits to guide implementation.

According to WAC 480-109-100(10)(a), measures identified through the deemed measure priority list in the Weatherization Manual are considered cost-effective. Agencies may use their health, safety, and repair allocation to cover the full cost of the rebated measure if other funding sources are not available. Agencies are encouraged to collaborate with Avista when identifying energy efficiency opportunities that are not on either the approved or the rebate list.

At the conclusion of the 2026 program year, and in alignment with BCP Condition 9(a)i, Avista will include in its annual and biennial reporting the impact of low-income conservation programs on reducing energy burden, along with the total number of program participants. The utility remains committed to developing and refining strategies that address barriers to participation for eligible customers, ensuring equitable access to energy efficiency services.

Low-Income Agency Workforce Development Initiative

Program Description

In late 2023 and early 2024, Avista conducted interviews with Community Action Agencies (CAAs) across its service territory and identified a key challenge: limited access to weatherization training. With most training opportunities located in Bellingham, Washington, agency staff faced significant travel burdens that hindered ongoing professional development.

To address this issue, Avista launched the Low-Income Agency Workforce Development Pilot in 2024, partnering with a nonprofit training provider to deliver multi-day sessions in eastern Washington. These trainings focused on core weatherization skills and principles, helping build local capacity and reduce barriers to participation.

In 2025, the pilot program continued with the same foundational trainings, while introducing two important enhancements. First, the Building Analyst Technician (BA-T) training was expanded to include a proctored field exam, allowing participants to earn certification locally and further professionalize their skillsets. Second, Avista added a customizable, one-on-one Program Manager coaching component focused on program policies and procedures. This new offer provided targeted support tailored to the unique operational needs of each CAA.

Throughout both years, all training courses emphasized Healthy Housing Principles and were designed in direct response to agency feedback, reinforcing Avista's commitment to collaborative, community-driven workforce development.

In 2026, Avista will continue its Workforce Development Training Series in collaboration with its Community Action Agency partners. At the beginning of the year, Avista will work closely with each agency to develop a tailored training plan that reflects their specific needs and priorities.

Avista will maintain key offerings introduced in 2025, including one-on-one Program Manager training and proctored BA-T exams. Agencies have shared that this series has been especially valuable given the limited availability of federal funding, and Avista is proud to support their teams through meaningful, accessible training opportunities.

Avista remains committed to investing in workforce development and strengthening its partnerships with Community Action Agencies to better serve communities. Avista looks forward to continuing its collaboration with the Building Performance Center and expanding the impact of this program in the year ahead.

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Named Communities Investment Fund (NCIF)

New Approaches to Engaging Customers in Named Communities

Program Description

Avista is committed to ensuring that customers benefit from the transition to clean energy. During the initial CEIP implementation period (2022-2025), the company has continued to pursue new and innovative ways to engage customers in Named Communities. The Named Communities Investment Fund continues to make up to $2 million available annually for energy efficiency projects benefiting highly impacted and vulnerable populations. In addition to making investments in Named Communities, the NCIF strives to reduce the energy burden for customers in Named Communities and increase participation in company programs.

Community Identified Projects

Program Description

The NCIF program advances the company's clean energy efforts by funding community-proposed projects that align with priorities set by the Equity Advisory Group. This group—made up of customers and community representatives from Avista's Washington service area—serves as a guiding voice in identifying and prioritizing initiatives for Named Communities. Their recommendations form the foundation for evaluating and awarding NCIF support. Table 23 below outlines the energy efficiency initiatives identified by the EAG that shape the NCIF funding framework.

TABLE 23 – EQUITY ADVISORY GROUP'S ENERGY EFFICIENCY INITIATIVES FOR NAMED COMMUNITIES

Rank	EAG Energy Efficiency Initiatives
1	Improve awareness and energy efficiency opportunities for the Spokane Tribe, residents of multifamily buildings, and residents of manufactured homes
2	Increase the tree canopy
3	Increase access to energy efficiency products and appliances
4	Increase awareness and engagement in energy efficiency programs
5	Match funds for energy efficiency grant applications to community-based organizations and tribal partners
6	Improve energy efficiency for those without stable housing

When awarding NCIF funding, Avista draws on the priorities identified by the EAG, as well as the specific actions, CBIs, and equity focus areas outlined in its CEIP. The company maintains ongoing engagement with the EAG, providing regular updates on NCIF progress and outcomes. To guide program improvements and spending decisions, Avista also incorporates feedback from the EEAG, insights gathered through public participation meetings, and input from community-based organizations—especially those advocating for underserved populations. Oversight and evaluation of proposed projects are supported by an internal advisory group composed of representatives from Avista's energy efficiency, social impact, regulatory, corporate communications, internal audit, and clean energy teams.

In 2026, Avista will continue executing the projects committed to in 2025, while also reviewing new proposals. All future funding decisions will be guided by the established framework of community-driven energy efficiency initiatives that align with the goals of the NCIF program.

Connected Communities

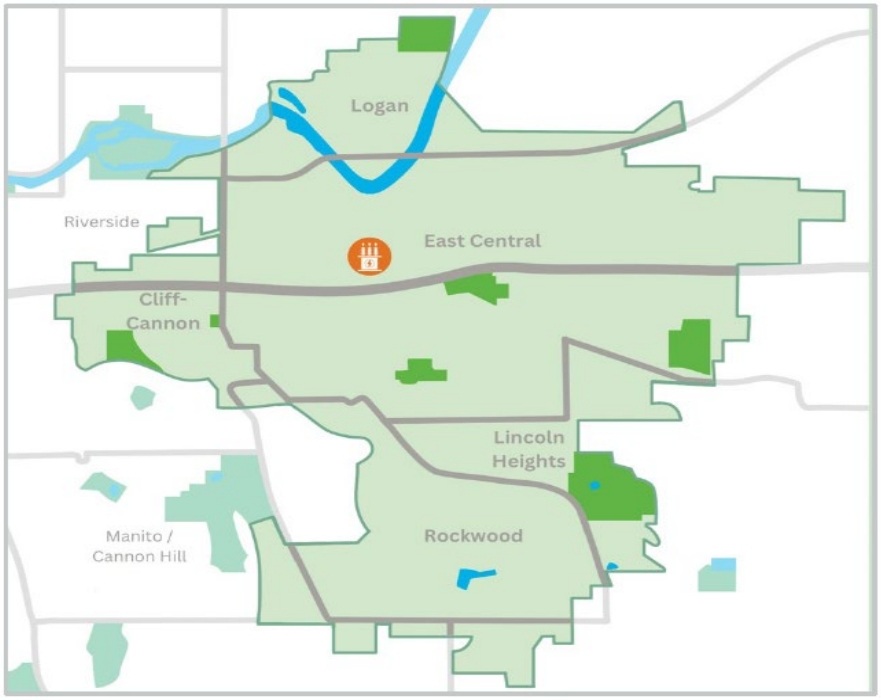
Program Description

This five-year demonstration project – funded through a grant from the Department of Energy, as well as partner contributions – is a partnership between Edo, Avista, McKinstry, Pacific Northwest National Laboratory (PNNL), and Urbanova. Participant recruitment focuses on equity across demographics and focuses on highly impacted and vulnerable populations in Avista's Named Communities, including those in the East Central, the Logan, and the Cliff-Cannon neighborhoods of Spokane, Washington.

The project explores and demonstrates clean, equitable products and solutions for customers. Its goal is to optimize grid utilization, increase resiliency, and reduce energy burden through control of HVAC systems in small and large commercial buildings and through smart thermostats and batteries in residential homes. The program aims to achieve 1.0 to 2.25 MW of flexible load, 440 to 900 MWh energy reductions annually, and 320,000 to 650,000 annual pounds of carbon dioxide equivalent emissions reductions. The project provides the ability to dispatch customer assets to improve grid utilization without compromising customer needs and comfort.

Program participants experience benefits that include reduced energy costs, optimized building performance, and direct incentives credited to their utility accounts. The project also helps the utility to lower distribution system costs and reduce energy losses while enhancing overall system reliability. All stakeholders benefit from minimized grid outages and avoid costly substation upgrades.

FIGURE 5 – CONNECTED COMMUNITIES



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Avista/Spokane Tribe of Indians Energy Partnership

Program Description

In September 2024, the Spokane Tribe was awarded $2.75 million from the Washington State Department of Commerce Tribal Clean Energy Program to construct a resiliency station in Wellpinit. The resiliency station, which will include a microgrid, is an energy delivery platform to enhance grid resiliency for Wellpinit, WA and surrounding areas. The platform will include existing and planned solar generation, as well as planned electrical storage that is interconnected with the utility grid in Wellpinit. The microgrid platform and switching devices will be configured to create points of integration with Avista's distribution management system (DMS) and supervisory control and data acquisition (SCADA). The project will focus on energy resiliency, while maximizing the value of (a) new and existing solar energy storage, (b) controllable customer loads, and (c) backup generators to support Tribal goals of emergency preparedness, carbon footprint reduction, and self-sufficient strategies to maintain operations during an outage or natural disaster. Avista will consult with Spokane Tribe members and the Equity Advisory Group regarding design considerations and outreach strategies for the duration of this project.

Total project costs for the resiliency station are expected to be around $7 million. Avista plans to contribute funds from its NCIF to the project. The company will continue to provide technical assistance as well as construction services for the redesign and redeployment of components of the energy distribution system in Wellpinit that are required to enable the resiliency station. The Spokane Tribe also intends to leverage funding from a Department of Energy Tribal Formula Grant to fully fund the project. The project is not expected to be completed until 2028.

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Commercial/Industrial Portfolio Overview

The commercial/industrial energy efficiency market is served through a combination of prescriptive and site-specific offerings, as well as through the Midstream and Clean Buildings support programs.

Prescriptive paths do not require pre-project contracting, thus lending themselves to streamlined administrative and marketing efforts, resulting in a straightforward customer experience. Incentives are established for these prescriptive programs following Avista's guidelines and standard operating procedures. Actual costs and savings are tracked, reported, and available to the third-party impact evaluator. Many, but not all, of the prescriptive measures use RTF UES.

When the prescriptive or midstream channels are not available, Avista offers commercial/industrial customers the opportunity to propose any energy efficiency project with documentable energy savings for technical review and potential incentive through the Site-Specific Program. Multifamily residential developments may also employ the Site-Specific Program when all or a large number of the residences and common areas are treated. The determination of incentive eligibility is based on projects' individual characteristics as they apply to the company's guidelines and standard operating procedures.

For the 2026 program year, Avista anticipates 30,431,869 kWh to be achieved through commercial/industrial programs with an expected incentive spend of $8,339,147. Table 24 includes the estimated savings and spend by program.

TABLE 24 – COMMERCIAL/INDUSTRIAL PROGRAM OVERVIEW

Commercial/Industrial Programs	Electric Program Savings (kWh)	Expected Spend
Building Operator Certification	595,000	$1,000
Direct Install Lighting	7,201,831	$3,600,915
Exterior Lighting	1,824,966	$474,641
Green Motors	1,568	$300
Grocer	88,239	$42,040
Interior Lighting	4,651,002	$1,030,482
Non-Residential Midstream	805,910	$209,288
Non-Residential Shell	51,540	$614
Pay for Performance	5,306	$4,245
Site Specific	15,206,507	$2,975,622
Total Commercial/Industrial	**30,431,869**	**$8,339,147**

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Commercial/Industrial Marketing

Avista has a robust commercial energy efficiency marketing strategy. Historically, the company's account executives were tasked with promoting programs and energy efficiency. However, since the COVID-19 pandemic, tactics have shifted to include a greater digital presence. A broad spectrum of paid tactics is now used in addition to promotion by the account executives, energy engineering, and community outreach teams. These paid tactics include digital, streaming, video sharing, and broadcast platforms. They also include emails, customer newsletters, direct mail, and print advertisements. Several commercial programs are also marketed by their third-party implementors. Commercial customers are targeted by industry type, size, geographic location, and other demographic factors.

In 2025, paid social media advertising was added to the company's commercial energy efficiency marketing strategy when Avista launched the "Power of Change" campaign aimed at increasing customer awareness of energy efficiency benefits. The campaign's initial goal was to help drive engagement and, ultimately, participation in the company's programs. Due to its initial success in 2025, the campaign will continue into 2026 with messaging centered around approachable and seasonally relevant energy saving tips, energy efficiency rebates, and programs. Demonstrating adjustments to changing customer preferences, the "Power of Change" campaign humanizes energy savings and includes paid social media ads, both static and motion.

FIGURE 6 – COMMERCIAL/INDUSTRIAL "POWER OF CHANGE" DIGITAL ADVERTISING CAMPAIGN EXAMPLES

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Commercial/Industrial Programs

Prescriptive Lighting Program

Program Description

This program encourages commercial and industrial electric customers to improve the energy efficiency of their lighting systems through direct financial incentives. By supporting the infrastructure and inventory required for high-efficiency installations, the program helps make energy-saving upgrades a practical and accessible option.

To simplify participation for both customers and vendors, Avista employs a prescriptive incentive model. This approach offers standardized, per-unit incentives for common lighting retrofits, calculated at approximately $0.26 per kWh saved. Incentive amounts and projected energy savings are based on historical averages, including baseline existing wattages and replacement wattages, unit costs and customer operating hours. This data-driven methodology ensures consistent and transparent incentive calculations.

The Prescriptive Lighting Program is especially beneficial for small businesses and vendors, offering straightforward access to incentives for a wide range of retrofit projects. Eligible upgrades include replacement of fluorescent lamps and fixtures, conversion from HID and incandescent can fixtures to high efficiency LED lighting, as well as integration of networked lighting controls.

TABLE 25 – COMMERCIAL/INDUSTRIAL PRESCRIPTIVE LIGHTING PROGRAM METRICS

Projected Program Metrics	Interior	Exterior
Overall kWh Savings	4,651,002	1,824,966
Incentives	$1,030,482	$474,641
Non-Incentive Utility Costs	$722,884	$327,123
Total Costs	**$1,753,366**	**$801,764**

Program Implementation

Successful delivery of the program relies on a coordinated strategy that combines financial incentives, targeted outreach, and streamlined application processes. Key implementation components include direct incentives designed to spark customer interest and drive participation, marketing campaigns and communications that guide customers to the program, regionally based Account Executive outreach, and ongoing partnerships with electricians, distributors, and lighting supply houses ensure customer demand is met efficiently. Additionally, to simplify participation, Avista enables trade allies to submit applications directly through the iEnergy tracking and payment system.

Clear and consistent communication is critical to program success. Avista provides detailed guidance on incentive requirements and forms via its website and direct outreach. When program changes occur, Avista typically offers a 120-day advance notice that usually includes, at a minimum, direct email communication to trade allies as well as forms and website updates.

Program Eligibility

This program is applicable to commercial/industrial facilities with electric service provided by Avista through rate Schedules 11 or above.

Program Revisions

TABLE 26 – COMMERCIAL/INDUSTRIAL PRESCRIPTIVE LIGHTING PROGRAM REVISIONS

	2025	2026
Interior Lighting		
T8 TLED 2'	$ 6.00	$ 6.00
T8 TLED 3'	$ 10.00	$ 10.00
T8 TLED 4'	$ 12.00	$ 12.00
T8 TLED 8'	$ 25.00	$ 25.00
T8 LED U-Bend	$ 15.00	$ 15.00
T5 TLED 4'	$ 17.00	$ 17.00
T5HO 4' TLED	$ 30.00	$ 30.00
TLED to TLED (> 5W reduction)	$ 5.00	$ 5.00
TLED to TLED (< 5W reduction)	$ 3.00	$ 3.00
CFL to CFLED	$ 17.00	$ 17.00
LED MR16	$ 9.00	Site-Specific
1x4 LED Fixture	$ 30.00	$ 30.00
2x2 LED Fixture	$ 25.00	$ 25.00
2x4 LED Fixture	$ 50.00	$ 50.00
T8 8' LED Strip Fixture	$ 70.00	$ 70.00
42W CFL to LED Fixture	$ 20.00	$ 20.00
60W Incandescent to LED Fixture	$ 30.00	$ 30.00
75-100W Incandescent to LED Fixture	$ 40.00	$ 40.00
150W Incandescent to LED Fixture	$ 75.00	$ 75.00
4LT5HO to LED Fixture	$ 110.00	$ 110.00
6LT5HO to LED Fixture	$ 140.00	$ 140.00
8LT5HO to LED Fixture	$ 200.00	$ 200.00
175W HID to LED Fixture/Lamp	$ 140.00	$ 140.00
250W HID to LED Fixture/Lamp	$ 260.00	$ 260.00
400W HID to LED Fixture/Lamp	$ 310.00	$ 310.00
1000W HID to LED Fixture/Lamp	$ 600.00	$ 600.00
Occupancy Sensor Wall Switch	$ 10.00	$ 10.00
Occupancy Sensor Ceiling/Fixture Mount	$ 30.00	$ 30.00
Networked Lighting Controls	$ 50.00	$ 50.00
Exterior Lighting		
89W HID to LED Fixture/Lamp	$ 85.00	$ 85.00
100W HID to LED Fixture/Lamp	$ 120.00	$ 120.00
150W HID to LED Fixture/Lamp	$ 180.00	$ 180.00
175W HID to LED Fixture/Lamp	$ 180.00	$ 180.00
200W HID to LED Fixture/Lamp	$ 120.00	$ 120.00

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250W HID to LED Fixture/Lamp	$ 230.00	$ 230.00
320W HID to LED Fixture/Lamp	$ 280.00	$ 280.00
400W HID to LED Fixture/Lamp	$ 375.00	$ 375.00
575W HID to LED Fixture/Lamp	$ 400.00	$ 400.00
750W HID to LED Fixture/Lamp	$ 750.00	$ 750.00
1000W HID to LED Fixture/Lamp	$ 930.00	$ 930.00
1500W HID to LED Fixture/Lamp	$ 1,050.00	$ 1,050.00
100W New Construction Fixture	$ 170.00	$ 170.00
140W New Construction Fixture	$ 225.00	$ 225.00
160W New Construction Fixture	$ 250.00	$ 250.00
T12/T8 Fluorescent to TLED	$ 20.00	$ 20.00
Sign Lighting	$ 13.00	$ 13.00

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Direct Install Lighting Program

Program Description

In partnership with Resource Innovations, Avista is providing a Direct Install Lighting Program to supplement and enhance the ongoing customer engagement and energy efficiency efforts already in place. In contract with local electrical trade allies, customers receive installation of appropriate energy-saving lighting measures such as lamps, fixtures, and controls; a brief on-site audit identifying additional efficiency opportunities; and marketing and collateral handouts to encourage future program participation. This program allows customers who have traditionally been unable to participate in programs requiring upfront capital the opportunity to receive new lighting and lowered energy costs. The direct install methodology also boosts local markets by endorsing local businesses and trade allies and providing training and upskilling opportunities.

TABLE 27 – COMMERCIAL/INDUSTRIAL DIRECT INSTALL LIGHTING PROGRAM METRICS

Projected Program Metrics	
Overall kWh Savings	7,201,831
Incentives	$3,600,915
Non-Incentive Utility Costs	$1,106,514
Total Costs	**$4,707,430**

Program Implementation

Avista and Resource Innovations have developed engagement procedures for the direct installation and audit approach to market and implement the Direct Install Lighting Program. The iEnergy software platform is utilized to streamline customer eligibility, maintain data integrity, and lower administrative costs. Specifically, the development of the iEnergy OnSite tool has allowed trade allies to conduct customer eligibility checks, complete surveys and enrollment, perform facility walk-through assessments, and project scope creation and costs. It also captures all applicable lighting program data, tracks equipment that is removed and installed, calculates site-specific savings based on wattage reduction and hours of operation, generates customer-facing reports, and allows for quality control reviews and inspections as required.

Program Eligibility

This program provides a valuable service to small and medium electric customers in Avista's Washington service territory under rate Schedules 11 or 12. Resource Innovations uses ZIP codes and city identifiers to cluster eligible customers geographically and establish an efficient routing for door-to-door marketing, audits, and installations. Customers may also complete a request form on myavista.com to express interest in participating.

Business Partner Program

Program Description

The Business Partner Program (BPP) is a strategic outreach initiative designed to engage Avista's small business customers by raising awareness of utility programs and services that can help them better manage their energy costs. Recognizing that small business owners and managers are often focused on day-to-day operations and may lack the time or resources to pursue energy improvements, the BPP offers a comprehensive, high-touch approach to support their needs.

Through personalized engagement, the BPP educates these traditionally hard-to-reach customers about their utility bills, available billing options, and financial incentives for implementing energy efficiency measures. The program also highlights valuable services such as electric vehicle resources, loan programs, and energy efficiency rebates, while connecting customers with trade allies who can assist with bid proposals and project implementation.

By building trust and providing tailored information, the BPP empowers small businesses to make informed decisions. The goal is to motivate these customers to take action on improvements that can lead to long-term energy savings and sustainability, resulting in lower monthly energy bills.

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Site-Specific Program

Program Description

Avista's Site-Specific Program provides calculated incentives to support the installation of qualifying energy efficiency equipment at commercial/industrial sites. These projects typically involve a higher degree of complexity than the traditional prescriptive or midstream offerings and require custom engineering analysis to determine energy savings and appropriate cost-effective incentive levels. Examples include process improvements, upgrades to specialized manufacturing equipment, advanced lighting systems with integrated controls, and other measures tailored to the customer's operational needs.

Avista's Site-Specific Program is a foundational element of its commercial/industrial offerings and has consistently ranked among the most cost-effective components of the overall energy efficiency portfolio. The program provides customers with technical assistance and customized incentives in accordance with Avista's Schedule 90, supporting energy efficiency projects that that deliver measurable kWh savings within the program criteria. Designed for flexibility, the Site-Specific Program accommodates energy efficiency projects that fall outside prescriptive or midstream pathways. These projects typically involve custom engineering analysis and are tailored to the unique operational needs of each customer. Common project types include custom lighting systems, HVAC upgrades, building envelope improvements, and industrial process load reductions.

TABLE 28 – COMMERCIAL/INDUSTRIAL SITE-SPECIFIC PROGRAM METRICS

Projected Program Metrics	
Overall kWh Savings	15,206,507
Incentives	$2,975,622
Non-Incentive Utility Costs	$2,986,885
Total Costs	**$5,962,507**

Program Implementation

This program offers incentives for qualifying electric energy-saving measures, up to the incremental cost of the efficiency upgrade, provided the measure's simple payback period is less than its expected useful life. To maximize cost-effectiveness, Avista adjusts the percentage of incremental cost paid, aiming to achieve the greatest energy savings at the lowest cost. Unless a specific business case is presented, incentives are capped at 70 percent of the incremental cost, and measures must demonstrate a simple payback of 15 years or less, based on energy cost savings. Due to the scale and complexity of site-specific projects, savings can be difficult to forecast. Long sales cycles and broader economic conditions may influence customer willingness to invest in energy efficiency. Additionally, increased complexity in eligibility requirements, higher participation costs beyond capital investment, and expenses related to post-installation measurement and verification are actively managed to maintain customer engagement and program effectiveness.

Key components of the program include:

- Direct financial incentives to encourage customer interest

- Targeted marketing efforts
- Dedicated account executives who provide guidance and support throughout the project lifecycle
- Collaboration with trade allies to ensure technical capacity and responsiveness to customer demand

Program requirements, incentive details, and application forms are communicated through the Avista website and the trade ally network, ensuring transparency and accessibility for all eligible participants.

Program Eligibility

The program is available to all commercial and Industrial retail electric customers and has historically contributed the largest share of verified savings to Avista's energy efficiency portfolio. Its adaptive structure enables Avista to respond effectively to diverse customer opportunities while maintaining alignment with regulatory criteria and cost-effectiveness goals.

Program Revisions

To help meet energy savings targets amid ongoing labor shortages and supply chain challenges, Avista introduced a Contractor Incentive Program (CIP). This initiative provides a direct financial incentive to contractors who successfully complete qualifying energy efficiency projects. The contractor incentive is in addition to the customer incentive, which continues to be paid directly to participating customers.

Under the CIP, contractors receive $0.01 per kilowatt-hour (kWh) of verified energy savings for each completed project. This approach is designed to strengthen contractor engagement, accelerate project completion timelines, and enhance overall program throughput by aligning contractor motivation with program goals.

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Pay for Performance Program

Program Description

The Commercial Pay for Performance Program is an incentive-based program that pays customers for verified energy savings measured directly at the meter. These savings may result from a variety of projects, including building retrofits, equipment upgrades, behavioral changes, operational improvements, maintenance practices, and retro-commissioning efforts. While savings are submitted through the Site-Specific Program, the Pay for Performance differs from the traditional Site-Specific mechanism, offering a distinct approach to compensating customers based on actual performance outcomes.

Program Implementation

Avista's commercial Pay for Performance Program provides annual incentives based on total verified electricity and natural gas savings, rather than separate incentives for individual energy efficiency measures. Eligible commercial customers who undertake whole-building energy retrofits receive a fixed incentive rate for measurable savings achieved over the course of a three year period. Incentive payments are issued annually at the end of each year, contingent on verified savings, at rates of $0.08 per kWh and $1.25 per therm.

Participation involves submitting a completed rebate application. Avista then establishes a usage baseline, reviews and approves the proposed projects, and issues an Agreement. Following implementation, energy savings are measured against the established baseline, and incentive payments are made annually for up to three years, provided savings targets are met.

Program Eligibility

This program is open to all Avista commercial customers who own or operate buildings with conditioned heated or cooled space and demonstrate consistent, measurable energy usage. Each participating building must have stable energy consumption over the prior 12 months and be individually metered -- preferably with interval meters to support accurate measurement and verification. To qualify, planned improvements must yield at least a 10 percent reduction in the building’s baseline electricity or natural gas consumption. Industrial and manufacturing process loads are excluded from this program but may be eligible under Avista's Site-Specific program.

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Washington State Clean Buildings Law Support Programs

Program Description

Washington State House Bill 1257 was codified into law late in 2019 and expanded in 2024. This law currently requires most existing commercial buildings over 20,000 square feet to benchmark energy use, and complete both energy management and operations and maintenance plans. Larger buildings must also either seek exemption, meet their performance standard or take additional steps that may include an audit and project work.

Avista is working cooperatively with the Department of Commerce to execute the new law and to support building owners as they navigate the compliance process. Avista has identified the four key areas of support shown in Table 29.

TABLE 29 – COMMERCIAL/INDUSTRIAL WASHINGTON STATE CLEAN BUILDINGS ACT SUPPORT EFFORTS

Service	Start Date	Description
Energy Efficiency Engineering	Late 1970s	Various customer support to identify and incentivize efficiency
ENERGY STAR Portfolio Manager	2009	Monthly energy use data pushes
Clean Buildings Accelerator Program	2022	Cohort-based, comprehensive compliance assistance
Pay for Performance Early Adopter Incentive	2025	Avista pays customer and then gets credit against Public Utility Tax

Avista has offered energy efficiency engineering support for several decades, assisting customers in identifying and incentivizing energy efficient processes and equipment, and working to quantify savings. The engineering team assists commercial and industrial customers within this space.

Since 2009, Avista has supported customers by uploading energy use data to Energy Star Portfolio Manager. The Clean Buildings Law requirement to utilize this resource in benchmarking and reporting has significantly increased the number of customers who utilize Energy Star Portfolio Manager to track energy use at their facilities. The system provides visual tools for assessing energy use at a facility wholistically, over time.

Avista has continued to offer a Clean Buildings Accelerator Program to guide customers through the process of compliance. This strategic energy management program educates customers about the law and provides tools including benchmarking assistance, document preparation and controls reviews. Using a cohort-based model allows customers to learn from the facilitators and from their peers. Avista will continue to offer this program based on customer interest. Avista will continue offering the program based on customer interest and the activities and guidance of the Department of Commerce.

Green Motors Rewind Program

Program Description

The program aims to organize, identify, educate, and promote member motor service centers that commit to energy-efficient rewind practices, continuous energy improvement, and enhanced motor-driven system performance.

Launched in 2008 by the Green Motors Practices Group (GMPG), the initiative partners with Northwest regional utilities and sponsoring organizations to offer incentives through GMPG-affiliated motor centers for motors that meet established efficiency standards.

Avista participates in this regional effort by offering the program to its commercial electric customers who engage in the green rewind process for motors ranging from 15 to 5,000 horsepower (HP). This collaboration allows Avista to support energy-saving practices in a market that is otherwise challenging to reach as a local utility. Eligible customers receive incentives as an instant credit applied to their invoice at the time of the motor rewind, $1 per horsepower is awarded to the customer, and an additional $1 per horsepower is provided to the participating service center.

TABLE 30 – COMMERCIAL/INDUSTRIAL GREEN MOTORS PROGRAM METRICS

Projected Program Metrics	
Overall kWh Savings	1,568
Incentives	$300
Non-Incentive Utility Costs	$171
Total Costs	**$471**

Program Implementation

Until September 1, 2024, the Green Motors Program was administered by the Green Motors Practices Group (GMPG). Avista has recently transitioned the program in-house, maintaining the same incentive structure, offering instant invoice credits through participating motor service centers. As part of this transition, Avista redesigned program forms and is actively coordinating with service centers to ensure continuity of the initiative. To raise awareness and support customer engagement, Avista has updated its website and developed new communication materials that highlight the benefits and requirements of this energy efficiency measure.

TABLE 31 – COMMERCIAL/INDUSTRIAL GREEN MOTORS PROGRAM MEASURES AND INCENTIVES

	Projected Participation		Per-Unit kWh Savings	Incentive*
150 HP Industrial	1	Units	1,568	$300

*This incentive includes the $1 per HP fee paid to the service center for participating.

Nonresidential Prescriptive Insulation Program

Program Description

The Commercial Prescriptive Shell Program provides incentives to customers who improve the envelope of their existing buildings by adding insulation, which may make a business more energy-efficient and comfortable.

TABLE 32 – COMMERCIAL/INDUSTRIAL PRESCRIPTIVE INSULATION PROGRAM METRICS

Projected Program Metrics	
Overall kWh Savings	51,540
Incentives	$614
Non-Incentive Utility Costs	$16,235
Total Costs	**$16,849**

Program Implementation

Under the commercial insulation program, incentives are issued to eligible customers following the installation of qualifying insulation measures by a licensed contractor. To participate, commercial customers must demonstrate an annual heating footprint using a fuel supplied by Avista. After installation, customers are required to submit a completed rebate form, itemized invoices, and an insulation certificate. Once the project is reviewed and approved, Avista will issue an incentive check either directly to the customer or to a designated recipient. Rebates are capped at the total amount listed on the customer's invoice and are processed through iEnergy using the current-year calculator. Program awareness and participation are supported through outreach by trade allies, Avista account executives, targeted marketing efforts, and the Avista website, which also serves as a central hub for program requirements, incentive details, and downloadable forms.

TABLE 33 – COMMERCIAL/INDUSTRIAL PRESCRIPTIVE INSULATION PROGRAM MEASURES AND INCENTIVES

	Projected Participation		kWh Savings	Incentives
Less than R4 Wall Insulation (E/E) to R19+ Wall Insulation	58,672	Sq. Ft.	per Sq. Ft.	$1.25 per Sq. Ft.
Less than R11 Roof Insulation (E/E) to R30+ Wall Insulation	56,674	Sq. Ft.	per Sq. Ft.	$1.00 per Sq. Ft.

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Commercial Grocer Program

Program Description

The program provides prescriptive rebates to commercial customers who implement energy efficiency upgrades to refrigerated cases and associated grocery equipment. Eligible measures include enhancements to lighting systems, anti-sweat heater controls, strip curtains, and motor components. Given that refrigeration is typically the largest source of electricity consumption in grocery stores and supermarkets, these upgrades contribute significantly to overall energy savings. Rebates are issued post-installation, and eligibility is limited to commercial customers utilizing Avista fuel for the applied measures.

TABLE 34 – COMMERCIAL/INDUSTRIAL GROCER PROGRAM METRICS

Projected Program Metrics	
Overall kWh Savings	88,239
Incentives	$42,040
Non-Incentive Utility Costs	$8,943
Total Costs	**$50,983**

Program Implementation

To receive incentives, customers must submit a completed rebate form along with the installation invoice. Rebates are reviewed and processed using the current-year calculator within the iEnergy platform, and incentive payments are issued upon project approval. Payments are capped at the total invoiced amount. Program promotion is supported through Avista account executives, trade allies, marketing initiatives, and the Avista website, which also serves as the primary channel for communicating program requirements, available incentives, and necessary forms.

Program Revisions

Effective January 1, 2026, Avista is discontinuing Gasket measures due to the expiration of those measures in the RTF.

TABLE 35 – COMMERCIAL/INDUSTRIAL GROCER PROGRAM DISCONTINUED CONSERVATION MEASURES

Grocer Program Discontinued Measures
Gaskets for Walk-in Cooler - Main Door
Gaskets for Walk-In Freezer - Main Door
Gaskets for Reach-in Glass Doors, Medium Temp
Gaskets for Reach-in Glass Doors, Low Temp

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Commercial Midstream Program

Program Description

Common barriers to participation in traditional downstream rebate programs include: a lack of customer awareness of rebate programs; language and technology barriers; and distributors' tendency to stock low-cost, low efficiency units because of the high cost of energy-efficient equipment. Prior to the implementation of Avista's Midstream Program, customers who requested high-efficiency equipment often had to wait weeks for the equipment. By focusing efforts on distributors directly, Avista's Midstream Program leverages distributors' recognized influence over contractors and specific equipment sales while mitigating many participation barriers. Distributors work with contractors to submit claims for Avista customers, and claims are then paid promptly. This approach benefits both the customer as well as the company. Customers have improved equitable access, as they may receive an incentive without having to complete any paperwork or have background knowledge of the rebate program, and Avista gains additional savings without the burden of customers having to submit paperwork to the utility.

The Food Service Program is a national model that is familiar to many large commercial chains yet also has the benefit of partnering with local distributors to reach non-chain food service providers.

TABLE 36 – MIDSTREAM COMMERCIAL PROGRAM METRICS

Projected Program Metrics	
Overall kWh Savings	805,910
Incentives	$209,288
Non-Incentive Utility Costs	$143,298
Total Costs	**$352,586**

Program Eligibility

Commercial customers are eligible for the program if they have Avista electric service and install qualifying equipment through a participating contractor. Avista's implementation partner, Energy Solutions, engages in outreach and education for distributors, who utilize a software system to enter and track claims. Avista has provided basic data to Energy Solutions to enable verification of customer eligibility primarily at the time of claim submittal. Equipment utilized for industrial processes is not part of the Midstream Program.

Program Revisions

The Midstream Program for HVAC, water heating and commercial food service will continue in 2026, with Avista considering addition of FEI-rated fans to program offerings. Within the food service area of the program, changes in baseline efficiencies for commercial oven measures will require adjustments to both the savings and types of ovens incentivized through the program. The changes will align program offerings with Washington State's House Bill 1619. Avista will continue to evaluate all measures offered through the midstream program and will revise program offerings or incentives as necessary.

Building Operator Certification Program

Program Description

Avista offers customers a discount on Building Operator Certification (BOC) training. BOC is a nationally recognized program for building engineers and maintenance personnel to learn how to improve comfort and efficiency within the buildings they operate.

TABLE 37 – BUILDING OPERATOR CERTIFICATION PROGRAM METRICS

Projected Program Metrics	
Overall kWh Savings	595,000
Incentives	$1,000
Non-Incentive Utility Costs	$45,541
Total Costs	**$46,541**

Program Implementation

The BOC training program and discount are offered in partnership with Building Performance, the regional program administrator. In person and virtual trainings are offered throughout the year in both in-person and virtual settings. Building Performance handles logistics, including hiring instructors and administering registration. The program is advertised by both Building Performance and Avista. Avista staff participate in courses by sharing energy efficiency opportunities with participants.

Program Eligibility

BOC training is open to building engineers and maintenance staff who oversee one or more commercial buildings within the Avista service territory.

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Commercial/Industrial Pilot Programs

Time-of-Use and Peak Time Rebate Pilot Programs

Program Description

The goal of these pilots is to determine if Avista should offer an opt-in TOU and/or a PTR Program to all residential and/or general service customers. The pilot will measure the value of time-of-use rates and peak time rebates for residential and general service customers and encompasses the following three objectives:

- System cost minimization: Reduce costs to serve customers by improving capacity utilization and encouraging economic conservation and peak sharing.
- Customer choice: Offer customers options to help them manage energy bills.
- Equity and accessibility: Design and offer rates and programs that consider needs and effects on low-income/vulnerable populations and highly impacted communities.

Avista's two Time-of-Use (TOU) Rate Pilots and the Peak Time Rebate (PTR) Pilot are scheduled to conclude on June 1, 2026, following a two-year operation period. Within six months of the pilot conclusion, Avista will publish a comprehensive final report detailing the performance and providing recommendations regarding future implementation. The reports will assess whether the pilots should transition into full program offerings in their current form, be modified, or be discontinued based on observed outcomes and customer engagement. Until a formal determination is made, Avista will continue to offer the pilots to currently enrolled customers. However, enrollment will remain closed to new participants.

Detailed pilot rate plans are outlines in Washington Tariff Schedules 07, 08, 17, 18, and 84. These schedules were filed with the Washington Utilities and Transportation Commission and became effective on June 1, 2023, in accordance with the Commission's Final Order in Dockets UE-200900, UG-200901, and UE-200894.

- Schedules 07 and 08 pertain to residential TOU rate options
- Schedules 17 and 18 pertain to general service TOU rate options
- Schedule 84 pertains to Peak Time Rebate

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Compressed Air Pilot Program

Program Description

Avista's Compressed Air Leak Detection Pilot program, designed for commercial electric customers with compressed-air systems, is scheduled to conclude in Q4 2025. The pilot provides incentives for the repairing of leaks identified through acoustic imaging scans, with verification conducted via a follow-up scan. The pilot is administered in partnership with a local contractor who leads customer recruitment, scanning, and repair coordination.

Following the program's conclusion, Avista will conduct a comprehensive evaluation in 2026 to determine whether a full-scale program offering is warranted.

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Roof Top Unit (RTU) Controls Pilot Program

Program Description

This pilot initiative seeks to address a commonly overlooked gap in space heating and cooling controls, particularly among small- to medium-sized businesses using rooftop units (RTUs) without an accompanying energy management system (EMS), also known as BAS or BMS. These businesses typically rely on standalone thermostat controls, which may be manual or programmable.

The proposed RTU controls solution includes a controller unit, Wi-Fi-enabled thermostats, a software subscription, and a customer-facing dashboard. To ensure reliable connectivity, Avista will provide a dedicated Wi-Fi access point and cellular service for select pilot sites, minimizing dependence on customer-provided internet.

The RTU controls software operates on a "control you don't notice" algorithm, which is projected to deliver up to 15% energy savings compared to conventional RTU thermostat controls. Additionally, the system offers building operators enhanced visibility into RTU performance trends, anomalies, and thermostat overrides—enabling improved operational efficiency, asset performance, and control over indoor climate conditions.

Given the emerging nature of this technology, the pilot will follow a phased approach over two years. Phase one will involve a single test site in a controlled environment. Should the initial results demonstrate measurable energy savings, phase two will expand to multiple customer sites to validate consistency and scalability. If proven cost-effective, the technology may be integrated into Avista's broader energy efficiency program offerings.

Contracting is currently underway, with equipment installation targeted ahead of the 2025–2026 heating season. One full heating and cooling season will be evaluated before determining progression to phase two. Any updates to scope and budget will be provided upon that decision.

The budget for phase one is set at $10,000.

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Regional Market Transformation

Avista's local energy efficiency portfolio seeks to influence customers to purchase cost-effective energy efficiency products and services through a combination of incentives, awareness, and addressing barriers to adoption. The local energy efficiency portfolio is intended to be permanent in nature, with the understanding that the specific programs and eligibility criteria will be revised over time in recognition of the changing marketplace, technologies, and economics. Though these efforts can, and often do, create permanent changes in how customers make energy choices, it is generally not feasible for Avista to design local programs to influence markets that are often regional or national in scale.

Market transformation consists of defined interventions occurring for a finite period of time, utilizing strategically selected approaches to influence the energy market (customer, trade allies, manufacturers or combinations thereof) followed by an exit strategy. Successful market transformations permanently change the trajectory of markets in favor of more cost-effective energy efficiency choices, well beyond the termination of the active intervention.

Electric utilities within the Northwest came together in 1997 to establish and fund a cooperative effort toward sustaining market transformation on a regional basis, with sufficient scale and diversity to deliver a portfolio capable of providing a cost-effective electric-efficiency resource.

That organization, NEEA, begins its seventh funding cycle for 2025-2029. Avista has been an active participant and funder of this collaborative effort since its inception. NEEA's successful residential lighting efforts – and many other ventures – are difficult to replicate. Nevertheless, there is little doubt that there are cost-effective opportunities that can only be achieved, or that are best achieved, through a regionally cooperative effort. Avista has a high degree of confidence that the NEEA portfolio will succeed, and that the company's Washington customers will continue to benefit from these efforts. 2026 savings derived from NEEA programs are expected to be as follows:

TABLE 38 – NEEA 2026 EXPECTED SAVINGS BY SECTOR

Expected Savings by Sector	aMW @ Site	MWh @ Site	kWh @ Site
Residential	0.65	5,694	5,694,000
Commercial	0.15	1,314	1,314,000
Industrial	-	-	-
Total	**0.80**	**7,008**	**7,008,000**

For 2026, Avista's Washington portion of the NEEA's electric budget is expected to be $1,539,138 for core savings activities.

End-Use Load Flexibility Project

Leveraging the Northwest Energy Efficiency Alliance's (NEEA) market transformation expertise, Avista joined nine other regional utilities in a special funding initiative known as the End-Use Load Flexibility (EULF) project, which ran from 2024 through 2025. This collaborative effort focused on

exploring load-flex technologies, particularly targeting electric water heater loads and line voltage thermostats.

As part of the project, Avista contributed to field studies on CTA-2045 water heater modules and demand response-capable line voltage thermostats, supported the development of program metrics, and participated in regional surveys assessing grid operator priorities and current demand response operations. These activities align with Avista's commitment under the 2021 CEIP to develop a pilot demand response program following the adoption of Washington's permanent standard for grid-enabled water heaters (WAC 194-24-180).

Looking ahead, NEEA and its utility partners, including Avista, are evaluating an expansion of the EULF initiative through the remainder of the seventh funding cycle (2026–2029). The proposed Load Flexibility Market Transformation Portfolio aims to deliver enhanced performance of end-use products, reduce costs for utilities and consumers, and mitigate grid risks through flexible technologies. Avista has actively participated in steering committee meetings and strategic planning sessions for the 2026–2029 portfolio and intends to continue its support and engagement as the initiative progresses.

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Avista-Specific Methodologies and Analytical Practices

Over time, Avista has evolved approaches to calculate the various metrics applied within the planning effort to meet the needs of its portfolio and regulation. Care has been taken to ensure these approaches are consistent with the intent of the NWPCC's methodologies for the analysis of energy efficiency. Avista completes an *Annual Conservation Report* (*ACR*) in the spring of each year, based on a retrospective review of actual results from the prior year. This process includes the calculation of each of the four basic standard practice tests (summarized in Appendix B – Summarization of Cost Effectiveness Methodology). Since the total resource cost (TRC) test and utility cost test (UCT) are the basis for optimizing the portfolio (for reasons previously explained), the explanation of Avista's methodologies, for planning purposes, focus on these two tests.

The calculation of portfolio cost-effectiveness excludes costs that are unrelated to the local energy efficiency portfolio in that particular year. Those excluded costs, termed "supplemental" in Avista's calculations, include:

- The funding associated with regional programs (NEEA)
- The cost to perform CPA studies
- Costs related to EM&V

Individual measures are aggregated into programs composed of similar measures. At the program level, non-incentive portfolio costs are allocated based on direct assignment to the extent possible, and costs are allocated based on a program's share of portfolio-avoided cost-value acquisition when direct assignment is not possible. The result is a program-level TRC and UCT cost-effectiveness analysis that incorporates these allocated costs.

Since the costs and benefits associated with the adoption of a measure may accrue over time, it is necessary to establish a discount rate.[9] Future costs and benefits are discounted to the present value and compared for cost effectiveness purposes. Generally, energy and non-energy benefits accrue over the measure life and costs are incurred up-front.

The calculation of the TRC test benefits, to be consistent with NWPCC methodologies, includes an assessment of non-energy impacts (both benefits and costs) accruing to the customer. These impacts most frequently include maintenance cost, water, and sewer savings, and – in the case of the Low-Income Program – inclusion of the cost of providing base-case end-use equipment as part of a fully-funded measure as well as the value of health and human safety funding (on a dollar-for-dollar basis).

For the purposes of calculating TRC cost-effectiveness, any funding obtained from outside of Avista's customer population (generally through tax credits or state- or federally-administered programs) is not considered to be a TRC cost. These are regarded as imported funds and, from the perspective of Avista's customer population appropriate to the TRC test, are not costs borne by Avista customers. Co-funding of efficiency measures from state and federal programs for low-

[9]) Avista used a discount rate of 4.29% for commercial/industrial and residential programs.

income programs applicable to a home that is also being treated with Avista funding is not incorporated within the program cost. This is consistent with permitting tax credits to offset customer incremental costs as described within the California Standard Practice Manual description of the TRC test.

Avista's energy efficiency portfolios are built from the bottom up, starting with the identification of prospective efficiency measures based on the most recent CPA and augmented with other specific opportunities as necessary. Since potential assessments are only performed every two years and the inputs are locked many months in advance of filing the *IRP* itself, there is considerable time for movement in these inputs and the development of other opportunities.

Evaluation, Measurement, and Verification

Within its energy efficiency portfolio, Avista incorporates EM&V activities to validate and report verified energy savings related to its energy efficiency measures and programs. EM&V protocols serve to represent the comprehensive analyses and assessments necessary to supply useful information to management and non-company parties that adequately identify the acquisition of energy efficiency attributable to Avista's conservation programs, as well as potential process enhancements necessary to improve operations both internally and for customers. EM&V includes impact evaluation and process evaluation. Taken as a whole, EM&V is analogous with other industry standard terms such as portfolio evaluation and program evaluation.

To support planning and reporting requirements, several guiding EM&V documents are maintained and published. This includes the EM&V Framework, an annual EM&V Plan, and EM&V contributions within other energy efficiency and Avista corporate publications. Program-specific EM&V plans are created, as necessary, to inform and benefit the energy efficiency activities. These documents are reviewed and updated regularly, reflecting improvements to processes and protocols.

EM&V efforts will also be applied to evaluating emerging technologies and applications being considered for inclusion in the company's energy efficiency portfolio. In the electric portfolio, Avista may spend up to 10 percent of its conservation budget on programs whose savings impact have not yet been measured if the overall portfolio of conservation passes the applicable cost-effectiveness test. These programs may include educational, behavior change, and other types of investigatory or pilot projects. Specific activities can include product and application document reviews, development of formal evaluation plans, field studies, data collection, statistical analysis, and solicitation of user feedback.

Because of the benefits to customers and to the utility, Avista actively participates in regional energy efficiency activities. Avista has a voting role on the RTF, a critical advisory committee to the NWPCC. The RTF oversees standardization of energy savings and measurement processes for electric applications in the Pacific Northwest. This knowledge base provides energy efficiency data, metrics, non-energy benefits, and references suitable for inclusion in Avista's Technical Reference Manual (TRM) relating to acquisition planning and reporting. In addition, the company engages with other Northwest utilities and NEEA in various pilot projects or subcommittee evaluations. Portions of the energy efficiency savings acquired through NEEA's programs within the region are attributable to Avista's portfolio.

Avista's commitment to the critical role of EM&V is supported by the company's continued focus on the development of best practices for its processes and reporting. The International Performance Measurement and Verification Protocol serves as the basis of measurement and verification plans developed and applied to Avista programs. In addition, the compilation of EM&V protocols released under the U.S. Department of Energy's Uniform Methods Project will be considered and applied where applicable to support the consistency and credibility of reported results. Verification of a statistically significant number of projects is often extrapolated to perform impact analysis on complete programs, within reasonable standards of rigor and degree of conservatism. This process serves to ensure that Avista will manage its energy efficiency portfolio in a manner consistent with both utility and public interests.

The EM&V vendor for evaluation of program year 2026 has not been determined as of this writing. Avista will be issuing a Request for Proposal (RFP) in Q4, 2025 to select the independent third-party evaluator for the 2026-2027 biennium. Once the contract has been awarded, the EEAG will be informed of the selection.

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Cost-Effectiveness Metrics, Methodology, and Objectives

Avista's planning approach aims to maximize cost-effective conservation acquired by analyzing the cost-effectiveness of each segment (residential, low-income, and commercial/industrial), as well as the ways in which measures within programs contribute to the cost-effectiveness of that segment and eventually the individual portfolios. Non-energy impacts (NEIs) are a common topic of discussion in many energy-evaluation circles and Avista has made effective changes to the inclusion of NEIs. The company is appreciative of the valuable work the RTF has done to quantify NEIs for the region and where values have not been identified, Avista will look to the RTF to supplement values. The company views these efforts as an iterative process and expects that more discovery will take place in the future.

As with other utilities in the region, Avista actively participates in RTF meetings and provides measure-level data back to the RTF to further refine its estimates. The company acknowledges that it has the responsibility to use the best available data no matter the source; at times, that comes from internal estimates. Avista will continue to work with members from the RTF to identify measures or technologies that may have gaps in data and provide information where needed. These efforts further refine the RTF measures and form UES values that are more specific to Avista's service territory.

The company maintains an active involvement in the regional energy efficiency community and is committed to acknowledging and addressing new energy efficiency developments as they are presented. Avista will continue to work with interested parties as conversations around cost-effectiveness arise.

Non-Energy Impacts Study and GAP Analysis

Per Condition 11b of UE-230897, Avista will be issuing an RFP in 2026 to identify and/or update existing or new NEIs. New or updated NEI values will be incorporated with the measures offered

in 2026-2027 biennium to be utilized in cost-effectiveness calculations.

In prior years, Avista engaged with DNV (formerly DNV-GL) to develop and quantify a list of NEIs for Avista's electric and natural gas programs, along with a gap analysis of areas for future NEI development. These efforts identified several NEIs for low-income, residential, and commercial/industrial customers, including those affecting participants, society, and the utility. While basic conservation efforts consider the effect of energy efficiency measures on the utility's system by deferring capital investments, NEIs provide an opportunity to assign value to what is received by the customer, providing a link between an efficiency measure and a measurable customer benefit. As such, NEI values are included in Avista's TRC cost-effectiveness test as a benefit to the customer. Avista started using NEI values in its benefits calculations for TRC and PCT cost-effectiveness tests starting with the company's 2022 *Annual Conservation Report*, which was filed on June 1, 2023. Avista has incorporated updated NEI values into its TRM and continues to use NEI values in its cost-effectiveness calculations. NEI values are tracked on a per-measure basis and range from less than $.01 per kWh up to $.46 per kWh. Low-Income Program measures have the highest non-energy benefit value to customers because of the health and safety benefits provided to qualified customers at no cost.

Other categories of non-energy impact values that are quantified in Avista's NEI values include avoided illness from pollution; reductions in noise; increases in productivity; ease of selling or leasing a space based on improvements; avoided costs of insurance/fire damage; and NEIs related to energy burden reduction. Examples include reductions in bad debt write-offs; reductions in calls to the utility; reductions for utility carrying costs on arrearages; and thermal comfort and operations savings for customers. For each measure in Avista's portfolio, the NEI value for each identified category is aggregated and then matched against an NEI database to create an Avista-specific NEI value for that measure.

As new benefits are identified, Avista engages with its NEI study vendor to conduct gap analyses and add new NEI values to Avista's TRM. A gap analysis study was completed in 2023. Avista included these additional NEI values in its cost-effectiveness calculations as a portion of the 2023 report deliverable and will continue to do so in 2024 reporting cycles and beyond.

In 2024, Avista also concluded a study on low-global warmth potential (GWP) refrigerants. This study focused specifically on non-energy impacts of mitigating high-GWP refrigerants. Significant decarbonization NEIs are anticipated. Once this work is completed, Avista will leverage those NEIs to develop additional incentives for air conditioning and refrigeration measures, as well as incentives for proper disposal of high-GWP refrigerant. These greenhouse gas reduction efforts are important elements of Avista's decarbonization plans.

Energy Efficiency at Power Production Facilities

As required by the company's *BCP* Conditions, Avista continues to review the feasibility of pursuing cost-effective conservation in the form of reductions in electric power consumption, resulting from increases in the efficiency of energy use at electric power production facilities it owns in whole or

in part.[10] Avista meets with its generation engineering team on an annual basis to discuss potential projects that may lead to greater energy efficiency at facilities it manages or owns. While the generation team is primarily focused on providing safe and reliable power, they understand the benefit of efficiency and how those levels contribute to the regional clean energy goal. Avista will continue to work with its generation team to identify potential projects in the next biennium.

Distribution Savings

Avista's distribution system, defined as all installed and energized equipment from the substation feeder breaker down to the customer transformer, undergoes regular reconductor projects. This "reconductoring" involves replacing existing line sections with larger wire. This increases the capacity of the line segment and reduces line losses. Although the primary driver for reconductoring is area load growth, a side benefit is a reduction in line losses. The loss savings depends on the line characteristics of the new line(s) compared to the old line(s) and on the downstream loading(s).

For 2022-2025 it is estimated that 8,916 MWh was saved, or roughly 2,972 MWh per year. For 2026-2027 it is anticipated that another 2,972 MWh will be saved from additional reconductor jobs. It is anticipated these savings will continue until the conductor is replaced, often 20+ years in the future. The MWh savings generated through these reconductor jobs reduces the impact of load growth and represents a 2,972 MWh that would otherwise need to be generated to meet load growth.

In 2026, Avista is considering replacement of the HVAC system at Cabinet Gorge Dam. Avista's energy efficiency team is providing technical assistance to the asset management team and will calculate potential energy savings from various upgrade options to help inform the team's decision. A project timeline has not yet been established.

Schedule 90 – Energy Efficiency Programs

Avista's electric energy efficiency operations are governed by Schedule 90 tariff requirements. This tariff details the eligibility and allowable funding that the company provides for energy efficiency measures. Though the tariff allows for considerable flexibility in how programs are designed and delivered – and accommodates a degree of flexibility around incentives for prescriptive programs subject to reasonable justification – there remains the occasional need to modify the tariff to meet current and future market conditions and opportunities. For 2026, Avista has not proposed any changes to the language in this schedule.

[10]) UE-19092 Attachment A – Condition 12a.

Conclusion and Contact Information

This 2026 *ACP* represents program efforts by Avista to achieve its expected eligible acquisition savings for the first year of the 2026-27 biennium. In addition, the plan is designed to identify various activities that promote and support energy efficiency for the transition to clean energy, for reduction of energy costs for customers, and deferral of investments in Avista's energy system. For additional supporting information, please see the following appendices:

- Appendix A – 2024-2025 Energy Efficiency Evaluation, Measurement, and Verification Work Plan
- Appendix B – Cost Effectiveness Methodology
- Appendix C – Electric Program Summary

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Glossary of Terms

Active Energy Management (AEM): The implementation of continuous building monitoring to improve building performance in real time.

adder: An additional amount, typically a percentage, added to a quantification of conservation savings, risks, and/or benefits.

adjusted market baseline: Based on the RTF guidelines, represents a measurement between the energy efficient measure and the standard efficiency case that is characterized by current market practice or the minimum requirements of applicable codes or standards, whichever is more efficient. When applying an adjusted market baseline, no net-to-gross factor would be applied since the resultant unit energy savings amount would represent the applicable savings to the grid.

Advanced Metering Infrastructure (AMI): Systems that measure, collect and analyze energy usage, from advanced devices such as electricity meters, natural gas meters and/or water meters through various communication media on request or on a predetermined schedule.

advisory group: Avista's group of external interested persons and efficiency program experts who advise on the company's planned energy efficiency activities, as well as activities under consideration.

Air-Conditioning, Heating, and Refrigeration Institute (AHRI): The trade association representing manufacturers of HVAC and water heating equipment within the global industry.

aMW: The amount of energy that would be generated by one megawatt of capacity operating continuously for one full year. Equals 8,760 MWhs of energy.

American National Standards Institute (ANSI): A source for information on national, regional, and international standards and conformity assessment issues.

American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE): Devoted to the advancement of indoor-environment-control technology in the heating, ventilation, and air conditioning (HVAC) industry, ASHRAE's mission is "to advance technology to serve humanity and promote a sustainable world."

Annual Conservation Plan (ACP): An Avista-prepared resource document that outlines Avista's conservation offerings, its approach to energy efficiency, and details on verifying and reporting savings.

Annual Conservation Report (ACR): An Avista-prepared resource document that summarizes its annual energy efficiency achievements.

Annual Fuel Utilization Efficiency (AFUE): A measurement on how efficient an appliance is in converting the energy in its fuel to heat over the course of a typical year.

avoided cost: An investment guideline, describing the value of conservation and generation resource investments in terms of the cost of more expensive resources that would otherwise have to be acquired.
baseline: Conditions, including energy consumption, which would have occurred without implementation of the subject energy efficiency activity. Baseline conditions are sometimes referred to as "business-as-usual" conditions.

baseline efficiency: The energy use of the baseline equipment, process, or practice that is being replaced by a more efficient approach to providing the same energy service. It is used to determine the energy savings obtained by the more efficient approach.

baseline period: The period of time selected as representative of facility operations before the energy efficiency activity takes place.

Biennial Conservation Plan (BCP): An Avista-prepared resource document that outlines Avista's conservation offerings, its approach to energy efficiency, and details on verifying and reporting savings for a two-year period.

Building Owners & Managers Association (BOMA): An international federation of U.S. local associations and global affiliates that represents the owners, managers, service providers, and other property professionals of all commercial building types.

Business Partner Program (BPP): An outreach effort designed to raise awareness of utility programs and services that can assist small business customers in managing their energy bills.

British Thermal Unit (Btu): The amount of heat energy necessary to raise the temperature of one pound of water one degree Fahrenheit (3,413 Btu are equal to one kilowatt-hour).

busbar: The physical electrical connection between the generator and transmission system. Load on the system is typically measured at busbar.

capacity: The maximum power that a machine or system can produce or carry under specified conditions. The capacity of generating equipment is generally expressed in kilowatts or megawatts. In terms of transmission lines, capacity refers to the maximum load a line is capable of carrying under specified conditions.

Clean Energy Implementation Plan (CEIP): Introduced within a subsection of the Clean Energy Transformation Act, a CEIP must describe the utility's plan for making progress toward meeting the clean energy transformation standards while it continues to pursue all cost-effective, reliable, and feasible conservation and efficiency resources.

Clean Energy Transformation Act (CETA): Signed into law in 2019, the Clean Energy Transformation Act requires electric utilities to supply their Washington customers with 100 percent renewable or non-emitting electricity with no provision for offsets.

Community Action Partnership (CAP): General term for Community Action Programs, Community Action Agencies, and Community Action Centers that provide services such as low-income weatherization through federal and state agencies and other funding sources (e.g. utility constitutions).

Community Energy Efficiency Program (CEEP): Created by the Washington State Legislature in 2009, CEEP encourages homeowners and small businesses across the state to make energy efficiency retrofits and upgrades.

conservation: According to the Northwest Power Act, any reduction in electric power consumption as a result of increases in the efficiency of energy use, production or distribution.

Conservation Potential Assessment (CPA): An analysis of the amount of conservation available in a defined area. Provides savings amounts associated with energy efficiency measures to input into the company's Integrated Resource Planning (IRP) process.

cooling degree days: A measure of how hot the temperature was on a given day or during a period of days. Cooling degree days per day are calculated by subtracting from a fixed temperature the average temperature over the day. Historically, the fixed temperature has been set at 65 degrees Fahrenheit, the outdoor temperature above which cooling is typically needed. As an example, a day with a mean temperature of 80°F has 15 cooling degree days. If the next day has a mean temperature of 83°F, it has 18 cooling degree days.

cost-effective: According to the Northwest Power Act, a cost-effective measure or resource must be forecast to be reliable and available within the time it is needed, and to meet or reduce electrical power demand of consumers at an estimated incremental system cost no greater than that of the least-costly, similarly reliable and available alternative or combination of alternatives.

Customer Benefit Indicator (CBI): An attribute, either quantitative or qualitative, of a resource or related distribution investment associated with customer benefits.

customer/customer classes: A category, or categories, of customers defined by provisions found in tariff(s) published by the entity providing service, approved by the PUC. Examples of customer classes are residential, commercial, industrial, agricultural, local distribution company, core and non-core.

decoupling: In conventional utility regulation, utilities make money based on how much energy they sell. A utility's rates are set based largely on an estimation of costs of providing service over a certain set time period, with an allowed profit margin, divided by a forecasted amount of unit sales over the same time period. If the actual sales turn out to be as forecasted, the utility will recover all of its fixed costs and its set profit margin. If the actual sales exceed the forecast, the utility will earn extra profit.

deemed savings: Primarily referenced as unit energy savings, an estimate of an energy savings for a single unit of an installed energy efficiency measure that (a) has been developed from data sources and analytical methods that are widely considered acceptable for the measure and purpose, and (b) is applicable to the situation being evaluated.

demand: The load that is drawn from the source of supply over a specified interval of time (in kilowatts, kilovolt-amperes, or amperes). Also, the rate at which natural gas is delivered to or by a system, part of a system or piece of equipment, expressed in cubic feet, therms, Btu or multiples thereof, for a designated period of time such as during a 24-hour day.

Demand Response (DR): A voluntary and temporary change in consumers' use of electricity when the power system is stressed.

Demand Side Management (DSM): The process of helping customers use energy more efficiently. Used interchangeably with Energy Efficiency and Conservation, although conservation technically means using less while DSM and energy efficiency means using less while still having the same useful output of function.

Direct Load Control (DLC): The means by which a utility can signal a customer's appliance to stop operations in order to reduce the demand for electricity. Such rationing generally involves a financial incentive for the affected customer.

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discount rate: The rate used in a formula to convert future costs or benefits to their present value.

distribution: The transfer of electricity from the transmission network to the consumer. Distribution systems generally include the equipment to transfer power from the substation to the customer's meter.

Distributed Generation (DG): An approach that employs a variety of small-scale technologies to both produce and store electricity close to the end users of power.

Effective Useful Life (EUL): Sometimes referred to as measure life and often used to describe persistence. EUL is an estimate of the duration of savings from a measure.

end-use: A term referring to the final use of energy; it often refers to the specific energy services (for example, space heating), or the type of energy-consuming equipment (for example, motors).

energy assistance advisory group: An ongoing energy assistance program advisory group to monitor and explore ways to improve Avista's Low-Income Rate Assistance Program (LIRAP).

Energy Efficiency Advisory Group (EEAG): A group which advises investor-owned utilities on the development of integrated resource plans and conservation programs.

energy efficiency measure: Refers to either an individual project conducted or technology implemented to reduce the consumption of energy at the same or an improved level of service. Often referred to as simply a "measure."

Energy Independence Act (EIA): Requires electric utilities serving at least 25,000 retail customers to use renewable energy and energy conservation.

Energy Use Intensity (EUI): A metric – energy per square foot per year – that expresses a building's energy use as a function of its size or other characteristics.

evaluation: The performance of a wide range of assessment studies and activities aimed at determining the effects of a program (and/or portfolio) and understanding or documenting program performance, program or program-related markets and market operations, program-induced changes in energy efficiency markets, levels of demand or energy savings, or program cost-effectiveness. Market assessment, monitoring and evaluation, and verification are aspects of evaluation.

Evaluation, Measurement, and Verification (EM&V): Catch-all term for evaluation activities at the measure, project, program and/or portfolio level; can include impact, process, market and/or planning activities. EM&V is distinguishable from Measurement and Verification (M&V) defined later.

ex-ante savings estimate: Forecasted savings value used for program planning or savings estimates for a measure; Latin for "beforehand."

ex-post evaluated estimated savings: Savings estimates reported by an independent, third-party evaluator after the energy impact evaluation has been completed. If only the term "ex-post savings" is used, it will be assumed that it is referring to the ex-post evaluation estimate, the most common usage; from Latin for "from something done afterward."

external evaluators (AKA third party evaluators): Independent professional efficiency person or entity retained to conduct EM&V activities. Consideration will be made for those who are Certified Measurement

and Verification Professionals (CMVPs) through the Association of Energy Engineers (AEE) and the Efficiency Evaluation Organization (EVO).

free rider: A common term in the energy efficiency industry meaning a program participant who would have installed the efficient product or changed a behavior regardless of any program incentive or education received. Free riders can be total, partial, or deferred.

generation: The act or process of producing electricity from other forms of energy.

Green Motors Practices Group (GMPG): A nonprofit corporation governed by electric motor service center executives and advisors whose goal is the continual improvement of the electric motor repair industry.

gross savings: The change in energy consumption and/or demand that results from energy efficiency programs, codes and standards, and naturally occurring adoption which have a long-lasting savings effect, regardless of why they were enacted.

heating degree days: A measure of the amount of heat needed in a building over a fixed period of time, usually a year. Heating degree days per day are calculated by subtracting from a fixed temperature the average temperature over the day. Historically, the fixed temperature has been set at 65 degrees Fahrenheit, the outdoor temperature below which heat was typically needed. As an example, a day with an average temperature of 45 degrees Fahrenheit would have 20 heating degree days, assuming a base of 65 degrees Fahrenheit.

Heating Seasonal Performance Factor (HSPF): Defined as the ratio of heat output over the heating season to the amount of electricity used in air source or ductless heat pump equipment.

Heating, Ventilation, and Air Conditioning (HVAC): Sometimes referred to as climate control, the HVAC is particularly important in the design of medium to large industrial and office buildings where humidity and temperature must all be closely regulated whilst maintaining safe and healthy conditions within.

highly impacted community: designated by the Washington Department of Health, any census tract with an overall ranking of 9 or 10 on the Environmental Health Disparities map, or any census tract with tribal lands.

impact evaluation: Determination of the program-specific, directly or indirectly induced changes (e.g., energy and/or demand usage) attributable to an energy efficiency program.

implementer: Avista employees whose responsibilities are directly related to operations and administration of energy efficiency programs and activities, and who may have energy savings targets as part of their employee goals or incentives.

***incremental cost*:** The difference between the cost of baseline equipment or services and the cost of alternative energy-efficient equipment or services.

Integrated Resource Plan (IRP): An IRP is a comprehensive evaluation of future electric or natural gas resource plans. The IRP must evaluate the full range of resource alternatives to provide adequate and reliable service to a customer's needs at the lowest possible risk-adjusted system cost. These plans are filed with the state public utility commissions on a periodic basis.

Integrated Resource Plan Technical Advisory Committee (IRP TAC): Advisory committee for the IRP

process that includes internal and external participants.

International Performance Measurement and Verification Protocol (IPMVP): A guidance document with a framework and definitions describing the four M&V approaches; a product of the Energy Valuation Organization (www.evo-world.org).

Investor-Owned Utility (IOU): A utility that is organized under state law as a corporation to provide electric power service and earn a profit for its stockholders.

Kilowatt (kW): The electrical unit of power that equals 1,000 watts.

Kilowatt-hour (kWh): A basic unit of electrical energy that equals one kilowatt of power applied for one hour.

Kilo British Thermal Unit (kBtu): Btu, which stands for British thermal units, measures heat energy. Each Btu equals the amount of heat needed to raise one pound of water one degree Fahrenheit; the prefix kilo- stands for 1,000, which means that a kBtu equals 1,000 Btu.

Levelized Cost of Energy (LCOE): The present value of a resource's cost (including capital, financing, and operating costs) converted into a stream of equal annual payments. This stream of payments can be converted to a unit cost of energy by dividing them by the number of kilowatt-hours produced or saved by the resource in associated years. By levelizing costs, resources with different lifetimes and generating capabilities can be compared.

line losses: The amount of electricity lost or assumed lost when transmitting over transmission or distribution lines. This is the difference between the quantity of electricity generated and the quantity delivered at some point in the electric system.

Low-Income Home Energy Assistance Program (LIHEAP): Federal energy assistance program, available to qualifying households based on income, usually distributed by community action agencies or partnerships.

Low-Income Rate Assistance Program (LIRAP): LIRAP provides funding (collected from Avista's tariff rider) to CAP agencies for distribution to Avista customers who are least able to afford their utility bill.

market effect evaluation: An evaluation of the change in the structure or functioning of a market, or the behavior of participants in a market, that results from one or more program efforts. Typically, the resultant market or behavior change leads to an increase in the adoption of energy-efficient products, services, or practices.

measure (also Energy Efficiency Measure or "EEM"): Installation of a single piece of equipment, subsystem or system, or single modification of equipment, subsystem, system, or operation at an end-use energy consumer facility, for the purpose of reducing energy and/or demand (and, hence, energy and/or demand costs) at a comparable level of service.

measure life: See Effective Useful Life (EUL).

Measurement and Verification (M&V): A subset of program impact evaluation that is associated with the documentation of energy savings at individual sites or projects, using one or more methods that can involve measurements, engineering calculations, statistical analyses, and/or computer simulation modeling. M&V

approaches are defined in the International Performance Measurement and Verification Protocol (IPMVP available at www.evo-world.org).

Megawatt (MW): The electrical unit of power that equals one million watts or one thousand kilowatts.

Megawatt-hour (MWh): A basic unit of electrical energy that equals one megawatt of power applied for one hour.

Named Community: Represents areas within Avista's service territory that are considered to be a highly impacted community or vulnerable population.

net savings: The change in energy consumption and/or demand that is attributable to an energy efficiency program. This change in energy use and/or demand may include, implicitly or explicitly, consideration of factors such as free drivers, non-net participants (free riders), participant and non-participant spillover, and induced market effects. These factors may be considered in how a baseline is defined and/or in adjustments to gross savings values.

Non-Energy Benefit/Non-Energy Impact (NEB/NEI): The quantifiable non-energy impacts associated with program implementation or participation; also referred to as non-energy benefits (NEBs) or co-benefits. Examples of NEIs include water savings, non-energy consumables and other quantifiable effects. The value is most often positive, but may also be negative (e.g., the cost of additional maintenance associated with a sophisticated, energy-efficient control system).

Northwest Energy Efficiency Alliance (NEEA): A nonprofit organization that works to accelerate energy efficiency in the Pacific Northwest through the adoption of energy-efficient products, services, and practices.

Northwest Power and Conservation Council (NWPCC): An organization that develops and maintains both a regional power plan and a fish and wildlife program to balance the environment and energy needs of the Pacific Northwest.

Outside Air Temperature (OAT): Refers to the temperature of the air around an object, but unaffected by the object.

On-Bill Repayment (OBR): A financing option in which a utility or private lender supplies capital to a customer to fund energy efficiency, renewable energy, or other generation projects. It is repaid through regular payments on an existing utility bill.

portfolio: Collection of all programs conducted by an organization. In the case of Avista, portfolio includes electric and natural gas programs in all customer segments. Portfolio can also be used to refer to a collection of similar programs addressing the market. In this sense of the definition, Avista has an electric portfolio and a natural gas portfolio with programs addressing the various customer segments.

prescriptive: A prescriptive program is a standard offer for incentives for the installation of an energy efficiency measure. Prescriptive programs are generally applied when the measures are employed in relatively similar applications.

process evaluation: A systematic assessment of an energy efficiency program or program component for the purposes of documenting operations at the time of the examination, and identifying and recommending improvements to increase the program's efficiency or effectiveness for acquiring energy resources while

maintaining high levels of participant satisfaction.

program: An activity, strategy or course of action undertaken by an implementer. Each program is defined by a unique combination of program strategy, market segment, marketing approach and energy efficiency measure(s) included. Examples are a program to install energy-efficient lighting in commercial buildings and residential weatherization programs.

project: An activity or course of action involving one or multiple energy efficiency measures at a single facility or site.

Regional Technical Forum of the Northwest Power and Conservation Council (RTF): A technical advisory committee to the Northwest Power and Conservation Council established in 1999 to develop standards to verify and evaluate energy efficiency savings.

realization rate: Ratio of ex-ante reported savings to ex-post evaluated estimated savings. When realization rates are reported, they are labeled to indicate whether they refer to comparisons of (1) ex-ante gross reported savings to ex-post gross evaluated savings, or (2) ex-ante net reported savings to ex-post net evaluated savings.

reliability: When used in energy efficiency evaluation, the quality of a measurement process that would produce similar results on (a) repeated observations of the same condition or event, or (b) multiple observations of the same condition or event by different observers. Reliability refers to the likelihood that the observations can be replicated.

reported savings: Savings estimates reported by Avista for an annual (calendar) period. These savings will be based on best available information.

Request for Proposal (RFP): Business document that announces and provides details about a project, as well as solicits bids from potential contractors.

retrofit: To modify an existing generating plant, structure, or process. The modifications are done to improve energy efficiency, reduce environmental impacts, or to otherwise improve the facility.

rigor: The level of expected confidence and precision. The higher the level of rigor, the more confident one is that the results of the evaluation are both accurate and precise, i.e., reliable.

R-value or R-factor (resistance transfer factor): Measures how well a barrier, such as insulation, resists the conductive flow of heat.

Schedules 90 and 190: Rate schedules that show energy efficiency programs.

Schedules 91 and 191: Rate schedules that are used to fund energy efficiency programs.

sector(s): The economy is divided into four sectors for energy planning. These are the residential, commercial (e.g., retail stores, office and institutional buildings), industrial, and agriculture (e.g. dairy farms, irrigation) sectors.

Site-Specific (SS): A commercial/industrial program offering individualized calculations for incentives upon any electric or natural gas efficiency measure not incorporated into a prescriptive program.

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simple payback: The time required before savings from a particular investment offset costs, calculated by investment cost divided by value of savings (in dollars). For example, an investment costing $100 and resulting in a savings of $25 each year would be said to have a simple payback of four years. Simple paybacks do not account for future cost escalation, nor other investment opportunities.

spillover: Reductions in energy consumption and/or demand caused by the presence of an energy efficiency program, beyond the program-related gross savings of the participants and without direct financial or technical assistance from the program. There can be participant and/or non-participant spillover (sometimes referred to as "free drivers"). Participant spillover is the additional energy savings that occur as a result of the program's influence when a program participant independently installs incremental energy efficiency measures or applies energy-saving practices after having participated in the energy efficiency program. Non-participant spillover refers to energy savings that occur when a program non-participant installs energy efficiency measures or applies energy savings practices as a result of a program's influence.

Technical Reference Manual (TRM): An Avista-prepared resource document that contains Avista's (ex-ante) savings estimates, assumptions, sources for those assumptions, guidelines, and relevant supporting documentation for its natural gas and electricity energy efficiency prescriptive measures. This is populated and vetted by the RTF and third-party evaluators.

Total Resource Cost (TRC): A cost-effectiveness test that assesses the impacts of a portfolio of energy efficiency initiatives regardless of who pays the costs or who receives the benefits. The test compares the present value of costs of efficiency for all members of society (including all costs to participants and program administrators) compared to the present value of all quantifiable benefits, including avoided energy supply and demand costs and non-energy impacts.

transmission: The act or process of long-distance transport of electric energy, generally accomplished by elevating the electric current to high voltages. In the Pacific Northwest, Bonneville operates a majority of the high-voltage, long-distance transmission lines.

Uniform Energy Factor (UEF): A measurement of how efficiently a water heater utilizes its fuel.

Unit Energy Savings (UES): Defines the savings value for an energy efficiency measure.

U-value or U-factor: The measure of a material's ability to conduct heat, numerically equal to 1 divided by the R-value of the material. Used to measure the rate of heat transfer in windows. The lower the U-factor, the better the window insulates.

uncertainty: The range or interval of doubt surrounding a measured or calculated value within which the true value is expected to fall within some degree of confidence.

Utility Cost Test (UCT): One of the four standard practice tests commonly used to evaluate the cost-effectiveness of DSM programs. The UCT evaluates the cost-effectiveness based upon a program's ability to minimize overall utility costs. The primary benefit is the avoided cost of energy in comparison to the incentive and non-incentive utility costs.

Variable Frequency Drive (VFD): A type of motor drive used in electro-mechanical drive systems to control AC motor speed and torque by varying motor input frequency and voltage.

verification: An assessment that the program or project has been implemented per the program design. For

example, the objectives of measure installation verification are to confirm (a) the installation rate, (b) that the installation meets reasonable quality standards, and (c) that the measures are operating correctly and have the potential to generate the predicted savings. Verification activities are generally conducted during on-site surveys of a sample of projects. Project site inspections, participant phone and mail surveys, and/or implementer and consumer documentation review are typical activities associated with verification. Verification may include one-time or multiple activities over the estimated life of the measures. It may include review of commissioning or retro-commissioning documentation. Verification can also include review and confirmation of evaluation methods used, samples drawn, and calculations used to estimate program savings. Project verification may be performed by the implementation team, but program verification is a function of the third party evaluator.

vulnerable population: Communities that experience a disproportionate cumulative risk from environmental burdens.

Washington Utilities and Transportation Commission (WUTC): A three-member Commission appointed by the governor and confirmed by the state senate, whose mission is to protect the people of Washington by ensuring that investor-owned utility and transportation services are safe, available, reliable, and fairly priced.

weather normalized: This is an adjustment that is made to actual energy usage, stream-flows, etc., which would have happened if "normal" weather conditions would have taken place.

Weighted Average Cost of Capital (WACC): A calculation of a firm's cost of capital in which each category of capital is proportionately weighted. All sources of capital, including common stock, preferred stock, bonds, and any other long-term debt, are included in a WACC calculation.

8,760: Total number of hours in a year.

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Appendix A – 2024-2025 Energy Efficiency Evaluation, Measurement, and Verification Work Plan

Note: The EM&V vendor for evaluation of program year 2026 has not been determined as of this writing. Avista will be issuing a Request for Proposal (RFP) in Q4, 2025 to select the independent third-party evaluator for the 2026-2027 biennium. Once the contract has been awarded, the EEAG will be informed of the selection. In the interim, the 2024-2025 EM&V Work Plan has been included for reference.

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Work Plan for Evaluation, Measurement and Verification (EM&V) of Avista's 2024 - 2025 Energy Efficiency Programs

Prepared for:
Avista Corporation

Delivered on:
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Technical Evaluation Plan

This Evaluation, Measurement, and Verification (EM&V) Work Plan details the methods by which ADM Associates, Inc. (ADM) will complete the impact and process evaluation of Avista Utility's (Avista) 2024-2025 Programs as-specified in ADM's response to the Request for Proposals (RFP) R-44922 for evaluating Avista Utility's ("Avista") 2024-2025 energy efficiency programs (residential, low-income, and non-residential) in Idaho and Washington.

1. Summary of Avista's Energy Efficiency Portfolio

Table 1-1 summarizes the programs offered to residential and low-income customers in the Avista service territory as well as ADM's impact and process evaluation tasks and impact methodology for each program. Table 1-2 and Table 1-3, portrays the same information for the programs offered to Avista's non-residential customers and the pilot programs offered within Avista's territory, respectively.

Table 1-1: Residential and Low-Income Impact Evaluation Activities by Program

Program	Database Review	Document Verif.	Survey Verif.	On-Site Verif.	Electric Impact Methodology	Gas Impact Methodology
Residential Appliance and Thermostat Program	✓	✓	✓		RTF UES	IPMVP Option C: Billing analysis with comparison group
Residential ENERGY STAR Manufactured Homes Program	✓	✓			RTF UES	Avista TRM
Residential Shell Program	✓	✓	✓		RTF UES	IPMVP Option C: Billing analysis with comparison group
Residential Fuel Efficiency Program	✓	✓	✓		RTF UES and Avista TRM	IPMVP Option C: Billing analysis with comparison group
Residential Midstream Program	✓	✓			RTF UES	IPMVP Option C: Billing analysis with comparison group
Residential Multifamily Weatherization – New Offerings Program	✓	✓			RTF UES and Avista TRM	IPMVP Option C: Billing analysis with comparison group
Residential On-Bill Repayment/Financing Program	✓	✓			IPMVP Option C: Billing analysis with comparison group	
Residential Always-On Behavioral Program	✓				IPMVP Option C: Billing analysis with RCT groups	
Residential Behavioral Program	✓				IPMVP Option C: Billing analysis with RCT groups	
Residential Home Energy Audit Program	✓				RTF UES/Avista TRM/ IPMVP Option C: Billing analysis with comparison group	
Residential Direct Install Insulation Program	✓	✓	TBD	TBD	TBD	TBD
Low-Income Program	✓	✓	✓		RTF UES/IPMVP Option C: Billing analysis with comparison group	
Named Community Investment Fund (NCIF) Program	✓	✓	TBD	TBD	TBD	TBD

Table 1-2: Non-residential Impact Evaluation Activities by Program

Program	Database Review	Document Verif.	Survey Verif.	On-Site Verif.	Electric Impact Methodology	Gas Impact Methodology
C&I Appliance and HVAC Controls Program	✓	✓	✓		RTF UES	RTF UES
C&I Site-Specific Program	✓	✓	✓	✓	IPMVP Options A, B, C, D as appropriate	
C&I Prescriptive Lighting Program	✓	✓	✓		Engineering algorithms with equipment inputs	N/A
C&I Small Business Direct Install Lighting Program	✓	✓	✓		Engineering algorithms with equipment inputs	N/A
C&I Prescriptive HVAC Variable Frequency Drive Program	✓	✓	✓		RTF UES	N/A
C&I Midstream Program	✓	✓			RTF UES, engineering algorithms with equipment inputs, CA eTRM and Avista Midstream TRM	IPMVP Option C: Billing analysis with comparison group
C&I Prescriptive Shell Program	✓	✓	✓		Avista TRM	
C&I Green Motors Program	✓	✓	✓		RTF UES	N/A
C&I Grocer Program	✓	✓	✓		RTF UES and Avista TRM	N/A
C&I Building Operator Certification Program	✓	✓			BOC Study[1]	N/A

[1] https://www.theboc.info/wp-content/uploads/2023/11/2023-BOC-Energy-Savings-FAQ-Final.pdf

Table 1-3: Pilot Impact Evaluation Activities by Program

Program	Database Review	Document Verif.	Survey Verif.	On-Site Verif.	Electric Impact Methodology	Gas Impact Methodology
Time of Use Pilot	✓				IPMVP Option C: Billing analysis with comparison group	N/A
Peak Time Rebates Pilot	✓				IPMVP Option C: Billing analysis with comparison group	N/A
Hybrid Heat Pump Pilot	✓	✓	✓		IPMVP Option C: Facility-level regression analysis with NTG adjustments	
Building Operator IQ Pilot	✓	✓			IPMVP Option C: Facility-level regression analysis with NTG adjustments, IPMVP options A, B or D as needed	
Compressed Air Pilot	✓	✓	TBD	TBD	TBD	TBD
Pay for Performance Pilot	✓	✓	✓	✓	IPMVP Option C: Facility-level regression analysis with NTG adjustments, IPMVP options A, B or D as needed	
Additional Pilots	TBD	TBD	TBD	TBD	TBD	TBD

2. Impact Evaluation Approach

ADM will perform an impact evaluation on each of the programs. ADM will use the following approaches to calculate energy impact defined by the International Performance Measurement and Verification Protocols (IPMVP) and the Uniform Methods Project (UMP):

- Simple verification (document-based, survey-based)
- Deemed savings
- Partially/Fully Measured Retrofit Isolation (IPMVP Options A & B)
- Whole building billing analysis (IPMVP Option C)
- Simulation modeling (IPMVP Option D)

ADM will complete and report the results of the above impact tasks for each of the electric impacts and the natural gas impacts for each state separately.

The M&V methodologies are program-specific and determined by previous Avista evaluation methodologies as well as the relative contribution of a given program to the overall energy efficiency impacts. ADM will review relevant information on infrastructure, framework, and guidelines set out for EM&V work in several guidebook documents that have been published over the past several years. These include the following:

- Northwest Regional Technical Forum (RTF)
- Technical reference manuals, such as the Avista TRM, AR TRM 9.2, PA TRM 2021 and the IL TRM 12.0
- National Renewable Energy Laboratory (NREL), United States Department of Energy (DOE) The Uniform Methods Project (UMP): Methods for Determining Energy Efficiency Savings for Specific Measures, April 2013[2]
- International Performance Measurement and Verification Protocol (IPMVP) maintained by the Efficiency Valuation Organization (EVO) with sponsorship by the U.S. Department of Energy (DOE)[3]

We will keep our data collection instruments, calculation spreadsheets, and monitored/survey data available at the request of Avista. Any component of the data collection or analysis will be made available to Avista and will remain available through prudence review and investigation as required by the Washington Utilities and Transportation Commission and the Idaho Public Utilities Commission, subsequent to the 2024-25 evaluation period. All communications (including data transfer) will be consistently performed with constant communication and data sharing protocols established in the kick-off meeting. This transparency will allow for independent review of ADM's efforts. We believe that self-contained, transparent, and auditable M&V data and analysis products can minimize the long-term

[2] Notably, The Uniform Methods Project (UMP) includes the following chapters authored by ADM. Chapter 9 (Metering Cross-Cutting Protocols) was authored by Dan Mort and Chapter 15 (Commercial New Construction Protocol) was Authored by Steven Keates.

[3] Core Concepts: International Measurement and Verification Protocol. EVO 100000 – 1:2016, October 2016.

regulatory burden and final acceptance of results as well as provide further clarity and benefits for all stakeholders involved.

Additionally, for all programs ADM will provide comprehensive documentation and transparency for all evaluation tasks throughout the evaluation cycle. This includes, but is not limited to, the thorough explanation of measure and program-level realization rates which are <90% or >110%. Where applicable, the explanation(s) will also provide quality recommendations for adjusting future claimed savings.

2.1 Impact Evaluation Approach

This section presents our general cross-cutting approach to accomplishing the scope of work outlined in the Request for Proposal (RFP) for impact evaluation of Avista's Portfolio listed in Table 1-1 through Table 1-3. The Evaluators start by presenting our general evaluation approach. This chapter is organized by general task due to the overlap across sectors and programs. Section 4, Section 5, and Section 6 describes the Evaluators' program-specific impact evaluation methods in further detail for the residential, non-residential, and pilot programs, respectively.

ADM outlines our approach to verifying, measuring, and reporting the energy efficiency portfolio impacts as well as cost-effectiveness and summarizing potential program and portfolio improvements. The primary objective of the impact evaluation is to determine residential, low-income, and non-residential ex-post verified net energy savings.

Our general approach for this evaluation considers the cyclical feedback loop among program design, implementation, and impact evaluation. Our activities during the evaluation will estimate and verify annual energy savings and identify whether a program is meeting its goals. These activities are aimed to provide guidance for continuous program improvement and increased cost effectiveness for the 2024 and 2025 program years. ADM will provide the following services and objectives as deliverables to Avista for this evaluation, as specified in the RFP:

- Independently verify, measure and document energy savings impacts from each of Avista's electric and natural gas energy efficiency Programs, or for Program categories representing consolidated small-scale offerings from January 1, 2024, through December 31, 2025;
- Develop a schedule for impact evaluations that ensures established programs receive evaluations at least every two (2) years. Identify new and/or "at risk" programs to be evaluated annually.
- For Washington Programs, calculate the cost effectiveness of the Portfolio and component Programs using the Total Resource Cost Test (TRC), Utility Cost Test (UCT), Participant Cost Test (PCT), Ratepayer Impact Measure Test (RIM), and, potentially, newly adopted jurisdictional specific tests (collectively, the "Services");
- Include in the evaluation any pilot programs ("Pilots") from which conservation savings have been realized. For each effort that Avista identifies as a Pilot, provide recommendations on appropriate evaluation methodologies;
- Analytically substantiate the measurement of those savings;
- Identify Program improvements, if any; and
- Identify possible future Programs.

In addition to the above services, we have identified the following deliverables to Avista for this evaluation:

- **Deliverable 1 – Evaluation Work Plan:** One (1) evaluation work plan for the 2024-2025 Programs, with a draft plan delivered within four weeks after project kick-off, including a presentation to Avista's Energy Efficiency Advisory Group ("The Advisory Group");
- **Deliverables 2a and 2b – Idaho and Washington Natural Gas Impact Evaluations:** Two (2) separate and independent impact evaluation reports, one for Idaho and one for Washington, of Avista's Residential, Commercial, and Industrial Natural Gas Impact Evaluations for each program year – with the Washington reports delivered on March 15, 2025 and 2026 and the Idaho reports on April 15, 2025 and 2026;
- **Deliverables 3a and 3b – Idaho and Washington Electric Impact Evaluations:** Two (2) separate and independent impact evaluation reports, one for Idaho and one for Washington, of Avista's Residential, Commercial, and Industrial Electric Impact Evaluation for each program year – with the Washington reports delivered on March 15, 2025 and 2026 and the Idaho reports on April 15, 2025 and 2026;
- **Deliverable 4 – Cost Effectiveness Analysis (*Washington Only*):** Two separate and independent (2) cost effectiveness report ("CE Report") for Washington Programs including written documents which support the CE Report, disaggregated into electric and natural gas components, one for each program year, delivered April 15, 2025, and April 15, 2026;
- **Deliverable 5 – Process Evaluation Report:** One (1) process evaluation of Avista's Residential, Commercial, and Industrial in Washington and Idaho including notable observations and recommendations, with a memorandum of process evaluation efforts completed to date delivered by March 15, 2026, and the full report delivered April 15, 2026;
- **Deliverable 6 – Meeting Participation:** Availability to meet and participate with advisory groups, subcommittees, and others, as needed. Meet with the Energy Efficiency Analytics team on a regular cadence to ensure issues are tracked and resolved expediently and to discuss changes or additions to the Programs and meet with Avista to develop accurate equations that represent Consultant's methodology for evaluating the Programs;
- **Deliverable 7 – DSM Prudence Review:** Availability for prudence review and investigation as required by the Washington Utilities and Transportation Commission and the Idaho Public Utilities Commission after the close of the 2024-2025 period. Provide comprehensive workpapers, supporting documentation and responses to production requests as needed by the respective Commissions;
- **Deliverable 8 – Time of Use Pilot Impact Evaluation:** At the conclusion of the first full year of the initial Time of Use pilot for Washington electric customers (June 1, 2024 through May 30, 2025), provide bill impact evaluation of the pilot participants and review Avista's load impact analysis for the pilot participants, delivered by October 1, 2025;
- **Deliverable 9 – Time of Use Pilot / Peak Time Rebate Design Recommendations:** At the conclusion of the 2025 program year, use Deliverable 8 conclusions to assist Avista in recommendations for Time of Use (TOU)/ Peak Time Rebate (PTR) program design/modifications in anticipation of full program rollout for the 2026-2027 biennium, delivered by April 1, 2026;

- An independent estimate of kWh and Therm savings for 2024 and 2025 through thorough and proper evaluation of program impacts with statistical ±10% statistical precision at 90% confidence for each state and fuel type;
- Presentation of evaluation findings to The Advisory Group, Spokane offices, or other regional locations, as required, along with additional stakeholders, as necessary;
- Updates to Avista's Technical Reference Manual (TRM), annually, based on Avista's evaluation findings and secondary information;
- All supporting workpapers for calculations, tables, graphs, and other documents as necessary;
- State-specific reports on any project where realization rate is expected to be less than 90% or greater than 110% as well as a complete listing of all projects where any material adjustments were made; and
- Summary of any deviations from historical methodology for calculating cost-effectiveness in the final report in addition to a presentation of deviations to the Advisory Group.

We approach evaluation with the frame of mind that the final report should not contain information that has not already been communicated with Avista. This is achieved through the following:

- **Transparency of Evaluation Effort.** In our evaluations, we will keep our data collection instruments, models, calculation spreadsheets, programming scripts, and monitored data/survey data available at the request of Avista. All components of the data collection or analysis will be made available in their native format with all formulas intact, informing Avista as to how the calculation of energy savings is performed and allowing for independent review of ADM's efforts.
- **Regular Updates on Evaluation Findings.** ADM will provide regular updating of all involved parties as to the findings of the impact and process evaluation efforts. This allows for real-time feedback regarding the performance of varying measures or participant classes, feeding into a process of continuous program improvement. This also allows Avista to conduct an independent review or quality check of ADM's analysis, if desired. ADM's analysis will be kept transparent throughout the evaluation effort.

This document contains the approach for the evaluation of Avista's 2024-2025 program years. It is ADM's intention to formalize this workplan in collaboration with Avista; This is a collaborative effort with Avista to ensure Idaho Public Utilities Commission (PUC) and Washington Utilities and Transportation Commission (WUTC) receives accurate and reliable program findings and that Avista receives meaningful insights to continue energy efficiency efforts and improve program results. ADM will provide comprehensive documentation and transparency for all evaluation tasks and will provide ongoing technical review and guidance throughout the evaluation cycle.

ADM will employ the following approach to complete impact evaluation activities for the programs. ADM defines five major approaches to determining net savings for Avista's programs:

- A *Deemed Savings* approach involves using stipulated savings for energy conservation measures for which savings values are well-known and documented. These prescriptive savings may also require an adjustment for certain measures, such as lighting measures in which site operating

hours may differ from RTF values. ADM will work with Avista to identify these instances and develop a method for calculating an adjusted value.

- A *Partially/Fully Measured Retrofit Isolation* approach. This refers to any program where savings must be calculated on a per-site basis using primary data collected on-site or facility bills for a unique, premise-level analysis (as opposed to the large-scale, whole-program analysis detailed under the "Billing Data Analysis" bullet). This includes the Site-Specific Program for which custom protocols may need to be applied. This approach aligns with the IPMVP Option A and B.
- A *Billing Analysis* approach involves estimating energy savings by applying a linear regression to measured participant energy consumption utility meter billing data. Billing analyses may also include billing data from nonparticipant customers. This approach does not require on-site data collection for model calibration. However, a sample of customers or sites may be selected and surveyed to confirm that the energy conservation measures were installed and are still operating. This approach aligns with the IPMVP Option C.
- A *Facility-Level Regression Analysis* approach involves estimating energy savings by applying a linear regression to a facility's pre-retrofit and post-retrofit interval meter data. This methodology includes defining a baseline for the facility, adjusting the baseline, and developing and refining a regression model to accurately predict energy consumption in the facility. The difference between projected energy consumption from the model and actual energy consumption equals the gross savings estimate. The methodology provided here references UMP Chapter 24 on Strategic Energy Management (SEM) Evaluation Protocol[4] and aligns with the IPMVP Option C.
- A *Simulation Model Analysis* approach involves a whole building simulation using the program REM/Rate and a User Defined Reference Home (UDRH) to compare the efficient home and the baseline home. The UDRH is designed as an exact replica of each program participating home in terms of size, structure, and climate zone. This approach aligns with the IPMVP Option D.

ADM will accomplish the following quantitative goals as part of the impact evaluation:

- Verify savings with 10% precision at the 90% confidence level by program year;
- Where appropriate, apply the RTF to verify measure impacts; and
- Where available data exists, conduct billing analysis with a suitable comparison group to estimate measure savings.

2.2 Database Review

This section describes ADM's general methodology for conducting database reviews for Avista's Residential and Non-Residential programs.

At the outset of the process evaluations, it will be important to review each program database to ensure that previous recommendations regarding developing a data dictionary and adequately tracking key data have been implemented. For this task, our team will also review the databases to ensure that they conform to industry standards.

[4] https://www.nrel.gov/docs/fy17osti/68316.pdf

Having conducted previous evaluations with Avista and with numerous other energy efficiency systems, we recognize that a well-designed tracking system is a key tool for accomplishing effective program delivery, monitoring, verification and evaluation. We are experienced with Avista's Cognos and iEnergy databases currently used and are well-informed regarding recent changes in program tracking systems. ADM consistently reviews each tracking system in order to provide early feedback on implementation efforts, provide continuous tracking of program performance, and provide critical information for verification and evaluation. ADM recognizes that failure to develop and maintain a sufficient tracking system can add significantly to the cost of implementation, monitoring, verification and evaluation; reduce confidence in results; and increase the variance in estimates of savings. Therefore, we make this a high priority in our iterative review of each program over the course of the program year.

The role of the tracking system becomes particularly important because this evaluation will be proceeding in real-time along with the program implementation. An advantage of a real-time evaluation is that it should allow the evaluation contractor to coordinate with the implementation contractor to ensure that appropriate pre-installation data collection and measurement are conducted to establish agreed-on baseline conditions for analyzing savings. An example of this is when ADM notified Avista that the transfer from Cognos to iEnergy database resulted in a mismatch of measure names and therefore system tracking connected to the Avista TRM and savings values applied to each measure. Consistent review and communication of findings led to a timely resolution for this prior to year-end deadlines.

Because of our previous M&V work for Avista, we are familiar with Avista's tracking system and changes occurring over time. We will work with Avista and implementers to identify any additional elements that should also be included to facilitate M&V of existing or proposed programs. Our review will be based on the requirements for reporting to WUTC; goals defined by CETA, specifically related to Named Communities; internal auditing requirements; program requirements; monitoring, verification, and evaluation requirements; and our long experience in evaluating residential and nonresidential energy efficiency programs.

ADM will review program materials – such as program theory and logic models to identify potential issues and key barriers to end-use behavior changes that could be influenced by efforts by each program. We will review the tracking and reporting system for duplicates, inconsistencies, missing information, and potential misinformation. We will perform sanity and logic checks to ensure data are consistent and meaningful. We will also perform test queries to ensure data are being populated consistently, accurately, and meaningfully. We will assess whether the data are sufficient for use in assessing program impacts, regulatory reporting, and other requirements. We will review reporting channels and procedures for ease of delivery of data and completeness and to determine if the reporting methodology is cost-effective, accessible, and easy to use.

Before conducting each impact analysis, ADM will conduct a database review for the program. ADM will complete document-based verification in order to verify detailed measure inputs, values, efficiency levels, and installation characteristics for a sample of participating households. This detailed review will assist with the development of verified savings. ADM will review the aggregate tracking data to verify each measure satisfies all program efficiency requirements.

ADM will also evaluate measure-level savings applications primarily by reviewing assigned measure unit energy savings ("UES") values in the tracking system to assure that they are appropriately applied using the Avista TRM. ADM will then aggregate and cross-check program and measure totals. ADM will

evaluate if the Avista TRM was applied correctly to the program tracking data by comparing Avista-provided project-level savings to the ADM-calculated project-level savings using the Avista TRM for each project. This will be reported as "adjusted savings" in the final reports.

ADM will clearly identify, explain, and substantiate any variations in the savings calculations we uncover for each program. We will integrate all findings into the final evaluation report with recommendations for updating values where applicable. In addition to reporting the total gross realization rates, we will also quantify the associated impact each adjustment had on the overall program savings.

ADM will work with Avista and implementer staff to incorporate recommended changes into the tracking system database. We focus on addressing issues of sufficiency, compatibility, and consistency that we detected during our review and on other problems that may be identified. We will also consider the administrative effort required by Avista and relative benefits for each additional recommended change.

2.3 Simple Verification Methods

ADM will verify a sample of participating households for detailed review of the installed measure documentation and development of verified savings. This includes developing samples to verify measures and equipment via two activities:

- Document-based verification
- Survey-based verification

Preliminary sample sizes for documentation-based review and survey-based verification are detailed in the sections below. ADM will work with Avista to adjust the sampling plan once program tracking data has been delivered and participation rates are finalized.

ADM will also verify tracking data by reviewing invoices and surveying a sample of participant customer households. We will coordinate as needed with Avista's process evaluation contractor in conducting participant surveys. The following sections describe ADM's general methodology for conducting document-based verification and survey-based verification.

2.3.1 Documentation-Based Verification

ADM will first screen each rebate household to ensure the customer who received a measure did not also receive another measure that disqualifies that customer from participating in either program, such as the ENERGY STAR Homes rebate in combination with an HVAC rebate. Tracking data will be reviewed to verify each measure satisfies all program efficiency requirements.

Documentation for this task will include rebate application forms, supporting customer or contractor invoices, household builder documents, AHRI certificate documents, and any other associated rebate documents specific to each program. These documents will include invoices, rebate applications, and additional materials required for accepting rebate applications for each program Avista offers to its customers. Further program-level details are summarized in Table 2-1, *Document-Based Verification Sample Design for Washington and Idaho Combined*.

For each program and measure sampled, ADM will verify quantities and efficiencies for rebated equipment according to the invoices and associated applications and documents. If ADM finds any deviations between the tracking data and application values, ADM will note and summarize these differences to Avista through periodic updates and the final report.

ADM will develop a sampling plan that aims to achieve a sampling precision of ±10% at 90% statistical confidence – or "90/10 precision" – for net realized savings estimates at the measure category level for all significant measures during document-based verification for each program in each population:

- Washington electric participant population
- Washington natural gas participant population
- Idaho electric participant population
- Idaho natural gas participant population

That is at each state and fuel type's Portfolio level, statistical precision and confidence will meet 90/10 precision at minimum. In a generalized form, simple random samples for a statistically infinite population are developed as follows:

$$n = \left(\frac{1.645 * cv}{rp}\right)^2$$

Where,

n = sample size

1.645 = *z* score reflecting 90% confidence for a two-tailed distribution

cv = Coefficient of Variation, defined as standard deviation / mean

rp = Required Precision, 10% for 90/10 sampling

Standard practice is to assume a CV of .50 for homogenous programs (such as residential programs). In this instance, the required sample for 90/10 is $(1.645 * .5 / .1)^2 = 68$. For programs with limited participation, this sample is adjusted as follows:

$$n_0 = \frac{n}{1 + \frac{n}{N}}$$

Where,

n_0 = Finite-population adjusted sample

n = Sample for a statistically infinite population

N = total population size

Thus, for a population of 400, the required sample to meet ±10% precision at 90% confidence is:

$n_0 = 68 / [1+ 68/400)] = 58.12$, rounding up to 59.

ADM will work with Avista to adjust the sampling plan before submitting a data request.

Based on the above considerations, ADM has estimated the following sample sizes for the above programs' document review (Table 2-1, *Document-Based Verification Sample Design for Washington*

and Idaho Combined). The representative participant sample will be adjusted for each of the programs in Washington and Idaho, by fuel type.

Table 2-1: Document-Based Verification Sample Design for Washington and Idaho Combined

Program	Washington				Idaho			
	Electric		Natural Gas		Electric		Natural Gas	
	Pop	90/10	Pop	90/10	Pop	90/10	Pop	90/10
Residential/Low-Income								
Residential Appliance and Thermostat Program	400	59	400	59	400	59	400	59
Residential ENERGY STAR Manufactured Homes Program	30	21	5	5	15	13	5	5
Residential Shell Program	300	56	1,700	66	150	47	400	59
Residential Fuel Efficiency Program					150	47		
Residential Midstream Program	400	59	400	59	400	59	400	59
Residential Multifamily Weatherization – New Offerings Program	250	54	400	59	75	36	130	45
Residential On-Bill Repayment/Financing Program	100	41	50	29	70	35	30	21
Residential Always-On Behavioral Program	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Residential Behavioral Program	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Residential Home Energy Audit Program	150	47			150	47		
Residential Direct Install Insulation Program	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Low-Income Program	1,400	65	1,600	66	350	57	400	59
Named Community Investment Fund (NCIF) Program	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Commercial & Industrial								
C&I Site-Specific Program	54	17	9	5	9	23	3	3
C&I Appliance and HVAC Controls Program	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
C&I Prescriptive Lighting Program	870	64			473	60		
C&I Small Business Direct Install Lighting Program	200	51			100	40		
C&I Prescriptive HVAC Variable Frequency Drive Program	2	2			4	4		
C&I Midstream Program	500	68	400	68	400	68	300	68
C&I Prescriptive Shell Program	6	6	1	1	1	1	1	1
C&I Green Motors Program	8	7			2	2		
C&I Grocer Program	9	8			4	4		
C&I Building Operator Certification Program	11	11	11	11	11	11	11	11

The values in the above represent our preliminary sample design. Sampling and verification of the Site-Specific Program differs from those above and is discussed below in section 5.2.2 Sampling and Precision. ADM will work with Avista to adjust the proposed sample sizes during the kickoff meeting and the formation of Avista's Electric and Natural Gas Residential, Low-Income, and Commercial and Industrial EM&V Plan for Idaho and Washington.

ADM will work with Avista to adjust these sample sizes once program tracking data has been delivered for the program year in evaluation. ADM understands that representation of participants in each state in Avista's service territory is critical. Therefore, ADM will ensure the samples for document review includes participants in both Washington and Idaho in addition to representation of each the electric and natural gas fuel types.

2.3.2 Survey-Based Verification

This section describes ADM's general methodology for conducting survey-based verification for Avista's Residential, Low-Income, Commercial, and Industrial programs. In addition to the document-based verification summarized above, ADM will also verify tracking data by surveying a sample of participant customer households.

A sample of participants will be surveyed to confirm that the measure was installed and is still currently operational and whether the measure was a new construction, early retirement, or replace-on-burnout, if applicable to the measure. If the units are found to be inoperative prior to replacement, ADM will re-classify the unit as replace-on-burnout. This will aid in providing more accurate estimation of annual savings by replacement type. Most importantly, this survey effort will help ADM develop in-service rates, or the percentage of rebates in which the measure is still currently operational and installed. This in-service rate will act as an adjustment to deemed savings estimates to reflect verified savings in the service territory. ADM will also ask the participant questions about additional details of the installed unit, such as sizing of water heater, model number, space heating equipment type, etc. The selected sample participants will be offered a $10 gift card incentive to participate in the verification survey.

ADM proposes the sample sizes for survey-based verification in Table 2-2. ADM will combine survey-based verification efforts with the survey-based process evaluation efforts in order to maximize the quality and quantity of data collected toward multiple deliverables while minimizing customer response fatigue. The findings from these activities will primarily serve the impact evaluation to:

- Verify measure was installed
- Verify measure is functional
- Gather pre-retrofit equipment information
- Gather retrofit equipment information
- Estimate annual hours of use

ADM has estimated the sample sizes shown in Table 2-2 for the survey-based verification. The representative participant sample will be adjusted for each of the programs in Washington and Idaho, by fuel type.

Table 2-2: Survey-Based Verification Sample Design for Washington and Idaho

Program	Washington						Idaho					
	Electric			Natural Gas			Electric			Natural Gas		
	Pop.	90/10	%	Pop.	90/10	%	Pop.	90/10	%	Pop.	90/10	%
Residential & Low-Income												
Residential Appliance and Thermostat Program	400	58	15%	400	58	15%	400	58	15%	400	58	15%
Residential ENERGY STAR Manufactured Homes Program	30	21	70%	5	5	100%	15	13	87%	5	5	100%
Residential Shell Program	300	56	19%	1,700	66	4%	150	47	31%	400	58	15%
Residential Fuel Efficiency Program							150	47	31%			
Residential Midstream Program[5]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Residential Multifamily Weatherization – New Offerings Program	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Residential On-Bill Repayment/Financing Program	100	41	41%	50	29	58%	70	35	50%	30	21	70%
Residential Always-On Behavioral Program	50,000	68	0%	50,000	68	0%						
Residential Behavioral Program	TBD	TBD	TBD	TBD	TBD	TBD						
Residential Home Energy Audit Program	150	47	31%				150	47	31%			
Residential Direct Install Insulation Program	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Low-Income Program	1,400	65	5%	1,600	65	4%	350	57	16%	400	58	15%
Named Community Investment Fund (NCIF) Program	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Commercial & Industrial												
C&I Appliance and HVAC Controls Program	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
C&I Site-Specific Program	54	17	32%	9	5	56%	9	23	36%	3	3	100%
C&I Prescriptive Lighting Program	870	63	7%				473	60	13%			
C&I Small Business Direct Install Lighting Program	200	51	26%				100	41	41%			
C&I Prescriptive HVAC Variable Frequency Drive Program	2	2	100%				4	4	100%			
C&I Midstream Program	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
C&I Prescriptive Shell Program	6	6	100%	1	1	100%	1	1	100%	1	1	100%
C&I Green Motors Program	8	8	100%				2	2	100%			
C&I Grocer Program	9	8	89%				4	4	100%			
C&I Building Operator Certification Program	11	11	100%	11	11	100%	11	11	100%	11	11	100%

[5] Surveys are not proposed for the Residential Midstream Program, as participation is invisible to the downstream Avista customer.

It likely will not be feasible to achieve 90/10 sample sizes for several programs, even by supplementing state samples with non-native participants due to unrealistically high required survey response rates. In this table, we have summed the estimated Washington and Idaho participant populations for each program. For the 90/10 sample, we have summed the completion counts *that would be required if we achieved a 90/10 sample for each state*, with two-thirds of each state's count coming from native participants.

For programs for which obtaining a 90/10 participant sample is not feasible, we propose a combination of online surveys, supplemented with an increased larger document verification sample. In the case of programs with very small participant populations, we may attempt a census of participants. ADM will develop the survey-based verification guide for review and comment by Avista staff prior to deploying these verification surveys.

To implement the impact surveys, ADM will use our in-house survey research center to support all survey-based data collection efforts. This group is comprised of full-time ADM staff and is dedicated solely to energy efficiency-related efforts. This allows our team to provide maximum transparency between program evaluation management and data collection efforts, which helps ADM provide a more accurate and detailed summary of findings to Avista program managers. In cases where the survey-based responses do not meet sampling target, ADM will use our in-house survey research center to reach out to customers via phone call. Alternatively, ADM will include in the email an option for customers to define a suitable time for ADM staff to survey via phone call. ADM will develop the web-based verification guide for review and comment by Avista staff prior to deploying these verification surveys. ADM will employ our in-house survey research center to support all survey-based data collection efforts. In cases where the web-based survey response does not meet sampling target, ADM will use our in-house survey research center to reach out to customers via phone call.

For each program, ADM will include program-specific questions. For example, the C&I Prescriptive HVAC Program verification surveys will likely include questions such as:

- Was this HVAC a new construction, or did it replace another HVAC?
- Was the previous HVAC functional?
- Is the newly installed HVAC still properly functioning?
- What is the efficiency and sizing of the newly installed HVAC?

Program-specific questions are provided under each program Section 4, Section 5, and Section 6 for the residential, non-residential, and pilot programs, respectively. These questions will help ADM verify that the measure was documented accurately and that data collection activities are progressing smoothly for the program. In addition, in the event that billing analysis is infeasible, this simple verification will help ADM more accurately estimate measure-level impacts using engineering algorithms.

2.4 On-Site Verification

In addition to document-based and survey-based verification, on-site data collection activities are planned for a subset of programs. On-site data collection activities are expected for the Site-Specific Program.

Site visits accomplish two major evaluation tasks. First, field staff verify that the energy efficiency measures of interest were indeed installed, that they were installed correctly, and that they still function properly. Second, staff collect data to analyze the energy impacts for the installed measures. We have well-developed and tested procedures in place for collecting the data necessary for detailed M&V of each measure. While on-site, we also obtain appropriate information to analyze the performance of the different types of energy systems at a facility. This includes collecting information on the quantity, efficiency, sizing, servicing, and scheduling for each measure.

Prior to conducting on-site visits, ADM will submit to Avista a list of sites to be visited, along with the site M&V plan for review before going on site. For any sites at which Avista wishes to accompany ADM, scheduling arrangements will be made by ADM staff so that an Avista representative can be present at the time of the visit.

Table 2-3 summarizes the estimated sample sizes for on-site verification for the Site-Specific Program, where on-site verification is anticipated.

Table 2-3: On-Site Verification Sample Design for Washington and Idaho Combined

Program	Washington	Idaho
Site-Specific Program	22	12

ADM will develop and prepare materials for each site selected for on-site verification. Further details on site-specific M&V plans are described below.

2.4.1 Site-Specific M&V Plans

In preparation for the site-level verification efforts, site-specific M&V plans will be developed for each of the sampled projects selected to receive a site-visit. Plans will be developed after a full review of project documentation and, if necessary, brief exploratory interviews with the program staff (or the applicant). Drafted site-specific M&V plans and a summary of the sample of projects will be provided to Avista for review. We will incorporate all Avista feedback received from this review into the final M&V plan prior to deployment of ADM field technicians. Each plan will contain the following information:

1. A description of site, project, and measure(s) being evaluated;
2. The expected M&V methodology describing its application[6] to the site;
3. Information to be collected to accomplish the expected M&V methodology;
4. Data to be collected to accomplish the expected M&V methodology; and
5. Expected data-collection equipment to be used by ADM staff.

ADM is familiar with and regularly employs several key references used to guide this process. The most common references are the International Performance Measurement and Verification Protocol (IPMVP), the Uniform Methods Project (UMP); and American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) Guideline 14. However, we also rely on our extensive experience to discern an appropriate rigor level for each site. For this evaluation we also expect to employ the Avista Technical Reference Manual (TRM) and Regional Technical Forum (RTF) to inform data collection needs.

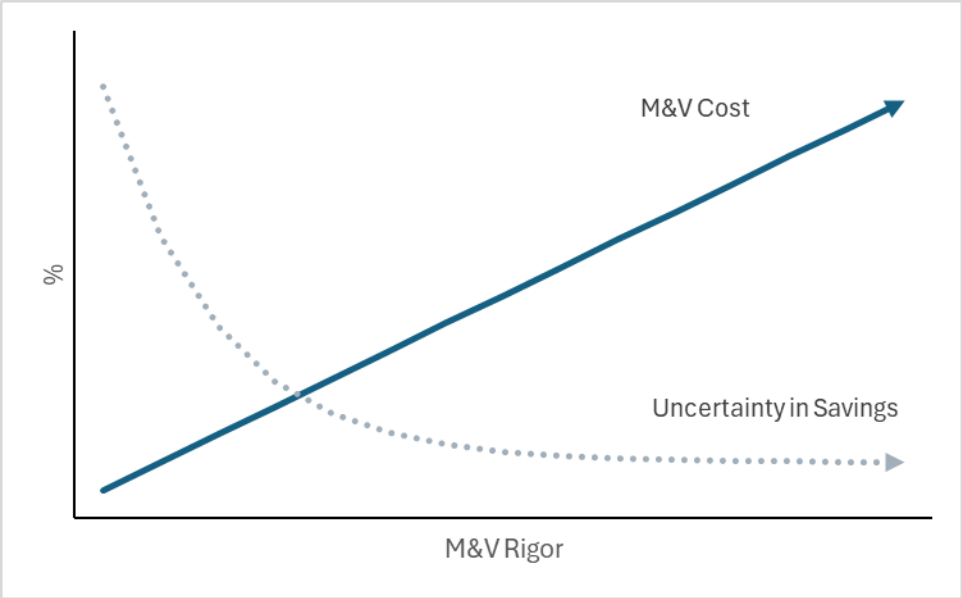
[6] Including contingencies and alternate approaches.

This leverages the thorough evaluation work already completed on such measures within the industry and allows the evaluation team to prioritize Avista customer experience. ADM has specific expertise in these matters, having completed the following efforts:

- Authored the UMP methods chapters for Commercial New Construction and Field Data Collection
- Developed RTF measure ENERGY STAR Air Purifier UES measure workbook;
- Reviewed all RTF UES measure workbooks for NWCC measure cost review efforts; and
- Utilized RTF UES measure workbook values, inputs, and assumptions for several impact evaluation efforts conducted in the Pacific Northwest.

Site-specific M&V Plans are tailored to both the unique measures evaluated, such as required level of rigor, and the unique facility, such as the feasibility of data collection and customer burden. ADM engineers are cognizant of the value of information principle and diminishing returns of additional value of information. As shown in Figure 2-1 the IPVMP philosophy of diminishing returns for M&V is instilled in ADM mentality. That is, ADM will compare the benefit of the additional information compared to the amount of effort, budget, and customer burden to determine if additional efforts are worthwhile.

Figure 2-1: Law of Diminishing Returns for M&V[7]



2.4.2 Measurement Verification, Monitoring and Measurements

Though most projects will have measure-level savings previously estimated through TRM or RTF values, there may be custom projects in the randomly selected sample that require on-site metering, such as facilities with uncommon operating hours, construction, or measures installed. ADM has experience with a wide variety of monitoring approaches applied to a spectrum of technologies and is well

[7] IPMVP M&V Guidelines: Measurement and Verification for Federal Energy Products. 2015. https://www.energy.gov/sites/prod/files/2016/01/f28/mv_guide_4_0.pdf

equipped with an extensive inventory of monitoring equipment available for use during this project. Our staff members have developed efficient and technically viable approaches for conducting primary monitoring and data retrieval. Having both the experience and proper tools, ADM provides cost effective and efficient field monitoring for this evaluation effort. In many cases, a low-level end-use monitoring effort can considerably improve engineering analysis estimates and modeling while reducing measurement errors, leading to improved estimates for future program savings.

If a site is selected for field monitoring, the field personnel will have all the personal protective equipment (PPE) required for safe and proper installation at the time of the visit. We will conduct measurement activities with minimal intrusion on the customer and facility operation. Our field personnel will also take photographs of a site and of its electrical and mechanical systems during the on-site visit, without infringing on customer or facility privacy. This form of documentation provides useful means of verifying equipment installation as well as resolving future potential contextual questions about the site.

2.5 Impact Evaluation Methods

ADM will employ the following approach to complete impact evaluation activities for the programs. ADM defines five major approaches to determining net savings for Avista's programs:

- Deemed Savings
- Partially/Fully Measured Retrofit Isolation (IPMVP Options A & B)
- Billing Analysis (IPMVP Option C)
- Facility-Level Regression Analysis (IPMVP Option C)
- Simulation Model Analysis (IPMVP Option D)

ADM notes that the Northwest RTF UES measures do not require NTG adjustments. In addition, billing analyses with counterfactual control groups, as proposed in our impact methodology, does not require a NTG adjustment, as the counterfactual represents the efficiency level at current market (i.e. the efficiency level the customer would have installed had they not participated in the program).

The facility-level regression analyses and simulation model analyses defined below indeed estimate gross energy savings, as they lack comparison groups, and therefore require NTG adjustments. For programs evaluated with these methods, ADM proposes to conduct in-depth interviews or participant surveys to estimate a NTG adjustment factor.

In the following sections, we summarize the general guidelines and activities ADM will follow to conduct each of the above analyses.

2.5.1 Deemed Savings

ADM will complete the validation for specific measures across each program using the RTF unit energy savings (UES) values, where applicable. Because ADM has experience with the Avista TRM, ADM understands that the Avista TRM references assigns average RTF UES for each measure. This is done in order to assign reasonably accurate ex-ante savings for each measure. For verified deemed savings, ADM will instead assign the appropriate RTF UES assigned to the measure specification, which is dependent on variables included but not limited to the following:

- Verify household type (SF, MF, MH, etc.)
- Verify space heating system type
- Verify cooling system type
- Verify water heating system type
- Verify heating and cooling zone
- Verify equipment sizing (tonnage, gallons)

Using this method, ADM will be able to accurately estimate deemed verified savings using region-based research conducted by the RTF. This enables the Evaluators and Avista to take advantage of the funding spent towards the RTF work in the region, access reviewed and approved UES values, and prioritize program learnings and adjustments based on credible estimates. The goal is to ensure that the proper measure unit savings are utilized in verified savings. ADM will document any cases where we recommend values differing from the specific unit energy savings workbooks used by Avista. If we find any projects that do not use the RTF values, we will complete additional investigation and review of measures with custom savings inputs.

ADM will review program application documents for a sample of incented measures to verify the tracking data accurately represents the original program documents. This sample will meet 90/10 precision goals. ADM will ensure the home installed measures that meet or exceed program efficiency standards.

ADM will then apply verification adjustments to these RTF values if deviations are found between tracking data and document-based verification, and if in-service rates deviate from 100% reported in survey responses. ADM will summarize measure-level verified savings impacts by extrapolating verified measure realization rates to the population of associated projects within each program.

2.5.2 Partially/Fully Measured Retrofit Isolation (IPMVP Options A & B)

For custom or otherwise non-deemed measures, ADM will carefully review the analyses and calculations that were used to develop stipulated savings values for the measures that are rebated. We evaluate the analysis for each measure according to the degree to which the savings calculations are supported and defensible and documentation is adequate. To facilitate our review of savings calculations, we use a checklist to record whether (1) the methodology used for the calculation was appropriate, (2) assumptions used were reasonable and appropriate, and (3) savings calculations were completed correctly.

The accuracy of a savings estimate developed through engineering calculations depends on the extent to which the analysis is based on correct assumptions regarding such factors as usage patterns and operating hours. We assess assumed and actual baseline conditions by reviewing program baseline assumptions, verifying adequate supporting documentation, and testing the validity of those assumptions via interviews with participants and the findings from primary verification efforts. In our review of the calculation procedures used for different types of measures, we focus on the main factors that determine energy use.

- Normally, the weakest part of any engineering calculation of savings relates to the characterization of the operating schedules of energy using equipment. In reviewing the energy

savings calculations, we determine whether the assumptions for usage patterns are within the range of reasonable hours for each building type and end-use application.

- For analyzing the calculations of energy savings and peak demand reductions associated with lighting measures, we focus on the three main factors that contribute to lighting energy use in a building: 1) lighting capacity, 2) the percentage of the capacity that is utilized, and 3) hours of use. That is, while lighting retrofits primarily reduce power densities (i.e., watts per square foot), account needs to be taken of the observed or typical utilization of that capacity.
- Similarly, there are factors whose effects on HVAC energy use are particularly important and that therefore are given special particular attention when we review the calculations for HVAC energy savings. Examples of such factors include thermostat set points and schedules, type of distribution system and control; ventilation rates, operating schedules for fans, lighting levels and schedules, particularly for office buildings, and equipment sizing.

Based on our evaluation of the calculations, we classify measures into one of three categories:

- Documentation is sufficient and original savings estimate is reasonable.
- Documentation is sufficient, but original savings estimate is not reasonable.
- Both documentation and original savings estimate are inadequate.

If a measure falls into one of the last two categories, we provide references that demonstrate observed deficiencies pertaining to the reasonableness of the given assumptions, the adequacy of the given documentation, and the appropriateness of the given methodology. Based on this work, we develop recommendations to Avista and program implementation staff regarding changes to stipulated savings values.

For custom measures, we develop a plan to sample and verify actual project savings and the engineering calculations used to calculate savings. Typically, we develop a process with program implementation staff through which the program implementer develops measurement & verification (M&V) plans that meet industry best standards for such projects and submits them to ADM engineering staff for review. We then revise the M&V approach to coordinate with the program implementer on on-site data collection or metering (as needed). This allows for the finalizing of savings prior to the issuing of a rebate check, allowing for custom incentives to be paid on verified savings, removing uncertainty surrounding what are often high-value projects. Custom projects are typically routed through the Site-Specific program. Evaluation details for this program and custom measures are descried further in section 5.1.

2.5.3 Billing Analysis (IPMVP Option C)

This section summarizes the general billing analysis methods ADM will employ for the evaluation of a subset of measures for each program.

For the purpose of this summary, a household is considered a treatment household if it has received a program incentive or has been defined in a treatment group, such as for the Residential Always-On Load Behavioral Program. Additionally, a household is considered a control household if the household has not received a program incentive or has been defined in a control group. To conduct a linear regression billing analysis for energy efficiency measures, ADM requires billing data for a control group to compare against treatment households. Control groups can be designed via randomized control trials (RCT) at the

outset of program design, or via quasi-experimental methods. For programs where RCT groups are defined, the evaluation team will compare the treatment group against the RCT-selected control group.

For programs where RCT design is not available, the evaluation team will request billing data for nonparticipant customers to serve as the control group. This method assumes Avista is able to provide consumption data for a group of similar non-participating customers in the service area. Further information on the selection of customers for a counterfactual control group is detailed in the "Comparison Group" section below, as well as potential risks and implications.

Using the constructed control group or the RCT assigned control group, ADM will fit a regression model to estimate weather-dependent daily consumption differences between treatment group households and control group households. ADM will include independent variables such as Heating Degree Days and Cooling Degree Days for weather controls, square footage, and other household characteristics where applicable to improve model confidence. We will tailor our regression model specifications to each program and measure. ADM will explore the following regression models:

- Fixed effect Difference-in-Difference (D-n-D) regression model (recommended in UMP protocols)
- Random effects post-program regression model (recommended in UMP protocols)

Further details on model specifications can be found below. It is important to note that because whole household consumption is used, the savings value includes the positive or negative effects of any non-measure changes made in the household. This option is used to determine the collective savings of all measures applied to the program-participating household by the energy meter. Therefore, ADM will attempt to isolate households that have installed only the measure in evaluation. For example, in evaluating the furnace measure in billing analyses, ADM will exclude households that have also installed an incented water heater in order to effectively isolate the effects of the furnace retrofit.

To evaluate the 2024 and 2025 program years, ADM will request billing data ranging from at least one year prior to measure intervention (i.e. date measure was installed, or date household was built) through the most recent date available from each household.

The following lists the data requirements for billing analysis:

- Monthly billing data for program participants (treatment)
- Monthly billing data for a group of non-program participants (control)
- Household-level data provided by Avista and public sources relevant to program requirements and targeted customers

In addition, ADM will gather the following datasets to complete each billing analysis:

- Historical NOAA weather data
- Typical Meteorological Year (TMY) weather data
- Publicly available household characteristics from county assessor data, if available

The following steps will be taken to prepare data:

- Gather billing data for homes that participated in the program

- Exclude participant homes that also participated in the other programs, if either program disqualifies the combination of any other rebate or participation
- Gather billing data for similar customers that did not participate in the program in evaluation
- Calendarize billing data
- Create a matched control group using non-participant billing and customer and/or household characteristic data
- Exclude homes missing sufficient billing data
- Exclude bills with consumption indicated to be invalid and/or outliers

ADM will report parameters necessary to portray model accuracy and significance such as coefficient p-values, adjusted r-squared values, and household-level and program-level kWh and Therm savings at the 90% confidence intervals for each state and fuel type. Program-year savings estimates at the monthly- and annual-level will also be reported for each state and fuel type.

ADM will summarize the measure-level impacts by extrapolating regression coefficients with TMY data to estimate typical measure savings based on participant household usage behaviors. The resulting regression measure-level savings estimates do not require any adjustments resulting from verification survey responses, as non-functioning equipment or equipment verified as not having been installed is already observed in the household consumption data.

One major caveat of this method is that we must be able to gather a sufficiently large sample of control households that are statistically similar to the treatment households. If the nonparticipant homes are statistically different from the participant homes in the pre-treatment period, this analytical approach will not provide meaningful results and ADM will therefore validate savings via RTF or Avista TRM engineering algorithms as well as additional literature review.

Billing analysis with a valid counterfactual group can provide reliable net impact estimates at the measure-level and program-level. However, the success of a billing analysis depends on the availability of several key factors:

- A sufficient number of customers have installed the measure to isolate measure-level savings;
- A sufficient number of similar nonparticipant customers can be identified and used towards propensity score matching to create a valid counterfactual group for the measure;
- Install dates for the measure display sufficient variability; and
- Historical billing data is available for at least one year prior to customer install dates.

This option is used to determine the collective savings of all measures applied to the program-participating household by the energy meter. It is important to note that because whole household consumption is used, the savings value includes the positive or negative effects of any non-measure changes made in the household.

ADM provides further detail on the implications of each of the components listed above.

2.5.3.1 Comparison Group

To estimate reliable net impacts through billing analysis, a similar counterfactual group must be selected. In programs where RCT groups are designed, such as for the Residential Always-on Load Behavioral Program, ADM will verify that these RCT treatment and control groups remain statistically valid in order to use in regression models. For billing analyses in which a RCT control group has not been previously defined, ADM will attempt to create a statistically similar control group using propensity score matching (PSM), a method that allows the evaluators to find the most similar nonparticipant customer households based on a range of independent variables. PSM allows the evaluators to find the most similar household based on the customers' billed consumption trends in the pre-period and verified with statistical difference testing. ADM has extensive experience conducting propensity score matching for residential program billing analyses of similar measures and is familiar with the implications and uncertainties involved in this type of analysis.

ADM proposes to construct a comparison group of nonparticipants who are similar to participants and reflect the counterfactual condition. ADM aims to achieve this by selecting customers from one of the two following options:

- Future program participants or
- Nonparticipants selected through propensity score matching (PSM)

For the prior case, ADM would isolate customers that participated later in the program year as the control group to compare against customers that participated earlier in the program year (the treatment group). ADM would then verify that the treatment and control groups display similar pre-period average daily consumption through t-testing and run a linear regression model to estimate the measure effect on consumption in the post-period.

In the latter case, ADM would use propensity-scoring matching (PSM) to match nonparticipants to similar participants using pre-period data, test the validity of the matches with t-testing, and run a linear regression to estimate the measure effect.

ADM will use available datasets to ensure the control households are similar to the treatment homes, using variables such household square footage, household heating type, household occupancy date, household zip code, and any other information available for the nonparticipant customers specific to the program. For example, to create a sufficient counterfactual group for the Low-Income Program, ADM will request flags for income eligibility across nonparticipant customers.

A propensity score is a metric that summarizes several dimensions of household characteristics into a single metric that can be used to group similar households. ADM will create a post-hoc control group by compiling billing data from a subset of nonparticipants in the Avista territory to compare against treatment households using quasi-experimental methods. This will allow ADM to select from a large group of similar households that have not installed an incented measure. With this information, ADM will attempt to create a statistically valid matched control group via seasonal pre-period usage. After matching, ADM will conduct a *t*-test for each month in the pre-period to help determine the success of PSM. ADM will also conduct a *t*-test for each month in the pre-period to help determine the validity of the previously defined RCT groups, if the program has defined these groups.

After creating a PSM control group, ADM will carry out linear regression modeling on the treatment and matched control group.

2.5.3.2 Fixed Effects Difference-in-Difference Regression Model

To calculate the impacts of heating season measures, ADM proposes to apply a linear fixed effects regression using participant and nonparticipant billing data with weather controls in the form of Heating Degree Days (HDD) and Cooling Degree Days (CDD).

For measures that are active during the heating season only, such as the air source heat pump or furnace, ADM will include heating degree days in the model specification. For measures that are active during the heating season and cooling season, such as water heaters and thermostats.

In addition, ADM will test and select the optimal temperature base for heating degree days and cooling degree days based on model r-squared values. ADM will select a value between 60- and 80-degrees Fahrenheit that displays the optimal model r-squared value. The selected base temperature therefore maximizes the total variation the model is able to explain.

The following equation displays the model specification to estimate the average daily savings due to the measure.

Equation 2-1: Fixed Effects Difference-in-Difference (D-n-D) Model Specification

$$\begin{aligned} ADC_{it} = \alpha_0 &+ \beta_1(Post)_{it} + \beta_2(Post \times Treatment)_{it} + \beta_3(HDD)_{it} + \beta_4(CDD)_{it} \\ &+ \beta_5(Post \times HDD)_{it} + \beta_6(Post \times CDD)_{it} + \beta_7(Post \times HDD \times Treatment)_{it} \\ &+ \beta_8(Post \times CDD \times Treatment)_{it} + \beta_9(Customer\ Dummy)_i + \varepsilon_{it} \end{aligned}$$

Where,

ADC_{it} = Estimated average daily consumption (dependent variable) in home *i* during period *t*

$Post_{it}$ = A dummy variable indicating pre- or post-period designation during period *t* at home *i*

$Treatment_i$ = A dummy variable indicating treatment status of home *i*

HDD_{it} = Average Heating Degree Days (base with optimal Degrees Fahrenheit) during period *t* at home *i*

CDD_{it} = Average Cooling Degree Days (base with optimal Degrees Fahrenheit) during period *t* at home *i*

$Customer\ Dummy_i$= A dummy variable indicating customer-specific identifier at home *i*

ε_{it} = Customer-level random error

α_0= The model intercept for home *i*

β_{1-9} = Coefficients determined via regression

The Average Daily Consumption (ADC) is calculated as the total monthly billed usage divided by the duration of the bill month. β_2 represents the average change in daily baseload in the post-period between the treatment and control group and β_5 and β_6 represent the change in weather-related daily

consumption in the post-period between the groups. Typical monthly and annual savings will then be estimated by extrapolating the β_2, β_7, and β_8 coefficients with Typical Meteorological Year (TMY) HDD and CDD data or actual weather displayed in the program year, gathered from NOAA.

2.5.3.3 Random Effects Post-Program Regression Model

ADM will also explore the post-program regression model with random effects to estimate net program savings. The post-program regression (PPR) model combines both cross-sectional and time series data in a panel dataset. This model uses only the post-program data, with lagged energy use for the same calendar month of the pre-program period acting as a control for any small systematic differences between the treatment and control customers; in particular, energy use in calendar month *t* of the post-program period is framed as a function of both the participant variable and energy use in the same calendar month of the pre-program period. The underlying logic is that systematic differences between treatment and control customers will be reflected in the differences in their past energy use, which is highly correlated with their current energy use. These interaction terms allow pre-program usage to have a different effect on post-program usage in each calendar month.

The model specification is as follows:

Equation 2-2 Post-Program Regression (PPR) Model Specification

$$ADC_{it} = \alpha_0 + \beta_1(Treatment)_i + \beta_2\,(PreUsage)_i + \beta_3\,(PreUsageSummer)_i + \beta_4(PreUsageWinter)_i + \beta_5(Month)_t + \beta_6(Month \times PreUsage)_{it} + \beta_7(Month \times PreUsageSummer_)_{it} + \beta_8(Month \times PreUsageWinter)_{it} + \varepsilon_{it}$$

Where,

i = the *i*th household

t = the first, second, third, etc. month of the post-treatment period

ADC_{it} = Average daily usage for reading *t* for household *i* during the post-treatment period

$Treatment_i$ = Dummy variable indicating whether household *i* was in the treatment or control group

$Month_t$ = Dummy variable indicating month-year of month *t*

$PreUsage_i$ = Average daily usage across household *i*'s available pre-treatment billing reads

$PreUsageSummer_i$ = Average daily usage in the summer months across household *i*'s available pre-treatment billing reads

$PreUsageWinter_i$ = Average daily usage in the winter months across household *i*'s available pre-treatment billing reads

ε_{it} = Customer-level random error

α_0= The model intercept for home *i*

β_{1-8} = Coefficients determined via regression

The coefficient β_1 represents the average change in consumption between the pre-period and post-period for the treatment group.

In this specification, savings are calculated by:

Equation 2-3 Monthly Savings Estimate

$$Savings = \sum Treatment\ Coeff \times Number\ of\ recipients\ in\ month\ i \times Number\ of\ days\ in\ month\ i$$

ADM will summarize measure-level savings using the equation above.

2.5.4 Facility-Level Regression Analysis (IPMVP Option C)

This section summarizes the facility-level regression analysis methods ADM will employ for the evaluation of a subset of programs in the portfolio. The methodology provided here references UMP Chapter 24 on Strategic Energy Management (SEM) Evaluation Protocol[8].

For the purposes of this summary, a facility may comprise a single building with a single meter or multiple buildings at the same time with multiple meters. Additionally, the evaluation period is when energy savings from retrofits will be estimated, and the baseline period is when energy consumption measurements are taken to establish a baseline for the facility's energy consumption. The objective of this evaluation activity is to estimate changes in a facility's energy consumption due to the program. In order to complete this analysis, it is important to have the following datapoints for each facility:

- Hourly or 15-minute interval meter data of the past 24 or 36 months for each facility
- Facility square footage
- Facility occupancy
- Detailed information on facility type
- Schedule of operations
- Facility shutdowns or closures
- Efficiency measures installed
- Changes in facility or building operations or production unrelated to program, but affecting energy consumption

In some cases, submetering may be feasible with the implementation of an ECM. This information will give the evaluators sufficient understanding of energy consumption at the facility to construct a valid energy consumption model tailored to the specific facility being evaluated. It is also important that the expected energy savings are sufficiently large to be detected with a statistical analysis of the available data.

The EnergyStar Portfolio Manager information will be reviewed to explore consumption trends and variation in benchmarking over time. We will also perform a documentation review each quarter of the

[8] https://www.nrel.gov/docs/fy17osti/68316.pdf

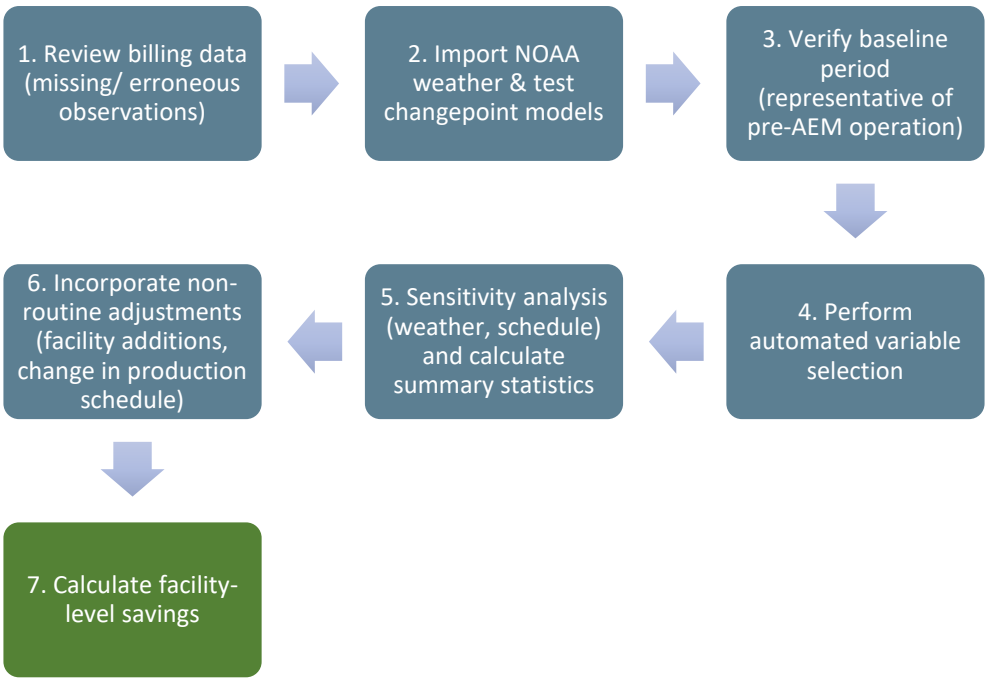
application form, measure tracker, occupancy tracker, and any other information available. Routine status update calls will mitigate any long-term risks from a lack of information.

The model specifications for the facility-level regression will be dependent on the facility to minimize observed standard errors. Therefore, there are no regression model specifications listed in this section. However, the analysis will be a multivariate linear regression model, with weather-dependent (Heating and Cooling Degree Days) and site-specific variables, such as square footage and building type, as inputs. We will also identify, estimate, report, and verify non-routine events monthly and apply non-routine adjustments as necessary on an annual basis. The M&V plan will be developed by all key members of our team and will be updated with feedback from Avista and relevant stipulations from the IPMVP Application Guide on advanced M&V strategies.

ADM will use consumption data in the baseline period (the 12 months immediately prior to project participation) and in the performance period (program intervention) in a linear regression model with specifications tailored to each building to predict monthly energy usage if no measures were installed. If additional baseline meter data is available, we may request consumption data as far back as 36 months. Specific models for each facility will be selected based on the highest observed R-squared value as well as the root mean squared error's coefficient of variation. High frequency data such as hourly or daily data is encouraged for this type of evaluation because it increases the probability of detecting energy savings and provides greater insights about the program effects.

ADM summarizes the steps completed towards this facility-level analysis:

Figure 2-2. Facility-Level SEM Analysis Process Flow



The statistical packaging software R will be used to conduct our analyses. An R shiny application provides a browser-based user interface easily operable by all users simultaneously. Although a similar tool has been developed, a custom version will be generated for this scope-of-work to incorporate the requirements in the M&V Guidelines. The automated regression tool (ART) will incorporate the

regression analysis, visual representation, uncertainty analysis, offline and online change point detection, and NRA's. Use of a shiny interface allows for secure access through a web browser to an internal server. Access to the shiny application can be granted to stakeholders as necessary for collaboration.

To complete the analysis, the following data is necessary:

- Building data from Avista including gross sf, leased sf, and space use type;
- A list of planned installed measures and their expected energy savings, costs, and timelines in the initial project application;
- Continuous monthly utility billing data in baseline period through performance period for all participants;
- National Oceanic and Atmospheric Administration (NOAA) weather data measured at the nearest weather stations; and
- Onsite generation, submeter, and building automation system (BAS) data.

Building data to be collected includes building space type, gross square footage, leased square footage percent per building space type, occupancy schedule, details of planned energy efficiency measures, and details of current HVAC, HVAC controls, lighting, lighting controls, server loads, and other building equipment. We may request additional information to increase the accuracy of the analysis. For example, building base temperatures for each space type, along with scheduled thermostat settings is valuable information in order to accurately estimate HDDs and CDDs.

Routine adjustments will be made to the model using the provided billing data and as site variable inputs change. Each year, for new construction buildings, we will use observed energy use data to change the shape of the baseline curve for the following year. We will also adjust the energy model for any changes in occupancy, operating hours, space use type, data centers, and cold years, as specified in the M&V Guidelines.

Through collaboration and data reviews, potential non-routine events (NREs) will be identified to integrate the necessary adjustments before calculating avoided energy use. NREs are events that change a building's energy use that were not accounted for in the baseline model, such as, changes in space use type, change in operating hours, fuel switching, on-site energy generation, occupancy changes, etc.

ADM will specify the regression model for the facility's energy consumption to accurately predict the facility's adjusted baseline. A model designed with this goal is able to yield an accurate estimate of facility energy savings and help the evaluator identify relationships in energy consumption data not evident through engineering analysis. ADM will accomplish this by selecting independent variables that portray important details about the facility's operation and which provide a level of detail about energy consumed at the facility. ADM will include HDD and CDD independent variables in addition to information on facility temperature setpoints, and we will explore a range of HDD and CDD base temperatures to select a base temperature that yields the best model fit. ADM will test the model fit by observing several factors, such as model residuals to investigate any auto-correlated errors, model *R*-squared coefficients, and predictive accuracy by comparing predicted energy consumption against metered energy consumption. ADM will include in the evaluation report the standard errors and confidence intervals to indicate the savings uncertainty at the facility-level and program-level.

ADM will explore the following regression-based methods for estimating facility savings:

E. Forecast models
F. Pre-post models
G. Normal operating conditions models
H. Backcast models
I. Panel models

Each of the models listed above comply with IPMVP Option C, as each uses regression to adjust the baseline for differences in facility operating conditions between baseline and reporting periods.

The results from this analysis are facility-level, gross verified energy savings. ADM understands that Avista reports net energy savings in Washington and Idaho. Therefore, an additional component of this evaluation method is to adjust facility-level gross savings with a NTG adjustment. For programs which are evaluated with this method, ADM will also interview building managers to gather information on awareness of the program, whether energy efficiency measures would have been installed in the absence of the program, or alternative improvements in the absence of the program.

2.5.5 Simulation Modeling (IPMVP Option D)

ADM provides the following method as a supplemental option for estimating verified net savings for the ENERGY STAR Manufactured Homes Program, or new potential new construction pilots. This method involves a whole building simulation (IPMVP Option D) in addition to a billing analysis with a counterfactual control group.

The simulation analysis results in gross savings estimates whereas a billing analysis with a control group results in net savings estimates. Therefore, ADM proposes the option of a simulation analysis with a net-to-gross (NTG) savings adjustment or a billing analysis with a counterfactual control group.

This approach involves the comparison of participating homes with a User Defined Reference Home (UDRH). The methodology detailed in this section is supported by the IPMVP Option D as a whole building simulation using calibrations. ADM will use the simulation models to compare a sample of participating homes with a User Defined Reference Home (UDRH), an agreed upon set of efficiency standards built to represent the baseline residential home in the region. The UDRH is defined in more detail in the following subsection.

ADM will use the program REM/Rate to complete whole building simulation modeling efforts. The UDRH feature in REM/Rate allows energy consumption to be calculated using energy efficiency input values for both the efficient home and the baseline home. The UDRH will be designed as an exact replica of each program participating home in terms of size, structure, and climate zone. However, instead of using the actual HERS-rated efficiency values, we use the energy codes defined in the UDRH. ADM will gather energy characteristics for the efficient, rated home by requesting HERS datafiles from the certified HERS-raters or by gathering information from the HERS certificates required by the program and provided by Avista.

To calculate the gross savings for a given home, first, the as-built home is verified using building characteristics found in supporting documentation. Once the efficient home is modeled, the energy model calculates the unadjusted gross savings by subtracting the energy use of the as-built home from

the energy use of its UDRH baseline home. This method provides a reliable and supported means of verifying gross residential new construction home savings.

Energy savings will be calculated per-home with the following calculation:

Equation 2-4: Whole Building Model Energy Savings

$$Energy\ Savings = Consumption_{UDRH} - Consumption_{ENERGY\ STAR}$$

Where,

$Consumption_{UDRH}$ = Simulated energy consumption values from REMRate for a household under the UDRH efficient code standards

$Consumption_{ENERGY\ STAR}$ = Simulated energy consumption from REM/Rate for a household built referencing the HERS certification values

ADM defines the UDRH used to evaluate simulated savings in the following section.

User Defined Reference Home (UDRH)

The UDRH represents a home built to meet the state of Idaho's and Washington's current minimum energy efficiency code requirements. Idaho uses the residential 2015 International Energy Conservation Code (IECC) with amendments[9] for newly constructed residential homes until January 1, 2021. Idaho's current building code references the residential 2018 IECC with Idaho amendments. ADM will use the residential 2018 IECC with Idaho-specific amendments efficiency values to create the UDRH when evaluating homes built in Idaho after January 1, 2021. This comparison will provide an accurate simulation of a newly constructed minimum efficient code residential home to compare against efficiency, program-participating homes. For homes built in Avista's territory in Washington state lines, ADM will create a UDRH based on Washington residential building codes, which are modeled after International Residential Code (IRC) 2018, which came into effect on February 1, 2021. If this IECC or IRC code for Idaho or Washington is updated before or during either the 2024 or 2025 program years, ADM will update the UDRH as necessary to meet residential building codes in each state.

Realization rates from the home-level analyses can be used to provide strategic guidance for program improvement. We will examine realization rates for commonalities among home builders or HERS raters and inform Avista if any program partner demonstrates a statistically significant increased likelihood of association with low realization rates. We will then review the home results in further detail to identify a root-cause (errors in model input, construction practice, equipment sizing, etc.)

2.6 Net-To-Gross and General Spillover Analysis

ADM proposes to conduct NTG analysis for programs in which impact evaluation methods result in gross energy savings, such as the Washington State Buildings Early Adopter Incentives Pilot, and the BEIQ Pilot. For this task, we will interview a sample of facility managers to assess free ridership and spillover. ADM will work with Avista to develop a sampling plan which achieves 90/10 precision for free ridership and spillover estimates.

[9] https://www.energycodes.gov/adoption/states/idaho

As this task involves spillover assessment and ADM staff have developed an innovative approach to spillover assessment, we have opted to discuss the optional NTG task in this section. We first describe our approach to assessing free-ridership and spillover specifically for the option task. We then discuss more generally the innovative approach to spillover assessment.

2.6.1 Free Ridership and Spillover Assessment

Our proposed free ridership approach is consistent with other self-report approaches. We will ask building managers questions to assess the likelihood that they would have reduced energy consumption or installed energy efficient measures absent the program interventions. In this case, interventions would not be limited to the program incentives, but to program outreach and any other assistance the program offers. If a building manager indicated improvements would not have been implemented to the same level without program assistance, we would ask questions to identify the likelihood that the building manager would have included any energy efficiency measures and, if so, what those measures would have been.

For each facility and measure, we will estimate a free ridership probability based on the average of three scores: a *program components score*; a *program influence score*; and a *no-program score*. Each score has a value ranging from 0 (no free ridership) to 1 (maximum free ridership).

The program components score is based on how much the building manager's decisions to implement energy efficiency improvements was influenced by: 1) technical assistance or information from program staff; 2) technical assistance or information from program implementers; 3) the program incentives; and 4) program informational materials. The maximum rating from the four components, converted to a score from 0 (corresponding to a rating of 1) to 1 (corresponding to a rating of 5), represents the program components score.

The program influence score is based on respondents' rating of how likely (on a scale from 1 to 5) it is they would have built any of the efficient homes if the rebate and information had not been provided by the program. It is assigned by converting the rating into a score from 0 (corresponding to a rating of 5) to 1 (corresponding to a rating of 0).

Finally, the no-program score is based on responses to a series of questions about the energy efficiency measures that the facility would have likely installed that meet energy prescription efficiency standards without the program.

The free ridership score is calculated as:

1 – Average (Program Components Score, Program Influence Score, No Program Score)

We also will ask questions to assess spillover. We will quantify a series of questions into a score representing the maximum level of spillover that the nonparticipating buildings from participating building managers represent. Then, to factor in the program influence on the decision to implement energy efficiency improvements on participating buildings, we will adjust the maximum spillover value by 1-FR, where FR represents the free ridership score program.

2.7 Cost-Effectiveness Tests

ADM will calculate each program's cost-effectiveness, avoided energy costs, and implementation costs. ADM will use our ADM-developed cost-effectiveness tool to provide cost-effectiveness assessments for the Residential, Low-Income, Commercial, and Industrial Portfolios by program, fuel type, program year, and measure, for each state.

As specified in this solicitation, ADM will determine the economic performance with the following cost-effectiveness tests:

- Total Resource Cost (TRC) test;
- Utility Cost Test (UCT);
- Participant Cost Test (PCT);
- Rate Impact Measure (RIM) test; and
- Resource Valuation Test (RVT).

ADM has extensive experience conducting and summarizing cost-effectiveness for residential and non-residential programs for utility commission reporting across the country as well as summarizing impact evaluation findings that could be useful to improve program cost-effectiveness, such as adjustments to program requirements, program tracking, and program implementation.

2.8 Non-Energy Benefits

ADM will use the RTF and Avista's non-energy benefits evaluation report results to quantify non-energy benefits (NEBs) for residential measures with established RTF values where available. Measures with quantified NEBs include residential insulation, high efficiency windows, air source heat pumps, and ductless heat pumps. ADM understands the RTF provides NEB values for electric measures, but not natural gas measures.

In addition to the residential NEBs, ADM proposes to apply the end-use non-energy benefit and health and human safety non-energy benefit to the Low-Income Program. ADM understands that the two major non-energy benefits referenced above are uniquely applicable to the Low-Income Program. ADM will apply those benefits to the program impacts as well as additional non-energy benefits associated with individual measures included in the program.

In the case NEBs are also quantified in Avista's separate process evaluation, ADM will incorporate these NEBs to the impact evaluation. ADM will also explore potential non-energy impacts (NEIs) and NEBs such as the following, for each program:

1. GHG reduction
2. Reduced maintenance costs for customers
3. Water conservation
4. Job creation

ADM will work with Avista staff during the kick-off meeting to identify a listing of NEIs and NEBs that are of interest for each program. Additionally, ADM recognizes there may be additional health and safety benefits for programs that target Named Community efforts. ADM will work with Avista to prioritize the identification of such additional NEIs and NEBs for these programs as they are designed and rolled out.

Given the differences across these programs, we expect that the NEBs quantified (or qualified) for each will vary accordingly.

3. Process Evaluation Approach

ADM will conduct a thorough process evaluation to identify program strengths as well as areas for potential program improvement. As detailed below, the process evaluation will, at a minimum, address all the objectives identified in the RFP and cover all elements of a successful program, including design, staffing, marketing, implementation, delivery, and customer response. An important part of this evaluation will be to identify market barriers that impede the program's reach into all parts of Avista's residential and non-residential markets.

The following subsections present overviews of our approach to process evaluation, followed by information on how we identify and answer important research questions, our data collection approaches, interview and survey implementation, and the timing and cadence of process evaluation activities.

3.1 Process Evaluation Overview

Our approach to process evaluation for the Avista portfolio will address the overall effectiveness of program activities in overcoming barriers and will provide strategic guidance to assist program improvement. Data collection activities will provide information on the effectiveness of program processes and procedures, including how well the program works with key stakeholders to optimize program operations. To this end, ADM will:

- Review program documentation and interview program and implementer staff to understand program goals, rules, and processes - including any coordination with delivery of gas utility programs - as well as to reveal any issues or concerns to be investigated through other process evaluation data collection;
- Interview applicable market actors about their experiences with the program to shed light on the effectiveness of program processes, the communication between Avista and its implementers, marketing activities, customer decision-making, and participation barriers;
- Survey program participants about their experiences, including satisfaction with the program, and their decision-making process; and
- Survey nonparticipants to reveal the level of program awareness and identify barriers to participation.

From the information obtained from the process evaluation, ADM will identify what the programs are doing well and what factors may be preventing the programs from achieving their goals or doing so more cost-effectively. This will help Avista and its implementers better understand the impact evaluation results and make related management decisions.

ADM will use process evaluation best practices, which include:

- Allocating process evaluation resources based on each program's contribution to overall energy savings; evidence of evaluation need (e.g., failure to meet savings goals or unsolicited feedback from customers or trade allies); changes in program design or implementation; and the recency with which programs had a detailed process evaluation.

- Designing all data collection instruments to address specific research questions, ensuring that all needed information is collected, and none is collected that will not or cannot be used.
- Presenting the process evaluations results clearly and efficiently, identifying how each interview or survey finding addresses a specific research question. Avista will not have to sort through lengthy descriptions of every survey response trying to figure out the meaning of the results.
- Providing meaningful high-level conclusions, which will form the basis for clear, actionable recommendations for process improvements where identified.

As specified by Avista, we will conduct a separate process evaluation for Washington and Idaho Programs. Each evaluation will cover all programs. We recognize Avista's desire for each process evaluation to be as comprehensive and meaningful as feasible. To that end, we will ensure that the process evaluation for each program is informed by multiple sources: staff and implementers, trade allies, program participants, and nonparticipating customers.

Where possible, we will seek to achieve the standard level of 90% confidence of 10% precision (90/10) – separately for Washington and Idaho – for participant surveys. We note, however, Avista's recognition that such a level of confidence and precision is not always feasible, particularly in programs with relatively small participant populations. In the case of market actors, such as contractors, retailers, and distributors, the choice of data collection approach will be driven by the size of the relevant market actor population and the nature of the data to be collected.

Table 3-1 summarizes our data collection approaches for each program. We will revise this as needed after we obtain greater detail about program participation and trade ally involvement during the project initiation period. We discuss sample size and confidence/precision issues in more detail in Section 3.3, *Data Collection Approaches*, below.

Table 3-1: Summary of Process Evaluation Sources, by Program

<table>
<tr><th>Programs</th><th>Document & Data Review</th><th>Staff / Implementers</th><th>Trade Allies</th><th>Participants</th><th>Non-participants</th></tr>
<tr><td colspan="6">Residential and Low-Income</td></tr>
<tr><td>Residential Appliance and Thermostat Program</td><td rowspan="13">Review all program documentation, (e.g., marketing plans and materials, implementation plans, applications) and project files.</td><td rowspan="13">Individual or group interviews with program and implementer staff of each program</td><td rowspan="6">Omnibus online survey and/or phone interviews</td><td rowspan="11">Program-specific multi-mode surveys, targeting 90/10 confidence/ precision per state</td><td rowspan="13">Cross-cutting multi-mode survey, with 90/10 confidence/ precision (n = 68) in each state</td></tr>
<tr><td>Residential Shell Program</td></tr>
<tr><td>Residential Fuel Efficiency Program</td></tr>
<tr><td>Residential On-Bill Repayment/Financing Program</td></tr>
<tr><td>Residential Always-On Behavioral Program</td></tr>
<tr><td>Residential Behavioral Program</td></tr>
<tr><td>Residential Home Energy Audit Program</td></tr>
<tr><td>Residential Direct Install Insulation Program</td></tr>
<tr><td>Low-Income</td><td>CAP interviews</td></tr>
<tr><td>Named Community Investment Fund (NCIF) Program</td><td>CAP interviews/ other organization interviews/ participant interviews</td></tr>
<tr><td>Residential ENERGY STAR Manufactured Homes</td><td>Retailer interviews</td></tr>
<tr><td>Residential Multifamily Weatherization – New Offerings Program</td><td>Property manager interviews</td><td rowspan="2">N/A</td></tr>
<tr><td>Residential Midstream Program</td><td>Distributor interviews</td></tr>
<tr><td colspan="6">Commercial & Industrial</td></tr>
<tr><td>C&I Appliance and HVAC Controls Program</td><td rowspan="12">Review all program documentation, (e.g., marketing plans and materials, implementation plans, applications) and project files.</td><td rowspan="12">Individual or group interviews with program and implementer staff of each program</td><td rowspan="12">Omnibus online survey and/or phone interviews</td><td rowspan="11">Program-specific multi-mode surveys, targeting 90/10 per state</td><td rowspan="12">Cross-cutting multi-mode survey, with 90/10 confidence/ precision (n = 68) in each state</td></tr>
<tr><td>C&I Site-Specific Program</td></tr>
<tr><td>C&I Prescriptive Lighting Program</td></tr>
<tr><td>C&I Small Business Direct Install Lighting Program</td></tr>
<tr><td>C&I Prescriptive HVAC Variable Frequency Drive Program</td></tr>
<tr><td>C&I Prescriptive Shell Program</td></tr>
<tr><td>C&I Green Motors Program</td></tr>
<tr><td>C&I Grocer Program</td></tr>
<tr><td>C&I Building Operator Certification Program</td></tr>
<tr><td>C&I Midstream Program</td><td>N/A</td></tr>
</table>

3.2 Identifying and Answering the Important Process Questions

ADM will use the various information sources – program documentation review, staff and implementer interviews, applicable market actor interviews, and customer surveys – to provide convergent information to address the identified research questions. We will make maximally effective use of each source by identifying which sources will provide the most applicable information to each question, as shown in Table 3-2. For example, while program and implementer staff interviews will likely touch on most or all research questions, we will rely more heavily on feedback from market actors, participants, and nonparticipants to assess customer service and market barriers.

Market actors and program participants will provide important input into most questions relating to program implementation, but they likely will not be major sources of information regarding management tools or cost management. Our assessment of nonparticipants' awareness of the program offerings and reasons for nonparticipation will provide important information relating to program marketing, participation information, rebates and incentives, and customer service as well as participation barriers.

Table 3-2: Data Sources to Answer Process Evaluation Research Questions

Process Evaluation Research Question	Document and Data	Staff	Market Actors	Participants	Nonparticipants
Are programs run per design and efficiently/effectively?	✓	✓	✓	✓	
Is staffing/organization sufficient and appropriate?		✓			
Is customer service of high quality, timely, and effective?			✓	✓	✓
Are marketing plans implemented per design and effective?	✓	✓	✓	✓	✓
Are quality assurance procedures appropriate and effective?	✓	✓	✓	✓	
Are management and implementation tools appropriate and effective?	✓	✓			
Are implementation contractors running programs effectively?		✓	✓	✓	
Are program materials effective and complete?	✓	✓	✓	✓	✓
Are costs managed properly and efficiently?	✓	✓			
Are contractors effectively capturing appropriate opportunities and ensuring comprehensive services?		✓	✓	✓	
Are rebates/incentives appropriate for meeting program goals?		✓	✓	✓	✓
What are the market barriers that impede program reach?			✓	✓	✓

The key to delivering a truly valuable process evaluation is refining and specifying the research questions by reviewing previous evaluation findings and thoughtfully interviewing program and implementer staff. For example, our review of prior evaluation reports identified the following issues that we would expect to investigate in our process evaluation:

- **Contractors are an important source of program awareness among program participants, while word of mouth and bill inserts are the most common among program nonparticipants. Recently, contractors as a source of awareness of residential programs have decreased, while word of mouth has increased.** The relationship between source of awareness and participation status has at least two interpretations: 1) that nonparticipants are less likely than participants to

have done recent work with a contactor and so have had less opportunity to learn from a contractor about the program; and 2) that the contractors that nonparticipants have worked with are less likely to tell their customers about the program. Both of these interpretations have potential implications for the program. The second interpretation points to greater opportunity for the program to increase participation, by increasing outreach to contractors to increase program referrals when working with customers that have contacted them for home improvement projects. However, the first interpretation may also have implications for increasing program participation if contractors can sell more improvement work by making more program referrals. Investigating which of these interpretations is more accurate by asking customers about their experience with contractors could help point the program to the correct outreach strategies. The decrease in the degree to which contractors have served as a program awareness source underscores the importance of investigating this issue and identifying reasons for the decrease.

- **The process evaluation of the 2019 Idaho low-income program pointed to high turnover by weatherization contractors.** This could affect the success of the program not only by reducing the availability of contractors to complete weatherization projects, but also potentially by decreasing the quality of weatherization treatments if many are performed by inexperienced contractors. Investigating the causes of the high turnover rate, and the impacts of turnover on project completion and quality, could provide the program with information that it could use to reduce turnovers and mitigate the impacts.

Another aspect of identifying and answering the important questions is understanding what is and is not meaningful in evaluation results. In preparing reports, ADM seeks to prioritize the dissemination of information that can lead to material and beneficial changes or insight for Avista's program managers and stakeholder groups.

3.3 Data Collection Approaches: Core Programs

The following provides details on the process evaluation data collection approaches we will use.

3.3.1 Document and Data Review

We will review available program documents, including program manuals, program logic models, contractor training materials, marketing materials and plans, and application forms to better understand how the program operates and to inform the evaluation design. The review also serves as process evaluation input, by helping us identify opportunities for program improvement, such as potentially overlooked marketing channels or tactics, or opportunities to streamline or expand application forms to collect needed data.

Reviewing Avista's program logic models will help ensure our understanding of each program's objectives and how the program's activities are expected to achieve those objectives. The logic model review will be a process evaluation end in itself – we will provide feedback on how well the model explains and describes the program theory – but it also will guide data collection and interpretation. In turn, our data collection activities may provide feedback on how a given model should be revised to better reflect the realities for that program.

We also will review project tracking data, which is a valuable resource for understanding how the program is performing and the market response. A review of the data system can also verify that the data are sufficient and complete enough to support program management and evaluation.

3.3.2 Program and Implementer Interviews

We will conduct in-depth interviews (IDIs) with program management staff to fill out our understanding of program design, goals, processes, and marketing strategies; to assess communication and coordination between Avista and its implementers; to get Avista's input on its implementer performance; to gain insight into quality control and assurance processes; to identify challenges that the programs have encountered and how those challenges have been addressed; and to clarify evaluation goals and research questions. Senior evaluation team members will conduct the IDIs using semi-structured interview guides (see Section 3.4, *Instrument Development*, below).

3.3.3 Participant In-depth Interviews for Named Community Programs

We will conduct in-depth interviews (IDIs) with select program participants to fill out our understanding of participant customer journey, benefits of the program, and helpful communication methods. This method of data collection will be prioritized for programs providing offerings to Named Communities. Because these programs are new offerings from Avista and are targeted towards customers in Named Communities with the goal of resolving their unique barriers to program participation and unique energy needs, ADM will develop a unique participant interview guide for this target demographic that focuses on energy burden, program satisfaction, program communication methods, and additional energy needs. Senior evaluation team members will conduct the IDIs using semi-structured interview guides (see Section 3.4, *Instrument Development*, below).

3.3.4 Market Actor, Participant, and Nonparticipant Surveys

We will conduct either telephone or web surveys with market actors, program participants, and nonparticipants. We anticipate conducting surveys as telephone, web, or mixed-phone/web surveys. We typically will conduct web surveys with email invitations, but we also use mail or postcard invitations to take web surveys. We have used the latter when email addresses were not available or, in some cases, as an adjunct to the email invitations.

The selection of survey type will depend on the nature of the target audience, the anticipated challenges in reaching customers by various methods, and the nature of the information to be collected. Decreasing response rates to residential phone surveys over the past several years have made web surveys a more cost-effective approach for residential target audiences. Response to web surveys also have declined in recent years; thus, we will consider and recommend other modes as appropriate.

We still obtain good response rates to phone surveys of most nonresidential target groups, including market actors. Further, phone surveys are valuable when discussing more technical issues that may require clarification or when contacting larger customers, when the contact identified in project records is not necessarily the best respondent for an organization. Thus, we will consider phone surveys, as appropriate, with these groups.

3.3.4.1 Market Actors

In the case of market actors, such as contractors, retailers, and distributors, the choice of data collection approach will be driven by the size of the relevant market actor population and the nature of the data to be collected. However, as noted in Table 3-1, above, we anticipate a combination of online surveys and phone interviews.

3.3.4.2 Participants

As Table 3-3 shows, achieving 90/10 confidence/precision separately for each state and fuel type would not be feasible, as it would require achieving survey completions with more than one-third of the participant population. Anticipating this, Avista has indicated that participant samples for each state may include residents of the other state so long at most of the sample comes from the native state. The ADM team will make use of the above allowance when needed but will take measures to ensure that each sample includes the minimum number of non-native customers.

Table 3-3: Estimated Participant Population[1], Sample Size, and Respondent Goals by Program Separated by State

Program[2]	Washington						Idaho					
	Electric			Natural Gas			Electric			Natural Gas		
	Pop.	90/10	%	Pop.	90/10	%	Pop.	90/10	%	Pop.	90/10	%
Residential/Low-Income												
Residential Appliance and Thermostat Program	400	58	15%	400	58	15%	400	58	15%	400	58	15%
Residential ENERGY STAR Manufactured Homes Program	30	21	70%	5	5	100%	15	13	87%	5	5	100%
Residential Shell Program	300	56	19%	1,700	66	4%	150	47	31%	400	58	15%
Residential Fuel Efficiency Program							150	47	31%			
Residential Midstream Program	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Residential Multifamily Weatherization – New Offerings Program	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Residential On-Bill Repayment/Financing Program	100	41	41%	50	29	58%	70	35	50%	30	21	70%
Residential Always-On Behavioral Program	50,000	68	0%	50,000	68	0%						
Residential Behavioral Program	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Residential Home Energy Audit Program	150	47	31%				150	47	31%			
Residential Direct Install Insulation Program	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Low-Income Program	1,400	65	5%	1,600	65	4%	350	57	16%	400	58	15%
Named Community Investment Fund (NCIF) Program	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Commercial & Industrial												
C&I Appliance and HVAC Controls Program	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
C&I Site-Specific Program	54	17	32%	9	5	56%	9	23	36%	3	3	100%
C&I Prescriptive Lighting Program	870	63	7%				473	60	13%			
C&I Small Business Direct Install Lighting Program	200	51	26%				100	41	41%			
C&I Prescriptive HVAC Variable Frequency Drive Program	2	2	100%				4	4	100%			
C&I Midstream Program	500	68	14%	400	68	17%	400	68	17%	300	68	23%
C&I Prescriptive Shell Program	6	6	100%	1	1	100%	1	1	100%	1	1	100%
C&I Green Motors Program	8	8	100%				2	2	100%			
C&I Grocer Program	9	8	89%				4	4	100%			
C&I Building Operator Certification Program	11	11	100%	11	11		11	11	100%	11	11	100%

[1] Participant populations were estimated from the 2024 Annual Conservation Plan, making some assumptions about the mean number of measure units per participant and assuming 80% of participation would be in Washington and 20% in Idaho. ADM will, of course, use the most up-to-date data on actual participation available to establish sample sizes.

ADM will make use of the above allowance when needed but will take measures to ensure that each sample includes the minimum number of non-native customers. Thus, for example, according to Table 2-1, achieving 90/10 for electric customers in the ENERGY STAR Manufactured Homes would require obtaining 21 survey completions for Washington (70% of the population) and 12 for Idaho (80% of the population). Assuming we complete the survey with 4 (33%) of the estimated 12 Idaho customers, we would "borrow" 8 of the Washington survey respondents to complete the Idaho sample.

We will work with Avista to establish an approach that ensures that, in such cases, we use the non-native respondents that best represent the native state. Possible approaches include selecting those who live closest to the state border or to draw a non-native subsample that is demographically closest to the native state sample.

Notwithstanding the above, it remains the case that it likely will not be feasible to achieve 90/10 sample sizes for several programs, even by supplementing state samples with non-native participants, as Table 3-4 illustrates. In this table, we have summed the estimated Washington and Idaho participant populations for each program. For the 90/10 sample, we have summed the completion counts *that would be required if we achieved a 90/10 sample for each state*, with two-thirds of each state's count coming from native participants. For example, according to Table 3-3, above, achieving 90/10 samples with electric customers for the Residential On-Bill Repayment Program would require 41 survey completions for Washington and 35 for Idaho. If two-thirds of each sample were native customers, that would require responses from 28 Washington customers and 13 Idaho customers, for a total of 41 responses.

For programs for which obtaining a 90/10 participant sample is not feasible, we propose a combination of online surveys, supplemented with in-depth interviews with selected participants. The latter may include those who did not respond to the online survey and/or those who indicated any dissatisfaction in the online survey. In the case of programs with very small participant populations, we may attempt a census of participants.

In developing any sample, we will ask Avista for a list of customers that had been selected for another survey within the previous year, if available, to scrub the sample frame of such customers. When sample development overlaps for two or more surveys, we will allocate the overlapping customers to one or the other sample to ensure that no customer is recruited for more than one survey (or, in the case of influential, "must-have" customers, that they are included in all important survey efforts in a manner that minimizes survey and EM&V burden to the customer).

Table 3-4: Estimated Combined Washington and Idaho Participant Population, Sample Size, and Required Survey Completion Rates for All Programs – Assuming Two-Thirds of Each State's 90/10 Sample are Native to that State

Program	Washington and Idaho Combined					
	Electric			Natural Gas		
	Pop.	Sample	%	Pop.	Sample	%
Residential Appliance and Thermostat Program	800	63	8%	800	63	8%
Residential ENERGY STAR Manufactured Homes Program	45	28	62%	10	9	90%
Residential Shell Program	450	59	13%	2,100	66	3%
Residential Fuel Efficiency Program				150	47	31%
Residential Midstream Program	N/A	N/A	N/A	N/A	N/A	N/A
Residential Multifamily Weatherization – New Offerings Program	N/A	N/A	N/A	N/A	N/A	N/A
Residential On-Bill Repayment/Financing Program	170	49	29%	80	37	46%
Residential Always-On Behavioral Program	50,000	68	0%	50,000	68	0%
Residential Behavioral Program	TBD	TBD	TBD	TBD	TBD	TBD
Residential Home Energy Audit Program	300	56	19%			
Residential Direct Install Insulation Program	TBD	TBD	TBD	TBD	TBD	TBD
Low-Income Program	1,750	66	4%	2,000	66	3%
Named Community Investment Fund (NCIF) Program	TBD	TBD	TBD	TBD	TBD	TBD
C&I Appliance and HVAC Controls Program	TBD	TBD	TBD	TBD	TBD	TBD
C&I Site-Specific Program	63	40	63%	12	8	67%
C&I Prescriptive Lighting Program	1,343	65	5%			
C&I Small Business Direct Install Lighting Program	300	56	19%			
C&I Prescriptive HVAC Variable Frequency Drive Program	6	6	100%			
C&I Midstream Program	N/A	N/A	N/A	N/A	N/A	N/A
C&I Prescriptive Shell Program	7	7	100%	2	2	100%
C&I Green Motors Program	10	9	90%			
C&I Grocer Program	13	11	85%			
C&I Building Operator Certification Program	22	17	77%	22	17	77%

3.3.4.3 Nonparticipants

We will conduct separate cross-cutting nonparticipant surveys of nonresidential and residential customers in both Washington and Idaho, targeting 90/10 confidence/precision for each survey. As with participant surveys, we anticipate a mix of online and phone surveys, possibly including mailed recruitments to take the online survey. For work with Energy Trust of Oregon, we found that a letter recruitment with a link to an online survey was an effective adjunct to other recruitment methods.

3.4 Interview and Survey Implementation

ADM will conduct all interviews and surveys using in-house resources. Our senior staff have broad and deep experience interviewing program and implementer staff, and ADM carries out dozens of phone, web, and mail surveys each year. ADM's in-house dedicated call center is staffed with a full-time manager and both English- and Spanish-speaking professionals. As-needed, ADM has completed surveys in additional languages including Mandarin and Vietnamese. Since 2015, our call center has handled an average of about 180 surveys a year with market actors, program participants, and nonparticipants, with about 12,000 survey completions overall.

3.4.1 Instrument Development

We will develop all interview guides and survey instruments to address research questions identified in the RFP, during project initiation, or in staff and implementer interviews and with a mind to the analyses to be performed. The evaluation plan will document the research questions specific to each data source, which will guide the process for developing each instrument. This will ensure that the research questions for each instrument will already have been vetted and discussed with Avista.

We will provide a crosswalk between the vetted research questions and each interview or survey item when we submit the draft instruments to Avista. This will ensure that there is no question or confusion about the purpose of any given item. Providing Avista staff with a clear understanding of the purpose of each item in the instrument will enable them to provide focused feedback on those items. We will revise each item as needed based on the feedback received.

3.4.2 Survey Programming and Testing

We will program all surveys, both phone and web, using an industry-standard survey platform, Qualtrics. The platform is widely used by professional survey research and evaluation firms and supports web, telephone, and dual-mode survey administration. It offers sophisticated programming features for developing user-friendly interfaces and offers a range of options for response validation and display logic. It also provides controls for preventing duplicate or ineligible submissions and allows the option of completing surveys in multiple sessions. It provides the ability to allow respondents to select the survey language as well as the ability to embed screener questions in email invitations.

We will test each survey to ensure that all questions and responses are included and worded correctly, and all input and display logic works correctly. The program lead will assess the look and feel of the survey (size of font, amount of white space, location of page breaks, and so forth) and will provide suggestions for improvement, if needed.

Once each survey is programmed, we will carry out a soft launch of a small subsample (if the program population is sufficiently large) as a second check to ensure the survey programming is correct as well as to determine whether any questions are not well understood or should be revised for any other reason.

ADM will also work with Avista program managers and call center to integrate co-branded or branded materials to improve the credibility and trustworthiness of the surveys in the perspective of Avista's customers.

3.4.3 Survey Recruitment

We will prepare telephone and email recruitment scripts. These materials will include several well-known elements, such as personalizing the message, stating the intended use of the responses and the importance of everyone's response, making a personal appeal, and so forth. They will provide the name of an ADM evaluation staff contract to answer questions about the survey. If Avista so desires, they also will provide an Avista contact to provide *bona fides* or answer questions. Email recruitments also will provide a call-in number for customers who would like to complete the survey by phone.

We also will include proven-effective language in the recruitment scripts that ADM's staff developed for use in survey recruitment, based on language used in public radio pledge drives. The key to the "pledge

drive" language is asking the recipient if he or she "can be one of the people who help of achieve our goal" number of responses. This language has been shown to increase response rates to online surveys above and beyond what is accomplished through the elements described above.[10] We hypothesize that it does so because it frames the request in the context of group or collective action, thus inhibiting thoughts that undermine self-efficacy (e.g., "what difference can my actions make?"). In this sense, it may be related to the concept of "collective efficacy."[11]

In recruiting for both phone and email surveys, we will follow additional protocols to attempt to maximize response rates and reduce customer burden. We will carry out multiple recruitment attempts but will space them to provide adequate opportunity to respond to each one before sending another. We have found that making more than three phone attempts yields quickly diminishing returns but that multiple email recruitment efforts, when spaced adequately and when using the pledge drive language, can generate continued responses with only a moderate decrease with each effort. We also have found that switching recruitment modes (e.g., from email to phone to post card) can reduce response decrement or even generate an increase in response.[12]

When feasible, we will send advance email or mailed notice of telephone surveys to customers. These will explain the purpose of the survey and address frequently asked questions. As with email recruitments for web surveys, the notification will include contact information to obtain additional information about the survey or participate by telephone.

We will use survey completion incentives when needed to increase response rates. Typically, a small incentive of $10 to $15 is effective at increasing response rates among residential customers, with increases in response rates offsetting incentive costs. When surveying market actors, a larger incentive of $50 to $100 often is needed.

Before beginning any survey recruitment, we will follow Avista's guidance in notifying Avista's call center about data collection activities.

3.4.4 Conducting Telephone Surveys

The call center manager, working with evaluation staff, will provide call center staff thorough project-specific training for each survey. This will cover the basics of the program that the survey addresses, the group that the survey targets, and the purpose and use of the survey and of each question. Our callers are experienced in surveying about a wide range of energy efficiency program types and with an equally wide range of target audiences. Nevertheless, we take every new survey as an opportunity to review and reinforce their understanding of these programs and audiences. Training will include a question-and-answer session as well as practice surveys.

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[10] J. Loomis, E. Focella, A. Weaver, and **R. Bliss** 2019. "Increasing Response Rates to Web Surveys: No Tote Bag Required." Informing Innovation: Research and Evaluation in a Changing Energy Landscape, Denver, CO: International Energy Program Evaluation Conference, August 2019.

[11] A. Bandura. 2000. "Exercise of Human Agency Through Collective Efficacy." Current Directions in Psychological Science, June 2000.

[12] Bliss, R. and D. Rubado. 2020. "Increasing Program Participation in Underserved Groups: The Value of a Nuanced Understanding of Demographics, Awareness, and Attitudes." Behavior, Energy & Climate Change Virtual Conference. December 7-9, 2020.

During the survey fielding, the call center manager will monitor callers to ensure quality and provide feedback to callers. For each survey, the call center manager will reiterate a standing directive to the callers to provide feedback on the survey instruments, including any challenges they have understanding or being able to ask the questions and any challenges respondents have in answering them. The call center manager immediately provides this information to the evaluation survey lead, who can then determine whether to reword a question or provide additional clarification to the caller.

3.4.5 Mailed Letters for Communicating with Hard-to-Reach Customers

As an additional option, ADM proposes to send mailed letters to customers who do not have valid emails connected to their accounts for the process evaluation survey. This will ensure that we are offering customers all available methods for communication, which increase our ability to reach Named Community participants, hard-to-reach participants, and participants that don't have the ability to use online methods for completing the survey. The mailed letters will be developed and distributed by the ADM lead evaluation researcher. The letters will include a recruitment message noting the survey completion incentive offer. ADM will utilize Anchor Pointe, a small, women-owned business, to print, package, and send out letters to the customers without valid email addresses.

3.5 Process Evaluation of Pilot or New Programs

Process evaluations are particularly important for new programs. Early feedback can lead to critical course corrections that generate smoother delivery, greater participation, and higher customer satisfaction. This section outlines our anticipated program-specific process evaluation approaches for the pilot programs.

3.5.1 Residential Home Energy Audit Program

To support the nascent Home Energy Audit Program, ADM proposes three process tasks:

- *Program Manger Interviews*. At the outset of the evaluation, as well as the close of the 2024 and 2025 program years, we schedule an in-depth interview with Avista's program manager to discuss the state of the program, successes, struggles, and next steps.
- *Auditor Interviews (n=4).* Assuming Avista has enlisted auditors, our team will interview a number of auditors to get their take on the early performance of the program and what the program could improve to educate customers more effectively in addition to encouraging greater participation in other Avista programs.
- *Participant Surveys (n=30).* If sufficient audits have occurred, ADM will survey a randomly selected sample of participants (across both states and fuels) to solicit their feedback on the audit itself, their interactions with the auditors, likelihood of participation in other programs, and information about any additional energy savings habits or behavioral changes they have made because of the audit.

3.5.2 Time-of-Use Pilot Program

The TOU Pilot Program will have its own separate process evaluation completed. However, ADM will include the data collected from the TOU Pilot in the overall biennial process evaluation report. For further details of pilot evaluation methods, refer to Section 6.

3.5.3 Peak Time Rebate Pilot Program

The PTR Pilot Program will have its own separate process evaluation completed. However, ADM will include the data collected from the TOU Pilot in the overall biennial process evaluation report. For further details of pilot evaluation methods, refer to Section 6.

3.5.4 Named Community Investment Fund Program

ADM proposes to conduct the following activities in the process evaluation of this program to understand the impact of the program and identify program successes and learnings:

- *Program Manger Interviews.* To start, ADM will complete an in-depth interview with Avista's program manager to discuss the launch of the NCIF Program, its early successes, early struggles, and next steps. We will work with Avista to determine the best timing for this initial interview, as well as at least two follow-up interviews during the program's two-year evaluation period.
- *CAP Agency and Other Organizations Interviews (n=TBD).* Out team will interview a number of CAP agencies and nonprofit organizations associated with the implementation of this program to get their take on the early performance of the program and what the program could improve to educate customers more effectively, encourage deeper retrofits, and encourage greater participation in other Avista programs.
- *Database Review.* Database reviews play an important role in process evaluations, especially for pilots, as it is essential to ensure the pilot is collecting the requisite information to track participation, enable accurate reporting, and facilitate viable future evaluations. To this end, ADM will review the data collected by Avista and provide feedback as appropriate.
- *Participant Surveys (n=TBD).* A few months after the pilot is launched, ADM will undertake a web survey with a random sample of participating customers. The survey will focus on: 1) how the customer heard about the program, 2) what efficiency improvements they made, and 3) their experience going through program to receive home improvements.

3.5.5 Hybrid Heat Pump Pilot Program

ADM proposes the following process evaluation tasks for the Hybrid Heat Pump Pilot Program:

- *Program Manger Interviews.* To start, ADM will complete an in-depth interview with Avista's program manager to discuss the launch of the lending pilot, its early successes, early struggles, and next steps. We will work with Avista to determine the best timing for this initial interview, as well as at least two follow-up interviews during the pilot's two-year delivery.
- *Database Review.* Database reviews play an important role in process evaluations, especially for pilots, as it is essential to ensure the pilot is collecting the requisite information to track participation, enable accurate reporting, and facilitate viable future evaluations. To this end, ADM will review the data collected by Avista and provide feedback as appropriate.
- *Literature Review.* It is worthwhile to review available information about similar efforts in the region and nationally to identify any lessons learned that may benefit Avista.
- *Participant Surveys (n=TBD).* A few months after the pilot is launched, ADM will undertake a web survey with a random sample of participating customers. The survey will focus on: 1) how the customer heard about the pilot, 2) what efficiency improvements they made using the loaned

tools, and 3) their experience going through the tool lending process, including how Avista could improve the experience and offer.

3.5.6 Compressed Air Pilot

ADM proposes the following process evaluation tasks for the Compressed Air Pilot Program:

- *Program Manger Interviews.* To start, ADM will complete an in-depth interview with Avista's program manager to discuss the launch of the lending pilot, its early successes, early struggles, and next steps. We will work with Avista to determine the best timing for this initial interview, as well as at least two follow-up interviews during the pilot's two-year delivery.
- *Database Review.* Database reviews play an important role in process evaluations, especially for pilots, as it is essential to ensure the pilot is collecting the requisite information to track participation, enable accurate reporting, and facilitate viable future evaluations. To this end, ADM will review the data collected by Avista and provide feedback as appropriate.
- *Literature Review.* It is worthwhile to review available information about similar efforts in the region and nationally to identify any lessons learned that may benefit Avista.
- *Participant Surveys (n=TBD).* A few months after the pilot is launched, ADM will undertake a web survey with a random sample of participating customers. The survey will focus on: 1) how the customer heard about the pilot, 2) what efficiency improvements they made using the loaned tools, and 3) their experience going through the tool lending process, including how Avista could improve the experience and offer.

3.5.7 Pay for Performance Pilot

- *Program Manger Interviews.* To start, ADM will complete an in-depth interview with Avista's program manager to discuss the launch of the Pay for Performance Program, its early successes, early struggles, and next steps. We will work with Avista to determine the best timing for this initial interview, as well as at least two follow-up interviews during the program's two-year evaluation period.
- *Facility Manager Interviews (n=TBD).* Out team will interview a number of CAP agencies and nonprofit organizations associated with the implementation of this program to get their take on the early performance of the program and what the program could improve to educate customers more effectively, encourage deeper retrofits, and encourage greater participation in other Avista programs.
- *Database Review.* Database reviews play an important role in process evaluations, especially for pilots, as it is essential to ensure the pilot is collecting the requisite information to track participation, enable accurate reporting, and facilitate viable future evaluations. To this end, ADM will review the data collected by Avista and provide feedback as appropriate.
- *Participant In-depth Interviews (n=TBD).* A few months after the pilot is launched, ADM will undertake a web survey with a random sample of participating customers. The survey will focus on: 1) how the customer heard about the program, 2) what efficiency improvements they made to their facility, and 3) their experience going through program to receive facility improvements.

3.6 Timing and Cadence of Process Evaluation Activities

During the development of the portfolio-level M&V plan, process evaluation schedules for WA and ID will ensure that existing, stable programs receive evaluations at least every two (2) years and new and/or “at risk" programs will be identified and evaluated annually. This approach allows for efficient allocation of evaluation resources.

The review of program documentation will occur first, as it – together with discussions during project initiation – will provide an understanding of the programs, form the basis for our draft evaluation plan, and will inform all later data collection. We will request all applicable program documentation during the project initiation period.

Early in the 2024 program year, we will conduct in-depth interviews (IDIs) with program staff to ensure we fully understand the program rules and processes and staff’s expectations for and concerns about the programs and the evaluation. This will help us to identify research questions to address through market actor and customer (participant and nonparticipant) interviews and surveys. We will then check in with program staff late in the 2024 program year or early in the 2025 program year to find out whether anything has changed, to gain a sense of how the programs are progressing, and to identify any new issues or concerns. This will allow us to devise appropriate questions for the other interviews and surveys. It also will ensure that our later data collection addresses any issues or concerns of interest to program and implementer staff. Finally, it will allow us to clarify any questions regarding our proposed sampling plans.

Market actor interviews and customer surveys will follow the staff and implementer IDIs. We will begin preparing guides for these interviews and surveys, as well as the sample plans, after completing the first staff interviews, but we will complete them only after completing the second round of staff interviews to ensure that they are complete and accurate.

As a final data collection activity, we will check in with staff and/or implementer contacts toward the end of the 2025 program year to assess progress and identify any issues that arose during that year that should be addressed in the report.

ADM will submit all data collection materials, sample plans, and other contact materials (e.g., mail or email recruitment scripts) to Avista for review before beginning evaluation activities. We will establish the review protocol with Avista during project initiation. Our goal is to establish the approach that makes the most sense for Avista staff – whether to provide all instruments and sample plans in a bundle or to establish a schedule that prioritizes certain instruments and plans for submittal. The latter may reduce the burden on Avista staff and allow for a more efficient review process. We will address all comments and revise instruments as needed.

3.7 Meeting Participation

ADM commits to meeting and participating with advisory groups, subcommittees, the Advisory Group, the Energy Efficiency Analytics team and others as needed, in addition to presenting annual results at Avista’s convenience. ADM understands that Avista holds, at minimum, (four) in-person Advisory Group meetings per year. In addition, various other meetings may be arranged if needed. ADM also commits to participating in these meetings to present evaluation methodologies, results, and any other need presented in the meetings.

3.8 DSM Prudence Review

ADM commits to remaining available for prudence review and investigation as required by the Washington Utilities and Transportation Commission and the Idaho Public Utilities Commission, subsequent to the 2024-2026 evaluation period. ADM will provide comprehensive workpapers, supporting documentation, and responses to production requests as needed by the respective Commissions.

3.9 Proposed Changes to the SOW or Alternative Means to Accomplish Project Objectives

ADM understands that the solicitation SOW states the Consultant shall verify quantity and quality of installations and apply RTF's UES to determine ex post savings in cases where the RTF has existing unit energy savings. ADM proposes the following changes to the SOW:

- Conduct billing analyses with comparison group via propensity score matching for a subset of measures
- Conduct facility-level regression analysis for a subset of programs
- Apply NTG adjustments as necessary
- Verify measure install and quality of install via web-based survey and/or site visits

ADM proposes to use a combination of RTF UES values, billing analysis, and simulation modeling to calculate ex post savings in the Residential and Non-Residential Electric and Natural Gas Portfolio. Billing analyses are proposed for some measures to remain comparable in methodology to previous Avista portfolio evaluations. In addition, billing analyses with comparison groups provide a reliable method to estimate net measure impacts because the comparison group reflects market-level adoption, which we can assume would be the behaviors the participant customers would have adopted had they not participated in the program.

ADM has experience conducting residential and non-residential billing analyses for a wide variety of measures, in addition to conducting propensity score matching to create a comparison group. Comparison groups are suggested to estimate reliable measure-level savings in the post-period and are important when large-scale environmental factors affect residential energy consumption, such as COVID19 shelter-in-place orders. Similarly, for the commercial and industrial sector ADM has found it necessary to employ greater use of Non-Routine Adjustments (NRAs), with notable recent examples including adjusting for disrupted throughput levels in industrial facilities attributable to supply chain disruptions.

3.10 Innovative Techniques

ADM summarizes the following innovative techniques we propose to employ during the evaluation of the Avista Portfolio:

- Innovative spillover assessment for other programs
- "Pledge Drive" language to increase survey response rates
- Savings group analysis

ADM is confident these innovative techniques can be employed to provide more accurate adjustments and verification to impact analyses as well as providing insight into potential program and portfolio improvements.

3.11 Innovative Spillover Assessment for Other Program Types

ADM understands that the proposed project does not require development of a net-to-gross ratio for most programs, as all savings assessments that are based on existing Regional Technical Forum (RTF) unit energy savings (UES) values account for market baselines and billing analyses produce net savings. However, Avista wishes to know what kinds of spillover its other programs are generating for planning or other purposes. While traditional spillover approaches typically document very little savings, ADM staff have developed and implemented an innovative spillover approach that has been shown to identify much higher spillover rates than standard approaches, in both residential and nonresidential programs. Thus, while we are not now proposing an optional spillover assessment of the type described above, we describe it here for Avista's consideration for later use.

ADM believes that standard spillover approaches are designed based on incorrect assumptions that can only lead to under-estimates of spillover. Specifically, the traditional approach asks customers about purchases of un-incented energy efficient equipment and then asks them to rate the program's influence on their purchase. This approach makes two false assumptions: 1) that customers will necessarily know whether a given purchase was energy efficient; and 2) that customers will know how much the program influenced their purchase. The second assumption is false because program influence often is not direct or observable to the customer, even when the customer is aware of program involvement.[13] In the case of midstream or point of purchase discounts, the discount may easily go unnoticed or not be remembered. In the case of contractor-driven purchases (e.g., HVAC systems), research has shown that customers frequently cite their contractor's recommendation as the primary reason for the decision to purchase a more efficient version of some equipment type.[14]

The evidence suggests that most program influence is indirect, via the distributors and either retailers or contractors who work with the customers. That is, the program influences these various market actors through outreach and training, and those actors influence the customers through recommendations. Further, in downstream programs, distributors may influence contractors. The indirect program influence can thus be represented as the product of the influence each actor has on the next actor in the influence chain.

ADM's proposed Process Evaluation Advisor (while with a previous employer subcontracting to ADM) developed this approach in 2015 for a nonresidential lighting program, identifying spillover savings that were significantly higher than typical approaches. ADM's Process Evaluation Advisor also applied this

[13] Bliss, R., N. Sage, and D. Diebel. 2017. "Not all Spillover Is the Same – So Don't Treat It That Way!" *Making Ambitious Reductions Real: Accurate and Actionable Evaluation*, Baltimore, MD: International Energy Program Evaluation Conference, August 2017.

[14] Folks, J., and Bliss, R. "Frog Princes and Free-Ridership: Contractor Influence in Residential Programs." 2016. Behavior, Energy & Climate Change Conference, Baltimore, MD. October 20.

"indirect" spillover assessment approach to a residential contractor-driven heat pump program.[15] Quantifying the program's influence on heat pump recommendations to the contractors' clients and the influence of those recommendations on client decisions and applying the product to the saved kWh from un-incented heat pump sales again revealed much higher levels of spillover than typical approaches provide.

3.11.1 Historical Data Collection Procedure

ADM provides small incentives for customers to complete surveys on energy efficient measures they have purchased in the program year. Survey data provides estimates for In-Service Rates (ISR) and Hours of Use (HOU) for rebated measures, and baseline conditions for lighting and space and water heating measures. ADM will ensure proper survey sample size to achieve 90% precision with a 10% confidence level for the survey-based verification efforts wherever possible.

Customer surveys include an option for in-person verification of survey responses for the lighting portion of the program. ADM field technicians visit customers who opted-in to field visits and provide visual verification of program tracking information and the lighting, appliance, and space and water heating equipment installation locations reported by customers.

3.12 Savings Group Analysis

ADM proposes to conduct a savings group analysis for a subset of measures evaluated through billing analysis. A savings group analysis identifies participating customers that may not display saved energy through the installation of the measure. Learning more about the portion of customers that are "negative" or "neutral" savers may inform strategies for adjusting target populations or measure offerings in the future. ADM proposes to conduct this analysis to explore potential issues and opportunities to increase cost-effectiveness and maximize program savings. This methodology is especially useful for pilots to gather insights that may affect how the program continues to be implemented.

The analysis will use billing data and/or AMI data to develop a multi-level model to estimate individual savings using both the participant and nonparticipant information to control for exogeneous factors that may affect energy savings or consumption within a household over time.

ADM will characterize the distribution of individual participants' energy savings to develop energy savings groups, followed by using clustering algorithms to identify predictive characteristics of those energy savings groups. ADM will work with Avista to identify additional data availability, such as AMI data, to enhance this analysis. As summarized above, the results of this analysis may provide useful insight into program improvements, and therefore, ADM proposes to explore such opportunities to aid Avista's program or pilot implementation and improve portfolio cost-effectiveness.

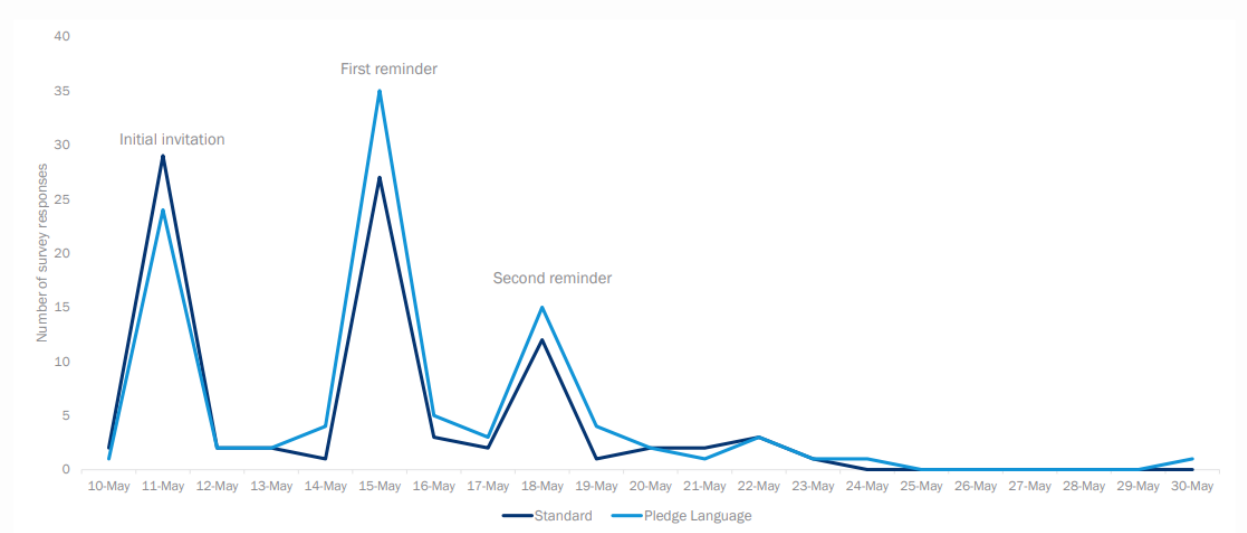
[15] Bliss, R. and M. McClaren. 2018. "Avoiding Being (Too Much of) A Victim of Your Own Success: Mitigating Free-ridership Losses Through Better Spillover Assessment." *International Energy Policy and Programme Evaluation Conference*, Vienna, Austria, August 2018.

3.13 "Pledge Drive" Language to Increase Survey Response Rate

One of the ADM's innovative developments is the use of "pledge drive" language in survey recruitments to online surveys. The key to the "pledge drive" language, based on language used in public radio pledge drives, is asking the recipient if he or she "can be one of the people who help of achieve our goal" number of responses. This language has been shown to increase response rates to online surveys above and beyond what is accomplished through other approaches.[16] We hypothesize that it does so because it frames the request in the context of group or collective action, thus inhibiting thoughts that undermine self-efficacy (e.g., "what difference can my actions make?"). In this sense, it may be related to the concept of "collective efficacy."[17]

A current ADM staff member developed this approach in 2015 for a survey that ADM was conducting at that time. Its success engendered multiple additional uses, one that incorporated it into a randomized trial, in which it was shown to increase response rate significantly (Figure *3-1*).

Figure 3-1: Test of Pledge Drive Language[18]



ADM will use the pledge drive language in all survey recruitments for the proposed project.

[16] J. Loomis, E. Focella, A. Weaver, and R. Bliss 2019. "How to Increase Response Rates to Web Surveys: No Tote Bag Required." Proceedings of the 2019 International Energy Program Evaluation Conference. Denver, Colorado: International Energy Program and Policy Evaluation Conference.

[17] A. Bandura. 2000. "Exercise of Human Agency Through Collective Efficacy." Current Directions in Psychological Science, June 2000.

[18] Loomis et al 2019, op. cit.

4. Residential Program-Level EM&V Approaches

The following sections detail ADM's program-specific impact methods, process methods, and sampling plans for each of the programs in Avista's Residential Portfolio, as summarized by the 2024 Washington Electric and Natural Gas Annual Conservation Plan. ADM will work with Avista to adjust program-specific impact and sampling plans as additional information is received about program participation, program restrictions, measure offerings, and available data.

4.1 Timing and Cadence of Impact Evaluation Activities

ADM plans to conduct an impact analysis for each program based on "high risk" or "low risk" programs; that is, for programs in which evaluated savings may vary from program year to program year, ADM will conduct an evaluation each year in the 2024-2025 evaluation period. However, for programs which display stable savings from year to year and have had no implementation changes over the biannual period, ADM will conduct an impact evaluation once in the two year period. The following tables summarize the cadence ADM will evaluate each program.

Table 4-1: Residential and Low-Income Impact Evaluation Cadence by Program

Program	Database Review
Residential Appliance and Thermostat Program	Biannually
Residential ENERGY STAR Manufactured Homes Program	Biannually
Residential Shell Program	Biannually
Residential Fuel Efficiency Program	Biannually
Residential Midstream Program	Annually
Residential Multifamily Weatherization – New Offerings Program	Annually
Residential On-Bill Repayment/Financing Program	Biannually
Residential Always-On Behavioral Program	Annually
Residential Behavioral Program	Annually
Residential Home Energy Audit Program	Biannually
Residential Direct Install Insulation Program	Biannually
Low-Income Program	Biannually
Named Community Investment Fund (NCIF) Program	Biannually

Table 4-2: Non-residential Impact Evaluation Cadence by Program

Program	Database Review
C&I Appliance and HVAC Controls Program	Biannually
C&I Site-Specific Program	Annually
C&I Prescriptive Lighting Program	Biannually
C&I Small Business Direct Install Lighting Program	Biannually
C&I Prescriptive HVAC Variable Frequency Drive Program	Biannually
C&I Midstream Program	Annually
C&I Prescriptive Shell Program	Biannually
C&I Green Motors Program	Biannually
C&I Grocer Program	Biannually
C&I Building Operator Certification Program	Annually

Table 4-3: Pilot Impact Evaluation Cadence by Program

Program	Database Review
Time of Use Pilot	Annually
Peak Time Rebates Pilot	Annually
Hybrid Heat Pump Pilot	Annually
Building Operator IQ Pilot	Annually
Compressed Air Pilot	Annually
Pay for Performance Pilot	Annually
Additional Pilots	Annually

ADM will work with Avista to modify the planned impact evaluation cadence throughout the 2024 to 2025 biannual period for new programs or pilots, or if programs have undergone substantial changes.

4.2 Residential Appliance and Thermostat Program

The Residential Appliance and Thermostat Program helps promote residential customers to use high efficiency appliances, smart thermostats, and line voltage thermostats. This program offers incentives for the purchase and use of high-efficiency ENERGY STAR-certified clothes washers, vented clothes dryers, refrigerators, freezers, connected thermostats, and line voltage thermostats for multifamily applications. Customers receive incentives after installation and after submitting a completed rebate form. Table 4-4 summarizes the anticipated measures offered under this program along with the proposed impact evaluation method for each measure, separated by fuel type.

Table 4-4: Residential Appliance and Thermostat Program Measures

Measure	Impact Analysis Methodology
E ENERGY STAR standard size refrigerator and refrigerator-freezer - bottom-mounted freezer - ESME	RTF UES, ResRefrigeratorsAndFreezers_v5_1
E ENERGY STAR standard size freezer - upright - ESME	RTF UES, ResRefrigeratorsAndFreezers_v5_1
E ENERGY STAR washer	RTF UES, ResClothesWasher_v7_2
E ENERGY STAR dryer	RTF UES, ResClothesDryers_v4_2
E Smart thermostat - DIY	RTF UES, ResConnectedTstats_v1.3/Billing Analysis
E Smart thermostat – contractor-installed	RTF UES, ResConnectedTstats_v1.3/Billing Analysis
E Line voltage communicating thermostat	RTF UES, ResElectronicLineVoltageTstats_v4_2
E Line voltage thermostat	RTF UES, ResElectronicLineVoltageTstats_v4_2
G Smart thermostat - DIY	RTF UES, ResConnectedTstats_v1.3/Billing Analysis
G Smart thermostat – contractor-installed	RTF UES, ResConnectedTstats_v1.3/Billing Analysis

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Residential Appliance and Thermostat Program in the section below.

4.2.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Residential Appliance and Thermostat Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)
- Survey-based verification for a random subset of customers (Section 2.3.2)

Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Residential Appliance and Thermostat Program. Table 2-2 in Section 2.3.2 summarizes the sample sizes for the survey-based verification activity for the Residential Appliance and Thermostat Program.

During document-based verification, if any deviations between the tracking data and application values are found, ADM will communicate these differences to Avista through periodic updates and summarize deviations the final report.

During survey-based verification, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure and documentation of prior equipment. ADM will include questions such as:

- Is the newly installed ENERGY STAR washer still properly functioning?
- Is the newly installed ENERGY STAR washer front-loading?
- What type of equipment heats the water in your home?
- Does your new refrigerator also have a freezer?
- Is your new refrigerator standard size (≥ 7.75 cubic feet) or compact (< 7.75 cubic feet)?

These questions will help ADM verify that the measure was collected and documented accurately and will allow ADM to calculate measure-level savings more accurately.

4.2.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data including customer identifiers, address, and date of rebate
- Rebate application forms and applicable invoices
- Monthly billed consumption data for participating and non-participating customers

4.2.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodologies to estimate verified net energy savings in the Residential Appliance and Thermostat Program:

- Deemed savings using RTF UES values
- Billing Analysis with counterfactual group (IPMVP Option C)

Measure-level impact evaluation methodologies for this program are specified in Table 4-4, separated by fuel type.

For measures in which an RTF-approved measure has been specified and considered active, ADM proposes to measure net savings using UES values in each RTF workbook for that. ADM will also apply adjustments to these RTF values if deviations are found between invoices and tracking data or if in-service rates deviate from 100% in verification surveys. This methodology is summarized in further detail in Section 2.5.1.

For measures in which an RTF-approved, active measure has not been specified, ADM proposes to measure verified net savings by conducting a billing analysis using with a counterfactual group selected via propensity score matching. The methodology used to select the quasi-experimental counterfactual group and the methodology for linear regression billing analysis are summarized in further detail in the "Billing Analysis (IPMVP Option C)" section. ADM will isolate each unique measure and verify each participant included in the analysis did not also participate in other programs; therefore, ADM will be able to isolate the measure effects using the household's billed consumption data.

Although ADM proposes to estimate smart thermostats with electric heating via the RTF UES values, ADM recognizes that the RTF workbook for Connected Thermostats in the residential sector assumes that 90% of the smart thermostats are DIY-installed, while 10% are contractor-installed. However, Avista's projected number of units smart thermostat with electric heating in 2024 portrays 75% of smart thermostats are DIY-installed. Because a larger portion of smart thermostats are installed via contractors, there may be an opportunity to claim additional savings for this measure. To evaluate whether the RTF UES values are appropriate to estimate verified savings for the electric smart thermostats, ADM proposes to explore a billing analysis via regression modeling for each the DIY and contractor-installed electric smart thermostats.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

4.2.4 Timing and Cadence

This program is considered "low risk" and therefore will be evaluated once in the 2024-2025 evaluation period.

4.2.5 Technical Comments

ADM provides no technical comments for this program's evaluation.

4.3 Residential ENERGY STAR Manufactured Homes Program

The Energy Star Manufactured Homes Program provides rebates for homes within Avista's service territory that attain an ENERGY STAR certification. This program is administered by a Northwest Energy Efficiency Alliance (NEEA) regional program and incentivizes the ENERGY STAR ECO-rated new manufactured homes and ENERGY STAR with NEEM+ certified homes.

Previously the program provided incentives for one building certification: the ENERGY STAR ECO-rated new manufactured homes. However, beginning in 2024, the prescriptive program started recognizing additional efficiency distinction between homes, including those branded as ENERGY STAR and ENERGY STAR with NEEM+. The NEEM+ certification criteria include additional efficiency measures such as programmable thermostats, improved windows, building wrap, and window flashing. The new incentive levels are intended to motivate customers to choose the highest efficiency manufactured home available.

Table 4-5 summarizes the anticipated measures offered under this program along with the proposed impact evaluation method for each measure, separated by fuel type.

Table 4-5: ENERGY STAR Manufactured Homes Program Measures

Measure	Impact Analysis Methodology
G ENERGY STAR Manufactured Home	Billing Analysis or Avista TRM
G ENERGY STAR with NEEM+ Manufactured Home	Billing Analysis or Avista TRM
E ENERGY STAR Manufactured Home	RTF UES, ResMHNewHomesandHVAC_v4_2
E ENERGY STAR with NEEM+ Manufactured Home	RTF UES, ResMHNewHomesandHVAC_v4_2

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the ENERGY STAR Manufactured Homes Program in the section below.

4.3.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the ENERGY STAR Manufactured Homes Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the ENERGY STAR Manufactured Homes Program.

During document-based verification, if any deviations between the tracking data and application values are found, ADM will communicate these differences to Avista through periodic updates and summarize deviations in the final report.

The verification of heating and cooling type will allow ADM to calculate measure-level savings more accurately based on RTF measure specifications. This simple verification will help ADM more accurately estimate measure-level impacts for the other measures using engineering algorithms.

Survey-based verification is not proposed for this measure, as rebates are primarily submitted by builders.

4.3.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of rebate
- Rebate application forms and certifications
- A sample of REM/Rate project files from HERS raters and documentation on installed equipment, if available
- Monthly billed consumption data for participating households and similar, non-participating households
- Program builder contact information

4.3.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodologies to estimate verified net energy savings in the ENERGY STAR Manufactured Homes Program:

- Deemed savings using RTF UES values or Avista TRM values

Measure-level impact evaluation methodologies for this program are specified in Table 4-5, separated by fuel type.

For measures in which an RTF-approved measure has been specified and considered active, ADM proposes to measure net savings using UES values in each RTF workbook for that. For measures in which an RTF-approved, active measure has not been specified, ADM proposes to measure verified net savings by applying Avista TRM values.

Due to the size of the program and the savings achieved through the program relative to the residential portfolio, this evaluation method is proposed to make use of the evaluation budget accordingly. The level of rigor proposed for the evaluation of this program aligns with the savings resulting from the program. ADM offers to also explore a billing analysis for each measure, at Avista's request.

ADM will review the methods employed by the Avista TRM to verify the UES value is appropriate to define savings. ADM will also apply adjustments to these RTF values if deviations are found between invoices and tracking data or if in-service rates deviate from 100% in verification surveys. This methodology is summarized in further detail in Section 2.5.1.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

4.3.4 Timing and Cadence

This program is considered "low risk" and therefore will be evaluated once in the 2024-2025 evaluation period.

4.3.5 Technical Comments

It is likely that the HERS household files will not be available, as was the case for the program historically. In the case that HER household files become available, ADM offers to evaluate each of the rebated ENERGY STAR homes via simulation modeling with a user-defined reference home relative to the state's building codes. Methodology for this analysis is described in further detail in the "Simulation Modeling (IPMVP Option D)" section. In addition, if this methodology is used, ADM will apply a NTG adjustment to the gross energy savings resulting from the simulation model analysis. The NTG adjustment will be gathered via the methods described under the Section 2.6.

4.4 Residential Shell Program

The Residential Shell Program provides incentives to customers for improving the integrity of the home's envelope with upgrades to windows, storm windows, and doors. Rebates are issued after the measure has been installed. Participating homes must have electric or natural gas heating and itemized invoices including measure details such as insulation levels, window values, and square footage. Previously, the program required minimum usage as a prerequisite for participation. However, in 2024, Avista eliminated this prerequisite. Additionally, self-install options for windows and storm windows will also continue. Both eligibility changes remove barriers to customer participation. Table 4-6 summarizes the anticipated measures offered under this program along with the proposed impact evaluation method for each measure, separated by fuel type.

Table 4-6: Residential Shell Program Measures

Measure	Impact Analysis Methodology
G Windows single pane <0.29 U-value	Billing Analysis
G Windows dual pane <0.29 U-value	Billing Analysis
G Storm windows (ENERGY STAR-rated)	Billing Analysis
G Wall insulation	Billing Analysis
G Floor insulation - DIY	Billing Analysis
G Attic insulation - DIY	Billing Analysis
G Insulated door R2.5-R5 HZ2 zonal	Billing Analysis
E Windows	RTF UES, ResSFWx_v4_4
E ENERGY STAR Certified Storm Windows	RTF UES, ResSFWx_v4_4
E Wall Insulation	RTF UES, ResSFWx_v4_4
E Floor Insulation	RTF UES, ResSFWx_v4_4
E Attic Insulation	RTF UES, ResSFWx_v4_4
E ENERGY STAR-Rated Doors	Billing Analysis

ADM understands that Avista recently implemented a tiered efficiency approach for window incentives. ADM will provide any necessary adjustments to the evaluation plan once a tiered approach is in effect. ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Residential Shell Program in the section below.

4.4.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Residential Shell Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)
- Survey-based verification for a random subset of customers (Section 2.3.2)

Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Residential Shell Program. Table 2-2 Section 2.3.2 summarizes the sample sizes for the survey-based verification activity for the Residential Shell Program.

During document-based verification, if any deviations between the tracking data and application values are found, ADM will communicate these differences to Avista through periodic updates and summarize deviations in the final report.

During survey-based verification, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure and documentation of prior equipment. ADM will include questions such as:

- When did the weatherization measures get installed?
- What type of fuel is used to heat your home?
- Does your home have central air conditioning, window, or neither?
- How long did the contractors take to complete the work?

The verification of heating and cooling type will allow ADM to calculate measure-level savings more accurately based on RTF measure specifications. In addition, in the event that billing analysis is

infeasible, this simple verification will help ADM more accurately estimate measure-level impacts for the other measures using engineering algorithms.

4.4.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of rebate
- Rebate application forms and applicable invoices
- Monthly billed consumption data for participating and non-participating customers

4.4.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodologies to estimate verified net energy savings in the Residential Shell Program:

- Deemed savings using RTF UES values
- Billing Analysis with counterfactual group (IPMVP Option C)

Measure-level impact evaluation methodologies for this program are specified in Table 4-6, separated by fuel type.

For measures in which an RTF-approved measure has been specified and considered active, ADM proposes to measure net savings using UES values in each RTF workbook for that measure. ADM will also apply adjustments to these RTF values if deviations are found between invoices and tracking data or if in-service rates deviate from 100% in verification surveys. This methodology is summarized in further detail in Section 2.5.1.

For measures in which an RTF-approved, active measure has not been specified, ADM proposes to measure verified net savings by conducting a billing analysis using with a counterfactual group selected via propensity score matching. The methodology used to select the quasi-experimental counterfactual group and the methodology for linear regression billing analysis are summarized in further detail in the "Billing Analysis (IPMVP Option C)" section. ADM will isolate each unique measure and verify each participant included in the analysis did not also participate in other programs; therefore, ADM will be able to isolate the measure effects using the household's billed consumption data. For example, to evaluate the ENERGY STAR doors measure, ADM will select only customers that have installed the ENERGY STAR door measure and have not installed any additional program measures during the same program year. ADM will include heating season and cooling season controls to estimate the relationship between energy consumption and weather during the pre- and post-periods, for electric or gas, as applicable to the shell measures offered in this program.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

4.4.4 Timing and Cadence

This program is considered "low risk" and therefore will be evaluated once in the 2024-2025 evaluation period.

4.4.5 Technical Comments

In the event that the required data is not available or sufficient to conduct a billing regression analysis, ADM will review and apply Avista TRM methods along with verified tracking data to estimate net program savings.

4.5 Residential Fuel Efficiency Program

The Fuel Efficiency Program encourages customers to consider converting their resistive electric space and water heating equipment to natural gas. This program is offered to residential customers in the Idaho service territory. Customers must use Avista electricity for electric straight-resistance heating or water heating in order to qualify for the rebate, which is verified by evaluating their energy use. The home's electric baseboard or furnace heat consumption must indicate at least 8,000 kWh during the previous heating season. Customers receive incentives after installation and after submitting a completed rebate form. Table 4-7 summarizes the measures offered under this program.

Table 4-7: Fuel Efficiency Program Measures

Measure	Impact Analysis Methodology
E Electric central ducted forced air furnace to air source heat pump (9.0 HFSP or greater) conversion	Billing Analysis / Avista TRM
E Electric to natural gas furnace conversion	Billing Analysis / Avista TRM
E Electric to natural gas furnace & water heat conversion	Billing Analysis / Avista TRM

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Fuel Efficiency Program in the section below.

4.5.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Fuel Efficiency Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)
- Survey-based verification for a random subset of customers (Section 2.3.2)

Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Residential Shell Program. Table 2-2 Section 2.3.2 summarizes the sample sizes for the survey-based verification activity for the Residential Shell Program.

During document-based verification, if any deviations between the tracking data and application values are found, ADM will communicate these differences to Avista through periodic updates and summarize deviations in the final report.

During survey-based verification, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure and documentation of prior equipment. ADM will include questions such as:

- Was this water heater a new construction, or did it replace another water heater?
- Was the previous water heater functional?
- Is the newly installed water heater still properly functioning?

- What is the efficiency and sizing of the newly installed water heater?

These questions will help ADM verify that the measure was documented accurately and that data collection activities are progressing smoothly for the program. In addition, in the event that billing analysis is infeasible, this simple verification will help ADM more accurately estimate measure-level impacts using engineering algorithms.

4.5.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Participant contact information for web and phone-based survey verification
- Filled rebate application forms and applicable invoices
- Monthly billed consumption data for participating customers
- Monthly billed consumption data for non-participating customers

In addition, ADM will gather the following datasets to complete the analysis:

- Historical NOAA weather data
- Typical Meteorological Year weather data
- Publicly available household characteristics from county assessor data, if available

4.5.3 Impact Analysis

ADM will utilize the following impact evaluation methodologies to estimate verified net energy savings in the Fuel Efficiency Program:

- Deemed savings using RTF UES or Avista TRM values
- Billing Analysis with counterfactual group (IPMVP Option C)

For measures in which an RTF-approved measure has been specified and considered active, ADM will measure net savings using UES values in the appropriate RTF workbook for that measure. ADM will also apply adjustments to these values if deviations are found between invoices and tracking data or if in-service rates deviate from 100% in verification surveys. For measures in which an RTF-approved measure has not been specified or approved, ADM will apply the Avista TRM UES values to the types and quantities of each measure, after applying adjustments from verification surveys, if found. This methodology is summarized in further detail in Section 2.5.1.

ADM will also explore measurement of verified net savings by conducting a billing analysis with a counterfactual group selected via propensity score matching. The methodology used to select the quasi-experimental counterfactual group and the methodology for linear regression billing analysis are summarized in further detail in the “Billing Analysis (IPMVP Option C)” section. This method will be explored for each measure in the Fuel Efficiency Program in order to verify if the Avista TRM savings values are appropriate, or if adjustment may be required to more accurately quantify observed savings.

In order to estimate the daily impacts of each measure, ADM will isolate the customers that received an isolated measure. For example, to evaluate the air source heat pump measure, ADM will select only

customers that have retrofitted their air source heat pump and have not installed any additional program measures during the same program year; therefore, ADM will be able to isolate the measure effects using the household's billed consumption data.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

4.5.4 Timing and Cadence

This program is considered "low risk" and therefore will be evaluated once in the 2024-2025 evaluation period.

4.5.5 Technical Comments

In the event that the required data is not available or sufficient to conduct a billing regression analysis, ADM will review RTF values and Avista TRM methods along with verified tracking data to estimate net program savings.

4.6 Residential Midstream Program

The Midstream Program was launched in 2023 and includes measures that were previously part of several other programs. Avista transitioned all residential and commercial HVAC and water heating and food service measures to the Midstream Program in 2023. For the purposes of this work plan, ADM presents the methodology to evaluate the residential measures in the Midstream Program in this section. The methodology to evaluate the commercial measures in the Midstream Program are presented in Section 5.6.

The transition to a midstream structure removes common barriers to participation, such as a lack of customer awareness of rebate programs; participation barriers such as language and technology knowledge; and distributors' tendency to stock low-cost, low-efficiency units due to the high cost of energy-efficient equipment.

The Midstream Program now leverages distributors' recognized influence over contractors and specific equipment sales and work with distributors to help contractors to submit claims for Avista customers. Claims are paid to contractors promptly and additional savings are garnered burdening customers to fill out complex rebate forms. Therefore, access is more equitable for Avista's customers.

ADM has experience with a wide variety of midstream programs promoting a range of (primarily commercial) measures, including motor products, advanced lighting controls, and reduced wattage fluorescent lamps. We can draw on our experience designing, preparing, and evaluating midstream programs to help Avista develop a separate midstream program or route measures offered through an existing program through distributors.

Table 4-8 summarizes the anticipated measures offered under this program along with the proposed impact evaluation method for each measure, separated by fuel type.

Table 4-8: Midstream Program Residential Measures

Measure	Impact Analysis Methodology
E Electric heat pump water heater (0.94 EF or higher)	RTF UES, ResHPWH_v5_3
E Air source heat pump	RTF UES, ResSF&MHExistingHVAC_v5_1
E Ductless heat pump (with existing FAF)	RTF UES, ResDHPonFAF_v3_1
E Ductless heat pump (displace zonal)	RTF UES, ResDHPforZonal_v5_1
Residential <5.4 ton Air-Cooled HP	Billing Analysis
G Natural gas water heater <= 55 gallons (0.65 EF or higher)	RTF UES, ResGasWH_v3_2/Billing Analysis
G Natural gas tankless water heater (0.82 EF or higher)	RTF UES, ResGasWH_v3_2/Billing Analysis
G Natural gas furnace 95% (single stage)	RTF UES, ResESGasFurnaces_v2_1/Billing Analysis
G Natural gas boiler (96% AFUE)	Billing Analysis
G High-efficiency wall furnace (90% AFUE)	Billing Analysis
G Natural gas furnace 95% (multi-stage)	RTF UES, ResESGasFurnaces_v2_1/Billing Analysis
E Electric central ducted forced air furnace to air source heat pump (9.0 HFSP or greater) conversion	Billing Analysis / Avista TRM
E Electric to natural gas furnace conversion	Billing Analysis / Avista TRM
E Electric to natural gas furnace & water heat conversion	Billing Analysis / Avista TRM

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Midstream Program in the section below.

4.6.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Midstream Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Residential Midstream Program. ADM will not conduct survey verification for this program. Instead, ADM will interview distributors and trade allies that participate in the program.

4.6.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms, applicable invoices, and equipment certificates if available
- Monthly billed consumption data for participating customers and for similar, non-participating customers

4.6.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodologies to estimate verified net energy savings in the Midstream Program:

- Deemed savings using RTF UES values
- Billing Analysis with counterfactual group (IPMVP Option C)

Measure-level impact evaluation methodologies for this program are specified in Table 4-8, separated by fuel type.

For measures in which an RTF-approved measure has been specified and considered active, ADM proposes to measure net savings using UES values in each RTF workbook for that measure.

For measures in which an RTF-approved, active measure has not been specified, ADM proposes to measure verified net savings by conducting a billing analysis with a counterfactual group selected via propensity score matching. The methodology used to select the quasi-experimental counterfactual group and the methodology for linear regression billing analysis are summarized in further detail in the "Billing Analysis (IPMVP Option C)" section. ADM will isolate each unique measure and verify each participant included in the analysis did not also participate in other programs; therefore, ADM will be able to isolate the measure effects using the household's billed consumption data.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

4.6.4 Timing and Cadence

This program is considered "high risk" and therefore will be evaluated each year in the 2024-2025 evaluation period.

4.6.5 Technical Comments

In the event that the required data is not available or sufficient to conduct a billing regression analysis, ADM will review and apply Avista TRM methods along with verified tracking data to estimate net program savings. ADM will also work with Avista and program implementers to ensure the expected energy savings per unit are reasonable and align with evaluation methods.

4.7 Residential Multifamily Weatherization Program – New Offerings

Avista decided to retire the Multifamily Direct Install Program (MFDI) Program Avista in its current form and focus on developing new multifamily opportunities, called the Residential Multifamily Weatherization Program – New Offerings. Avista is in the process of developing multifamily program offerings that include strategic energy management, fulfillment of any remaining direct install opportunities, and multifamily weatherization offerings. ADM assumes the program will continue to serve hard-to-reach customer segment as well as Avista's low- and limited-income population. Although ADM has limited information of the new version of this program, Table 4-9 summarizes the anticipated measures offered under this program along with the proposed impact evaluation method for each measure, assuming the continuation of direct install measures, and adding weatherization measures, summarized and separated by fuel type.

Table 4-9: Multifamily Weatherization Program – New Offerings Measures

Measure	Impact Analysis Methodology
Faucet aerators[19]	No energy savings
Showerheads[20]	No energy savings
Screw-in LEDs	RTF UES, ResLighting_v9_4
Smart power strips	Avista TRM
Vending misers in common areas	Avista TRM
Lighting (common area)	RTF UES, ResLighting_v9_4
Attic insulation	RTF UES, ResMFWeatherization_v6_1
Wall insulation	RTF UES, ResMFWeatherization_v6_1
Floor insulation	RTF UES, ResMFWeatherization_v6_1
Window replacement	RTF UES, ResMFWeatherization_v6_1
Window efficiency upgrade	RTF UES, ResMFWeatherization_v6_1
Storm windows	RTF UES, ResMFWeatherization_v6_1
Door replacement	RTF UES, ResMFWeatherization_v6_1

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Residential Multifamily Weatherization Program – New Offerings in the section below.

4.7.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Residential Multifamily Weatherization Program – New Offerings:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Residential Multifamily Weatherization Program – New Offerings. Table 2-2 Section 2.3.2 summarizes the sample sizes for the survey-based verification activity for the Residential Multifamily Weatherization Program – New Offerings.

During document-based verification, if any deviations between the tracking data and application values are found, ADM will communicate these differences to Avista through periodic updates and summarize deviations in the final report.

This program does not track participating customer contact information; therefore, surveys will not be deployed for the Multifamily Weatherization Program participants.

4.7.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of rebate
- Rebate application forms and applicable invoices

[19] The Regional Technical Forum has deactivated the showerhead measure workbook due to low or negligible energy savings for faucet aerators

[20] The Regional Technical Forum has deactivated the showerhead measure workbook due to low or negligible energy savings for showerheads

4.7.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodology to estimate verified net energy savings in the Multifamily Weatherization Program – New Offerings:

- Deemed savings using RTF UES values or Avista TRM values

Measure-level impact evaluation methodologies for this program are specified in Table 4-9, separated by fuel type.

Given the measure mix and inherent difficulties reliably modeling common areas in multifamily buildings (typically due to uncertainty mapping to the relevant accounts and/or the wide variety of energy uses associated with those accounts, ADM proposes to measure savings for the program using deemed savings.

For measures in which an RTF-approved measure has been specified and considered active, ADM proposes to measure net savings using UES values in each RTF workbook for that measure. For measures in which an RTF-approved, active measure has not been specified, ADM proposes to measure verified net savings using the values in Avista's TRM. ADM will review Avista TRM UES data sources to ensure they are applicable to the measure. ADM assumes that we will be able to use the RTF multifamily weatherization UES workbook for the new offerings of weatherization measures.

The RTF had deactivated the faucet aerator measure during the May 2021 RTF meeting due to insufficient data. The RTF had also deactivated the smart power strip measure during the November 2021 RTF meeting. Therefore, these measures will be evaluated with no energy savings. In addition, the vending misers in common areas has historically shown insufficient participation for an isolated billing analysis. Therefore, ADM proposes to employ Avista TRM to evaluate this measure.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

4.7.4 Timing and Cadence

This program is considered "low risk" and therefore will be evaluated once in the 2024-2025 evaluation period.

4.7.5 Technical Comments

In the case that the Avista TRM does not represent the most applicable UES value for the rebated measure, ADM will review third-party TRM algorithms to estimate verified net energy savings.

In addition, as noted above, billing analyses in multifamily settings are more prone to issues than single family detached homes or even dedicated commercial facilities. However, if Avista is interested in pursuing a billing analysis, ADM will make this change during the planning process.

4.8 Residential On-Bill Repayment/Financing Program

The On-Bill Repayment/Financing Program provides on-bill repayment/financing programs for residential and small business customers. Avista's on-bill repayment (OBR)/financing program returned as an offering after a half decade hiatus. In 2023 Avista started offering customers access to OBR

through its partner the Puget Sound Cooperative Credit Union (PSCCU). OBR, through PSCCU, offers lower rate loans for energy-efficient projects to homeowners and business owners that can be more easily tracked and paid back through their monthly utility bill. OBR is not intended for customers who qualify for Avista's Low-Income Weatherization program and that can therefore be served directly through the partnering community action agencies.

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the On-Bill Repayment/Financing Program in the section below.

4.8.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the On-Bill Repayment/Financing Program:

- Database review for program-level data fields (Section 2.2)

The database review will include all available On-Bill Repayment/Financing Program tracking data. ADM does not propose any sampled document-based verification or sampled survey-based verification activities for the evaluation of this program, as impact evaluation savings will be measured in the measure's native program.

4.8.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program marketing materials, program tracking database, and a list of customers participating in the program along with associated measures with repayment plans

4.8.3 Impact Analysis

Avista does not claim energy savings for OBR, as the savings associated with any measure installed using OBR financial support will be claimed through the relevant and native Avista program. In the event that Avista revises the program to start claiming savings for these financed measures, ADM will discuss with Avista and develop an OBR-specific impact analysis plan.

ADM's efforts will instead be focused on gathering and estimating program uplift, or additional participation in other programs due to the financing option provided by ADM. This will be identified in participant surveys, which will ask participants whether the financing option impacted their decision to purchase the rebated equipment.

4.8.4 Timing and Cadence

This program is considered "low risk" and therefore will be evaluated once in the 2024-2025 evaluation period.

4.8.5 Technical Comments

ADM provides no technical comments for this program's evaluation.

4.9 Residential Always-On Load Behavioral Program

The Residential Always-On Load Behavioral Program encourages residential households to reduce energy usage contributing to the "always-on" load. This "always-on" load, or "idle" load is the portion of daily household energy usage consumed from household devices that have been turned off or are in standby mode, but still drawing power.

The Residential Always-On Load Behavioral Program makes use of territory-wide AMI deployment by integrating AMI data with machine learning algorithms to identify the always-on load in each household. Avista has identified the top third of residential customers with always-on load and has created three potential groups: two treatment arms and one control group.

ADM understands that Avista may want to test different behavioral responses to personalized information, private costs, and economic incentives to determine a method most likely to generate the highest reduction in always-on load. ADM would work with Avista to develop A-B test groups for messaging, comparing more personalized information against generalized outreach and messaging. Subsequent to this analysis, ADM can then target "high savers" with survey efforts intended to capture demographic data that may be used as an underlying predictor of responsiveness to the program messaging.

This program was implemented by the third quarter of 2023 and targeted the top third (nearly 75,000 customers) of residential always-on loads. The program has identified two treatment groups and one control group, with a target reduction of 5 percent a month relative to each treatment customer's baseline. The groups are assigned as follows:

- **Group A:** Customer received emails from Avista monthly with their Always On progress (see email templates for more detail).
- **Group B:** Customer received emails from Avista monthly with their Always On progress as well as a $5 bill credit if they reduced their always on usage that month in comparison to their calculated baseline amount.
- **Group C:** The customer did not receive emails or communication regarding the program – this group reflects the control group.

Table 4-10 summarizes the anticipated cohorts treated under this program.

Table 4-10: Residential Always-On Load Behavioral Program Summary

Cohort	Households
Group A (Treatment 1)	25,000
Group B (Treatment 2)	25,000
Group C (Control Group)	25,000
Total	**75,000**

ADM will employ IPMVP-recommended standards for estimating verified net savings for this behavioral program. This includes validating each cohort's control group remain a statistically significant match after accounting for attrition, conducting separate linear regression for each cohort including variables for weather normalization, extrapolating model estimates using typical meteorological year (TMY) weather data, removing double counted savings claimed in other residential programs, and summing each cohort's validated savings to estimate total program energy savings.

Behavioral programs typically display 1-3% annual household energy savings. Behavioral programs also often display persistence savings due to behavioral energy consumption changes that extend further than the length of program treatment.

This behavioral program is highly unique in that messaging targets always-on load and uses high interval meter data to provide personalized tips. ADM will explore avenues for identifying further savings opportunities for targeted expansion of the program, as well as relative benefit of always-on load messaging compared to typical messaging in behavioral programs.

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Residential Always-On Load Behavioral Program in the sections below.

4.9.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Residential Always-on Load Behavioral Program:

- Database review for program-level data fields (Section 2.2)

ADM does not propose any sampled document-based verification or sampled survey-based verification activities for the evaluation of this program.

4.9.2 Required Data

ADM requires the following data to complete the analysis for this program:

- For each treatment and control customer, identifiers for treatment or control assignment and cohort assignment, unique customer identifiers, household zip code, and date of intervention
- Tracking data from Avista downstream programs for the previous three to five program years
- A sample of communication materials sent to customers
- Monthly billed consumption data for treatment and control customers
- AMI meter data for treatment and control customers

4.9.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodology to estimate verified net energy savings for each cohort in the Residential Always-On Load Behavioral Program:

- Billing analysis with RCT group (IPMVP Option C)

For this program, ADM proposes to measure verified net savings by conducting a billing analysis detailed in the “Billing Analysis (IPMVP Option C)” section with the program’s defined RCT groups. In the case the RCT groups have not been selected, ADM proposes to assist program implementors with random assignment of eligible households in the top third of residential always-on loads in the service territory.

ADM understands that in 2023, Avista increased the number of participants in the program to approximately 110,000 residential electric customers. ADM has extensive experience assisting behavioral pilot implementors with selecting these groups using the methods described in the Uniform

Methods Project (UMP) by the National Renewable Energy Laboratory[21] to ensure groups are valid, remain scalable in the future, and align with Avista energy efficiency goals.

For this behavioral program, ADM describes the billing analysis in further detail, as this methodology differs from measure-level or census-level billing analyses. The UMP considers Randomized Control Trials (RCT) the golden standard for evaluating behavioral energy efficiency programs. The most important benefit of an RCT is that the experiment results in an unbiased estimate of the program's causal impact. Because the Residential Always-On Load Behavioral Program employs a RCT design, ADM is able to conduct an impact evaluation with reliable and robust verified net energy savings estimates. The UMP recommends RCT groups as it distributes households evenly and randomly into treatment and control groups. Therefore, the pre- and post-period remain comparable over time, allowing the evaluator to control for outside factors that may also contribute to energy usage differences. Such outside factors include large-scale socioeconomic or meteorological changes, such as COVID-19 shelter in place orders or hurricanes. Through random assignment designed at the outset of the program, the effects of these large-scale socioeconomic factors are equally represented within each group, affecting each group's average household consumption equally.

Using the RCT groups designated within this program, ADM will compare treatment consumption with control consumption for each cohort in the program using AMI meter data or monthly billed consumption data. We will explore the following types of linear fixed effects regression (LFER) models during the evaluation of this program: Difference in Difference (D-in-D) and Post-Program Regression (PPR). Each model specification is detailed in the "Billing Analysis (IPMVP Option C)" section. ADM will include heating season and cooling season controls to estimate the relationship between energy consumption and weather during the pre- and post-periods, for each fuel type. ADM will finalize model specifications in collaboration with Avista during the kick-off meeting and subsequent program-specific meetings.

As previously mentioned, it is ideal to have a randomized control trial (RCT) to gather the most reliable and robust results. However, some RCTs may become no longer viable due to changes in implementation or natural attrition. ADM will test the validity of each RCT by completing t-tests for the average daily usage of each of the pre-period months between the remaining treatment group and remaining control. If the pre-period average daily usage rejects the null hypothesis at the 90% confidence interval for any of the 12 pre-period months, the RCT is considered invalid. In the case a cohort no longer passes equivalency testing, ADM proposes a method for producing post-hoc control groups via quasi-experimental methods, further described in the "Comparison Group" section. Using this quasi-experimental control group, ADM will continue impact analysis and explore the regression models mentioned above.

After regression models have been finalized, ADM will estimate and remove double count savings found in other Avista residential energy efficiency programs from the customers in both the treatment group and control groups. The double count savings removal is further described below.

The Residential Always-On Load Behavioral Program communications may also increase the customer's propensity to participate in other energy efficiency programs. This additional participation is known as

[21] https://www.nrel.gov/docs/fy21osti/77435.pdf

uplift. The communication sent to customers includes information about how to save energy, which may lead to customers' adopting more energy efficient upgrades for their home. When a household participates in an efficiency program because of this encouragement, the utility might count their savings twice: once in the regression-based estimate of behavioral program savings and again in the estimate of savings for the other energy efficiency program. Although uplift rarely displays a statistically significant difference between the treatment and control groups, the UMP recommends removing uplift from each group at the household level.

ADM will estimate savings from program uplift and subtract them from the efficiency program portfolio savings. To achieve this, ADM will gather information on the total net kWh saved in other residential programs. We will calculate the double count savings on a per-household level for each treatment group. We will subtract the double counted savings, whether positive or negative, from the wave's gross savings estimates from the regression analysis to get total verified savings. For downstream programs, other program tracking data and verified per-measure energy savings is sufficient to complete the removal of double counted savings.

ADM will summarize the cohort-level impacts by extrapolating regression coefficients with TMY data or actual weather data. ADM will present savings estimates in three formats for the program year:

- Daily and annual energy savings per home
- Annual percent savings per home
- Program-level energy (kWh) savings

ADM will summarize program-level savings by extrapolating verified household net energy savings to the number of unique treatment households participating in the program, separated and reported by state and fuel type.

4.9.4 Timing and Cadence

This program is considered "high risk" and therefore will be evaluated each year in the 2024-2025 evaluation period.

4.9.5 Technical Comments

In addition to the proposed methodology described above, ADM will also explore a single linear regression aggregating both cohorts, with an identifier differentiating treatment group 1 from treatment group 2 in order to identify the incremental savings effect gained by offering the incentive to the second treatment group. In addition, ADM will evaluate persisted savings derived from the program treatment using the impact methodology described above, as is industry best practice.

As mentioned previously, this behavioral program is highly unique. In order to better understand the unique strengths of this program's implementation methods, ADM will explore monthly billing data and AMI meter data to better characterize the various changes resulting from these unique, customized communications, such as investigating households that display higher than average household energy reductions in each cohort and similarities in household characteristics. Further details for the methodology of this group analysis are summarized in "Innovative Techniques" in Section 3.10, under "Savings Group Analysis". Information about these groups of customers, combined with customer

feedback about the always-on communications, will help Avista identify further opportunities for targeted expansion of the program with the goal of generating the highest reduction in always-on usage.

4.10 Residential Behavioral Program

Avista plans to launch a residential behavioral program in late 2024 or early 2024. ADM prepares to evaluate this program with the same methods as the Residential Always-On Program.

Unlike the Residential Always-On Load Behavioral Program, the Residential Behavioral program will not make use of territory-wide AMI deployment by integrating AMI data with machine learning algorithms to identify the always-on load in each household. Instead of focusing on always-on load energy savings, messaging will be deployed based on effective space heating, water heating, and lighting tips.

ADM will employ IPMVP-recommended standards for estimating verified net savings for this behavioral program. This includes validating each cohort's control group remain a statistically significant match after accounting for attrition, conducting separate linear regression for each cohort including variables for weather normalization, extrapolating model estimates using typical meteorological year (TMY) weather data, removing double counted savings claimed in other residential programs, and summing each cohort's validated savings to estimate total program energy savings.

Behavioral programs typically display 1-3% annual household energy savings. Behavioral programs also often display persistence savings due to behavioral energy consumption changes that extend further than the length of program treatment.

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Residential Behavioral Program in the sections below.

4.10.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Residential Behavioral Program:

- Database review for program-level data fields (Section 2.2)

ADM does not propose any sampled document-based verification or sampled survey-based verification activities for the evaluation of this program.

4.10.2 Required Data

ADM requires the following data to complete the analysis for this program:

- For each treatment and control customer, identifiers for treatment or control assignment and cohort assignment, unique customer identifiers, household zip code, and date of intervention
- Tracking data from Avista downstream programs for the previous three to five program years
- A sample of communication materials sent to customers
- Monthly billed consumption data for treatment and control customers
- AMI meter data for treatment and control customers

4.10.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodology to estimate verified net energy savings for each cohort in the Residential Load Behavioral Program:

- Billing analysis with RCT group (IPMVP Option C)

For this program, ADM proposes to measure verified net savings by conducting a billing analysis detailed in the "Billing Analysis (IPMVP Option C)" section with the program's defined RCT groups. In the case the RCT groups have not been selected, ADM proposes to assist program implementors with random assignment of eligible households in the top third of residential energy usage in the service territory.

For further information on billing analysis methods for the behavioral program, please reference Section 4.9.3 from the Residential Always-On Behavioral Program methods.

4.10.4 Timing and Cadence

This program is considered "high risk" and therefore will be evaluated each year in the 2024-2025 evaluation period.

4.10.5 Technical Comments

In order to better understand the unique strengths of this program's implementation methods, ADM will explore monthly billing data and AMI meter data to better characterize the various changes resulting from these communications, such as investigating households that display higher than average household energy reductions in each cohort and similarities in household characteristics. Further details for the methodology of this group analysis are summarized in "Innovative Techniques" in Section 3.10, under "Savings Group Analysis".

4.11 Residential Home Energy Audit Program

The Residential Home Energy Audit Program is designed to educate and generate interest in efficiency in general and, more specifically, in Avista's portfolio of residential energy efficiency and renewable-energy programs. ADM summarizes the proposed program-specific impact analysis activities and requirements for the Residential Home Energy Audit Program in the section below.

4.11.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Residential Home Energy Audit Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)
- Survey-based verification for a random subset of customers (Section 2.3.2)

Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Residential Home Energy Audit Program.

During document-based verification, if any deviations between the tracking data and application values are found, ADM will communicate these differences to Avista through periodic updates and summarize deviations in the final report.

During survey-based verification, ADM will randomly select a subset of participant customers to survey for simple verification that a home energy audit was conducted, that the participant remembers the results of the home energy audit, and that the participant still has the direct install measures installed and functioning.

4.11.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, contact information, and date of assessment
- Rebate application forms and applicable invoices (when relevant)
- Monthly billed consumption data for participating customers and for similar, non-participating customers

4.11.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodologies to estimate verified net energy savings in the Residential Home Energy Audit Program:

- Deemed savings using RTF UES values
- Billing Analysis with counterfactual group (IPMVP Option C)

This program provides direct install measures to customers. The Avista auditor may also provide recommendations for improvements that may be rebated through Avista's programs. In addition, the Avista auditor may also provide recommendations for home improvements that Avista does not currently incent for. Therefore, in order to capture this combination of effects, ADM will codnuct a billing analysis with a counterfactual group selected via propensity score matching. The methodology used to select the quasi-experimental counterfactual group and the methodology for linear regression billing analysis are summarized in further detail in the "Billing Analysis (IPMVP Option C)" section.

The measures rebated by the customer through other Avista channels will be removed from the average household billing analysis results, in order to remove double counting effects.

Additionally, for measures in which an RTF-approved measure has been specified and considered active, ADM proposes to measure net savings using UES values in each RTF workbook for that measure.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

4.11.4 Timing and Cadence

This program is considered "low risk" and therefore will be evaluated once in the 2024-2025 evaluation period.

4.11.5 Technical Comments

ADM provides no technical comments for this program's evaluation.

4.12 Residential Direct Install Insulation Program

Avista plans to launch the Residential Direct Install Insulation Program during the 2024-2025 biannual period. ADM assumes the measures provided in this program will mimic the residential shell measures and differ in only implementation and incentives. ADM will work with Avista program managers to update our assumptions and impact evaluation methods for additional measures not included in the tables below. Table 4-11 summarizes the anticipated measures offered under this program along with the proposed impact evaluation method for each measure, assuming the continuation of direct install measures, and adding weatherization measures, summarized and separated by fuel type.

Table 4-11: Residential Direct Install Insulation Program Offering Measures

Measure	Impact Analysis Methodology
Faucet aerators[22]	No energy savings
Showerheads[23]	No energy savings
Screw-in LEDs	RTF UES, ResLighting_v9_4
Smart power strips	Avista TRM
Vending misers in common areas	Avista TRM
Lighting (common area)	RTF UES, ResLighting_v9_4
Attic insulation	RTF UES, ResMFWeatherization_v6_1
Wall insulation	RTF UES, ResMFWeatherization_v6_1
Floor insulation	RTF UES, ResMFWeatherization_v6_1
Window replacement	RTF UES, ResMFWeatherization_v6_1
Window efficiency upgrade	RTF UES, ResMFWeatherization_v6_1
Storm windows	RTF UES, ResMFWeatherization_v6_1
Door replacement	RTF UES, ResMFWeatherization_v6_1

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the program in the section below.

4.12.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Residential Direct Install Insulation Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)
- Survey-based verification for a random subset of customers (Section 2.3.2)

[22] The Regional Technical Forum has deactivated the showerhead measure workbook due to low or negligible energy savings for faucet aerators

[23] The Regional Technical Forum has deactivated the showerhead measure workbook due to low or negligible energy savings for showerheads

Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Residential Direct Install Insulation Program. Table 2-2 Section 2.3.2 summarizes the sample sizes for the survey-based verification activity for the Residential Direct Install Insulation Program.

During document-based verification, if any deviations between the tracking data and application values are found, ADM will communicate these differences to Avista through periodic updates and summarize deviations the final report.

During survey-based verification, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure and documentation of prior equipment. ADM will include questions such as:

- Is the newly installed direct install measures still properly functioning?
- What type of equipment heats the space in your home?

These questions will help ADM verify that the measure was collected and documented accurately and will allow ADM to calculate measure-level savings more accurately.

4.12.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of rebate
- Rebate application forms and applicable invoices
- Monthly billed consumption data for treatment and control customers

4.12.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodology to estimate verified net energy savings in the Residential Direct Install Insulation Program:

- Deemed savings using RTF UES values or Avista TRM values

Measure-level impact evaluation methodologies for this program are specified in Table 4-11, separated by fuel type.

Given the measure mix and inherent difficulties reliably modeling common areas in multifamily buildings (typically due to uncertainty mapping to the relevant accounts and/or the wide variety of energy uses associated with those accounts, ADM proposes to measure savings for the program using deemed savings.

For measures in which an RTF-approved measure has been specified and considered active, ADM proposes to measure net savings using UES values in each RTF workbook for that measure. For measures in which an RTF-approved, active measure has not been specified, ADM proposes to measure verified net savings using the values in Avista's TRM. ADM will review Avista TRM UES data sources to ensure they are applicable to the measure. ADM assumes that we will be able to use the RTF multifamily weatherization UES workbook for the new offerings of weatherization measures.

The RTF had deactivated the faucet aerator measure during the May 2021 RTF meeting due to insufficient data. The RTF had also deactivated the smart power strip measure during the November

2021 RTF meeting. Therefore, these measures will be evaluated with no energy savings. In addition, the vending misers in common areas has historically shown insufficient participation for an isolated billing analysis. Therefore, ADM proposes to employ Avista TRM to evaluate this measure.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

4.12.4 Timing and Cadence

This program is considered "low risk" and therefore will be evaluated once in the 2024-2025 evaluation period.

4.12.5 Technical Comments

In the case that the Avista TRM does not represent the most applicable UES value for the rebated measure, ADM will review third-party TRM algorithms to estimate verified net energy savings.

In addition, as noted above, billing analyses in multifamily settings are more prone to issues than single family detached homes or even dedicated commercial facilities. However, if Avista is interested in pursuing a billing analysis, ADM will make this change during the planning process.

4.13 Low-Income Program

The Low-Income Program delivers energy efficiency measures to low-income residential customers in its Washington service territory in partnership with five network Community Action Agencies ("Agencies") and one tribal weatherization organization. In-house or contract crews install approved program measures in income-qualified households. In addition, the Agencies have access to other monetary resources which allow them to weatherize a home or install additional energy efficiency measures.

Table 4-12: Low-Income Program Measures

Measure	Impact Analysis Methodology
G Air infiltration	Census Billing Analysis
G ENERGY STAR-rated doors	
G Windows	
G High-efficiency natural gas furnace	
G Water heater	
G Attic insulation	
G Duct insulation	
G Floor insulation	
G Wall insulation	
G Duct sealing	
G Tankless water heater	
G High-efficiency boiler	
E Air infiltration	
E ENERGY STAR-Rated Doors	
E ENERGY STAR-Rated Refrigerator	
E Windows	
E Air Source Heat Pump	
E Attic insulation	

Measure	Impact Analysis Methodology
E Duct insulation	
E Floor insulation	
E Wall insulation	
E Duct sealing	
E Ductless Heat Pump (single head) (w FAF)	
E Ductless Heat Pump (single head) (displace zonal)	
E Tiers 2-3 HPWH	
E Conversion to Air Source Heat Pump	
E HHS	
E Outreach LEDs	
E Ductless Heat Pump (multi head) (w FAF)	
E Ductless Heat Pump (multi head) (displace zonal)	

Avista provides CAP agencies with the following approved measure list, which are reimbursed in full by Avista. Avista also provides a rebate list of additional energy saving measures the CAP agencies are able to utilize which are partially reimbursed. Table 4-12 summarizes the anticipated measures offered under this program along with the proposed impact evaluation method for each measure, separated by fuel type.

4.13.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Low-Income Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Low-Income Program.

During document-based verification, if any deviations between the tracking data and application values are found, ADM will communicate these differences to Avista through periodic updates and summarize deviations in the final report.

Survey-based verification is not proposed for this program, as the evaluation method proposed does not necessitate adjustments to savings estimates.

4.13.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of rebate
- Program materials
- Rebate application forms and applicable invoices
- Monthly billed consumption data for participating and similar non-participating customers
- Identifiers for low- to moderate-income households in both participant and nonparticipant customers in the Avista service territory
- Stakeholder contact information

We understand that Avista will be working with a variety of sources to acquire the requested data. To facilitate this, our team is flexible on the exact format of the data and encourages Avista to provide requested data incrementally rather than wait for a complete set.

4.13.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodology to estimate verified net energy savings in the Low-Income Program, as described in Table 4-12:

- Census billing analysis with counterfactual group (IPMVP Option C)

For this program, ADM proposes to measure verified net savings by conducting a census billing analysis using a counterfactual group selected via propensity score matching. The methodology used to select the quasi-experimental counterfactual group and the methodology for linear regression billing analysis are summarized in further detail in the "Billing Analysis (IPMVP Option C)" section. ADM will not isolate each unique measure but instead verify average participant household energy savings for both electric and natural gas. ADM will verify each participant included in the analysis did not also participate in other programs; therefore, ADM will be able to isolate the Low-Income Program participation effects using the household's billed consumption data. ADM will include heating season and cooling season controls to estimate the relationship between energy consumption and weather during the pre- and post-periods, for electric and gas.

For this program, our approach to creating a quasi-experimental control group utilizes "future" participants from the same program (i.e., those that received measures in 2025 for the 2024 analysis period, and those that received measures in 2024 for the 2025 analysis period) to account for the impact of various macroeconomic factors and other influences on pre- and post-program energy consumption that are unrelated to the installation of program measures. These include economic effects, the movement of people in and out of dwelling units, fluctuations in per-unit energy costs, or, for example, shelter-in-place orders for COVID19. To identify the most relevant customers for the control group, we will use the quasi-experimental matched control group method. This method is further defined in the "Comparison Group" section.

ADM will summarize program-level savings by extrapolating verified household net energy savings to the number of unique participating households, separated and reported by state and fuel type.

4.13.4 Timing and Cadence

This program is considered "low risk" and therefore will be evaluated once in the 2024-2025 evaluation period.

4.13.5 Technical Comments

ADM's previous impact evaluation of the Low-Income Program had insufficient isolated participation to complete a measure-level billing analysis for this program. In addition, a census billing analysis resulted in unreliable savings estimates. It is likely that participation in 2024 and 2025 may also be limited and may cause billing analyses to be unfeasible. ADM is hopeful that participation will increase as residential customers become more comfortable with on-site contractor visits. However, in the event that the

required data is not available or sufficient to conduct a billing regression analysis, ADM will review RTF UES values and Avista TRM methods along with verified tracking data to estimate net program savings.

4.14 Named Community Investment Fund (NCIF) Program

ADM understands that Avista plans to make $2 million available annually for new energy efficiency projects in Named Communities for each of the last two years of the initial CEIP four-year period. This body of funding will be used specifically to address obstacles to participation in efficiency programs for members of Named Communities. This program will be called the Named Community Investment Fund (NCIF) Program. Avista currently expects program goals will focus on reducing energy burdens; increasing engagement in company programs, health, and safety benefits; and enhancing customer reliability. In addition to working with the CAP Agencies included in the Low-Income Program, this program also incorporates non-profit organizations as well.

Avista plans to offer a mix of rebates and fully funded measures. However, this mix may change, as Avista further engages with its advisory groups and customers to maximize program benefits.

Table 4-13 summarizes the anticipated programs offered under this program along with the proposed impact evaluation method for each program. As additional information becomes available for the programs Avista designs for the Named Communities, ADM will discuss with Avista to revise impact evaluation methods to best meet the program's annual objectives.

Table 4-13: Anticipated Named Community Investment Fund Program Impact Methods

Anticipated Program	Anticipated Measures	Impact Analysis Methodology
Community Identified Projects	Educational/	RTF UES / Billing Analysis /
Multifamily Building Upgrades in Named Communities	Weatherization measures (windows, attic insulation, floor insulation, wall insulation, ENERGY STAR doors), line voltage thermostats, heat pumps, water heaters, and direct install measures	RTF UES / Billing Analysis
Weatherization, Health and Safety for Manufactured and Mobile Homes	Weatherization measures (windows, attic insulation, floor insulation, wall insulation, ENERGY STAR doors) and safety measures	RTF UES / Billing Analysis
Single-Family Weatherization	Weatherization measures (windows, attic insulation, floor insulation, wall insulation, ENERGY STAR doors)	RTF UES / Billing Analysis
Incentives for Business and Organizations Serving Named Communities	Site-specific incentives and distributed energy projects	RTF UES / Billing Analysis
Connected Communities	Educational	TBD
Avista / Spokane Tribe of Indians Energy Partnership	Load and grid optimization	Billing Analysis with AMI data

ADM understands that a portion of the NCIF projects will require more complex evaluation due to the mix of measures and efficiency of the measures installed in the households. ADM will review the available data and propose a suitable impact evaluation methodology for these projects; however, ADM

anticipates that billing analysis may be required for a subset of these projects. ADM will work with Avista to update these plans once the program is rolled out and tracking data is available for review.

4.14.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the anticipated NCIF Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)
- Survey-based verification for a random subset of customers (Section 2.3.2)
- In-depth interviews for a random subset of customers (Section 3.3.3)

Similar to the other residential program offerings, ADM anticipates that the above activities will be helpful for evaluating the NCIF Program efforts. Once the programs are established and participation trends are gathered, ADM will work with Avista to provide a sampling plan for document verification and survey and interview goals.

During document-based verification, if any deviations between the tracking data and application values are found, ADM will communicate these differences to Avista through periodic updates and summarize deviations in the final report.

During survey-based verification, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure and documentation of prior equipment. More importantly, ADM will gather additional questions during the process evaluation to understand energy burden for the customers in Named Communities, and whether participation in the program has assisted in providing additional comfort and noticeably lower energy bills. Although energy burden in terms of monetary costs is relevant and important, it is also important to gather whether customers need to limit their spending on other essential items, such as food or medications, in order to pay for energy to maintain a healthy home. For this reason, ADM will include questions such as:

- How much of your monthly income do you spend on energy bills?
- Do you or your family members limit spending on necessities, such as groceries or medications, in order to pay for your home's energy bills?

Questions such as these will identify the energy burden present in participating homes, as well as identify circumstances in which the home does not display typical energy burden, but rather, it is only the case because they have to prioritize one essential item over another (energy over food, or energy over medication). These details will help ADM assess the impact that this NCIF program has on the community. In addition, ADM will ask questions that gather insight on perception of the utility before and after having participated in Avista's programs.

4.14.2 Required Data

ADM anticipates we will require the following data to complete the analysis for these programs:

- Program tracking data, including customer identifiers, address, and date of rebate
- Rebate application forms and applicable invoices

- Monthly billed consumption data for participating and non-participating customers

4.14.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodologies to estimate verified net energy savings in the anticipated NCIF Program:

- Deemed savings using RTF UES values
- Billing Analysis with counterfactual group (IPMVP Option C)

ADM will work with Avista to revise impact analysis methods once further information regarding the measures and project mix that are incentivized. For measures in which an RTF-approved measure has been specified and considered active, ADM proposes to measure net savings using UES values in each RTF workbook for that measure. ADM will also apply adjustments to these RTF values if deviations are found between invoices and tracking data or if in-service rates deviate from 100% in verification surveys. This methodology is summarized in further detail in Section 2.5.1. ADM anticipates we may conduct some on-site measurement for some facilities in order to model actual facility usage more accurately.

For measures in which an RTF-approved, active measure has not been specified, ADM proposes to measure verified net savings by conducting a billing analysis using with a counterfactual group selected via propensity score matching. The methodology used to select the quasi-experimental counterfactual group and the methodology for linear regression billing analysis are summarized in further detail in the "Billing Analysis (IPMVP Option C)" section. ADM will isolate each unique measure and verify each participant included in the analysis did not also participate in other programs; therefore, ADM will be able to isolate the measure effects using the household's billed consumption data.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

4.14.4 Timing and Cadence

This program is considered "high risk" because it is a newer program, and therefore will be evaluated each year in the 2024-2025 evaluation period.

4.14.5 Technical Comments

In the event that the required data is not available or sufficient to conduct a billing regression analysis, ADM will review and apply Avista TRM methods along with verified tracking data to estimate net program savings.

5. Non-residential Program-Level EM&V Approaches

The following subsections detail ADM's program-specific impact methods, process methods, and sampling plans for each of the programs in Avista's Non-Residential Portfolio, as summarized by the 2024 Washington Annual Conservation Plan. ADM will work with Avista to adjust program-specific impact and sampling plans as additional information is received about program participation, program restrictions, measure offerings, and available data.

5.1 C&I Appliance and Thermostat Program

The C&I Appliance and Thermostat Program helps promote nonresidential customers to use high efficiency appliances, such as ENERGY STAR clothes washers, and smart thermostats. Customers receive incentives after installation and after submitting a completed rebate form. Table 5-1 summarizes the anticipated measures offered under this program along with the proposed impact evaluation method for each measure, separated by fuel type.

Table 5-1: C&I Appliance and Thermostat Program Measures

Measure	Impact Analysis Methodology
E ENERGY STAR washer	RTF UES, ComClothesWashers_v7_1
E Smart thermostat	RTF UES, ComConnectedThermostats_v2
G Smart thermostat	RTF UES, ComConnectedThermostats_v2

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the C&I Appliance and Thermostat Program in the section below.

5.1.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the C&I Appliance and Thermostat Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Residential Appliance and Thermostat Program. Table 2-2 Section 2.3.2 summarizes the sample sizes for the survey-based verification activity for the C&I Appliance and Thermostat Program.

During document-based verification, if any deviations between the tracking data and application values are found, ADM will communicate these differences to Avista through periodic updates and summarize deviations the final report. ADM will not conduct survey verification efforts for this program.

5.1.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data including customer identifiers, address, and date of rebate
- Rebate application forms and applicable invoices

5.1.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodologies to estimate verified net energy savings in the Residential Appliance and Thermostat Program:

- Deemed savings using RTF UES values

Measure-level impact evaluation methodologies for this program are specified in Table 5-1, separated by fuel type.

For measures in which an RTF-approved measure has been specified and considered active, ADM proposes to measure net savings using UES values in each RTF workbook for that. ADM will also apply adjustments to these RTF values if deviations are found between invoices and tracking data or if in-service rates deviate from 100% in verification surveys. This methodology is summarized in further detail in Section 2.5.1.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

5.1.4 Timing and Cadence

This program is considered “low risk” and therefore will be evaluated once in the 2024-2025 evaluation period.

5.1.5 Technical Comments

ADM provides no technical comments for this program’s evaluation.

5.2 C&I Site-Specific Program

The Site-Specific Program provides calculated incentives to support the installation of qualifying energy efficiency equipment at commercial/industrial sites. These projects typically have a higher degree of complexity than the traditional prescriptive offerings and rely on custom calculations of savings and incentive levels. Examples of these projects include process improvements, upgrades to specialized equipment used in manufacturing, lighting installations that rely on specialized controls, and other measures designed around the customer’s specific needs.

ADM understands that Avista incorporated a Contractor Incentive Program (CIP) for contractors who complete projects in order to meet savings goals in a difficult labor and supply chain environment. This incentive will be paid directly to contractors and would be in addition to customer incentives that continue to go directly to the customer.

Avista’s Site-Specific Program is a major component in its non-residential offerings. The program approach strives for a flexible response to energy efficiency projects that have demonstrable kWh savings within program criteria. The majority of site-specific kWh savings are composed of custom lighting projects and custom HVAC, envelope, and industrial process load projects that do not fit the prescriptive path. The Site-Specific Program is available to all commercial/industrial retail electric customers, and typically brings in the largest portion of savings to the overall energy efficiency portfolio.

ADM's proposed site-specific M&V approach involves (1) selecting a representative sample of customers or sites that participated in a project; (2) determining the savings for each customer or site in the sample, usually by using one or more of M&V Options defined in the IPMVP; and (3) applying the results of estimating the savings for the sample to the entire population in the project.

5.2.1 Impact Approach

Some programs, particularly for commercial and industrial customers, may include provisions for custom measures. For such measures, we develop specifications on how to sample and verify actual project savings and the engineering calculations used to calculate savings. Major methods for estimating energy savings include engineering analysis, computer simulations, end-use metering, and billing data analysis.

- Engineering analysis includes those methods of analysis in which savings and load impacts are calculated by applying engineering principles and calculations.
- Energy analysis through computer simulation is a more sophisticated version of engineering analysis. ADM has developed DOE-2 and EnergyPlus analyses for energy use and savings for over 10,000 buildings of different types in projects throughout the United States and abroad. We use a framework that uses EnergyPlus, eQuest or DOE-2 as the computational engine for simulating and analyzing energy use in different types of facilities. This streamlining of the analysis process greatly reduces the time and cost of analyzing energy use in a building while providing analytical results of high quality.
- End-use metering can be used to obtain data that directly measures pre- or post-measure (or both) energy use for those specific end-uses affected by an energy efficiency measure. ADM has experience with a wide variety of monitoring approaches and is well-equipped with an extensive inventory of monitoring equipment available for use during this project. Having both the experience and the proper tools, ADM can provide end-use monitoring very cost efficiently for this evaluation effort.
- Trending data from building automation systems can substitute for or augment metering data. ADM explores this possibility with the implementation team, trade allies, and customers. Through regular meetings with key trade allies, we have been able to procure both baseline and post-retrofit trend data to support M&V for numerous large and complex projects. ADM will always explore this data acquisition mode as a first option, since it reduces the M&V burden on the customers (trade allies typically set up the trends) and tends to reduce evaluation costs and improve evaluation turnaround time.
- QAQC: quality assurance and quality control, or pre-review, will be conducted for all projects eligible for an incentive greater than $20,000 or exceeding 500,000 kWh in savings.

Our project team has extensive experience in using all these methods. We draw on the lessons we have learned from this experience to prepare specifications for methods that are appropriate for each custom measure, considering advantages and disadvantages of each method. Moreover, we specify methods that depend on the type of measure and project-specific opportunities or constraints.

5.2.2 Sampling and Precision

For the Site-Specific Program simple random sampling is not an effective sampling methodology as the CV values observed in business programs are typically very high because the distributions of savings are

generally positively skewed. Often, a relatively small number of projects account for a high percentage of the estimated savings for the program.

To address this situation, we will use a sample design for selecting projects for the M&V sample that takes such skewness into account. With this approach, we select a number of sites with large savings for the sample with certainty and take a random sample of the remaining sites. To further improve the precision, non-certainty sites are selected for the sample through systematic random sampling. That is, a random sample of sites remaining after the certainty sites have been selected is selected by ordering them according to the magnitude of their savings and using systematic random sampling. Sampling systematically from a list that is ordered according to the magnitude of savings ensures that any sample selected will have some units with high savings, some with moderate savings, and some with low savings. Samples cannot result that have concentrations of sites with atypically high savings or atypically low savings. We will establish sample sizes to safely exceed ±10% precision at 90% confidence (90/10 confidence precision).

Using past program year participation, ADM has estimated sample sizes required to meet 90/10 precision for each state and fuel type. Table 5-2 below presents expected sample sizes,

Table 5-2: Expected Sample Sizes by State and Fuel Type

Fuel	WA	ID
Electric	17	9
Natural Gas	5	3

5.2.3 Site Visits

For sampled sites in the Site-Specific Program ADM will conduct on-site verification visits to confirm the installation conditions and use-case for sampled projects. For projects where most measures have deemed savings values, we do not expect to conduct extensive metering or monitoring. However, we have conducted both long-term and short-term metering and monitoring in past efforts to collect additional data required for a wide variety of evaluations. For measures for which deemed savings values are not available, we will use site visits to accomplish two major things: First, our field personnel will verify that reported measures have been installed, that they were installed correctly, and that they still function properly. Second, field staff will collect the data needed to analyze the energy savings and demand impacts for the installed measures. ADM will work with Avista to schedule the site visits in an efficient manner to lessen any impact on customer satisfaction. When needed, metered data will be collected either via a data logger or by EMS trend data (if available).

5.2.4 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms and applicable invoices
- Individual project files and supporting documentation for sampled projects

5.2.5 Impact Analysis

For the Site-Specific programs, our evaluation work will include:

- Stratified Random Sampling and by selecting large saving sites with certainty;
- QAQC (pre-review) of large and custom projects;
- Engineering reviews of non-prescriptive projects;
- On-site verification and data logging;
- Interviewing of program participants; and
- Net-to-gross.

For custom or otherwise non-deemed measures, we use site-specific methods to determine savings that depend on the type of measure being analyzed (e.g., lighting measures, HVAC measures, refrigeration and process improvement measures, motors, and variable frequency drives).

For measures evaluated according to the site-specific approach, we review documentation for projects selected for the analysis samples to assess (1) whether the methodology used for the savings and kW impact calculations were appropriate, (2) whether data sources or assumptions used were valid, and (3) whether savings calculations were done correctly. We consider a variety of factors in this review, including:

- Energy (kWh) savings and demand (kW) reductions
- Number of different measures in a project;
- Number of installed measures;
- Interactive effects between measures and building systems;
- Uncertainty of the measure itself; and
- Percentage of savings vs. baseline.

As noted, the type of method used to determine savings through the site-specific approach depends on the type of measure being analyzed. A high-level summary of our approach to evaluating lighting projects is as follows:

As a first step, we review ex ante lighting calculations and supporting documents. This review includes checking that the invoices and cut sheets for the purchased materials match the specified lighting upgrades in the calculation spreadsheet. If there are any discrepancies or internal inconsistencies in the documentation these are identified as researchable issues in the site-specific M&V plan. In these instances, our approach is to contact the implementer and the applicant and request for clarification or additional information. In general, our approach is to identify and remove as many uncertainties as possible prior to the on-site visit.

The second step is to devise a metering and project-level sampling plan. For certain projects, notably ones in universities and hospitals, it may not be possible to verify every fixture upgrade in the allotted time[24]. In such cases a sampling plan is created to verify the installation of the project with better than ±20% precision at the 90% confidence level[25].

[24] Most site visits will only require one to three hours of on-site work, but verifications of extensive projects in universities and hospitals can sometimes require one to two working days.

[25] If the project represents a significant portion of the program-level savings these criteria can be tightened as required to ensure that the overall precision goals are achieved at the program level.

The on-site work focuses on determining the hours of operation and verifying the baseline fixtures. During the scheduling process, a preliminary interview will inform the site contact of our data collection needs. Depending on program implementation protocols, the baseline fixtures may represent a significant uncertainty in lighting projects. Our approach to verifying the baseline fixtures and controls is summarized below:

If any of the supplanted fixtures are in storage on site, ADM field staff are instructed to photographically document the baseline fixtures. During the scheduling process we ask if this is possible, since the opportunity may exist to ask the site contact to either retain a sample fixture or to document the make/model.

If the above is not possible but the site contact can attest that fixtures like the baseline fixture are still in utilization in other areas of the facility, those fixtures are documented as proxies for the supplanted fixtures.

If the above is not possible, the site contact (or if applicable, the most knowledgeable person on-site in the matter) is asked to describe the baseline fixtures. Our field staff are trained interviewers and can often obtain enough information to help piece together the connected load of the supplanted fixtures.

Depending on the evaluation protocol chosen for a particular project, the hours of operation may need to be metered. If the new fixtures are high bays with integral occupancy sensors, then the preferred approach is to meter current at the electrical panel. Otherwise, light level loggers or lighting on/off loggers will suffice. On average, just a handful of loggers are required per site, but large projects may require 20 or more loggers to be installed.

Though custom commercial and industrial projects are quite different than lighting projects from an engineering standpoint, there are commonalities in our evaluation approaches. The main goal is to identify and remove or minimize the key uncertainties in the energy savings estimations. After a full review of project documentation and if necessary, brief exploratory interviews with the program implementer or the applicant, ADM develops an M&V plan that (1) describes the project and the initial impact estimation methods (2) identifies the major sources of uncertainty in the impact estimation (3) proposes a method for assessing the project's energy impacts and (4) motivates and details a plan to collect and analyze data to reduce or remove uncertainties from the energy savings estimation.

During a site visit, we use a documentation checklist to record the following types of information.

- We document any equipment changed or new equipment installed, including (1) descriptions, (2) schematics, (3) performance data, and (4) other supporting information.
- We also document information about the savings calculation, including (1) what method was used, (2) specifications of assumptions and sources for these specifications, and (3) correctness of calculations.

In our review of the energy savings calculations, we focus on the key factors and assumptions used to determine energy use, including operating hours, usage patterns, and loading factors. Our review includes the following:

- Review of energy-efficiency improvements considered for comprehensiveness
- Review of energy analysis input assumptions

- Review of methods used to calculate energy savings
- Recommendations for corrective actions if an energy analysis is found to be deficient

We use several sources of information to inform our work:

- Technical reference manuals, such as the NW RTF, PA TRM 2021 and the IL TRM 10.0;
- Evaluation studies that ADM has conducted;
- Data and evaluation and market analysis reports that have been prepared that are specific to WA, ID or other nearby states; and
- Evaluation and market reports that have been prepared for other regions of the country. These types of reports are available through the evaluation report databases maintained by CALMAC (for California) and the Consortium on Energy Efficiency.

After all problems in the documentation for a measure have been resolved and it has been determined that the energy efficiency measures have been correctly analyzed and are justifiable, the engineer performing the review will prepare a worksheet that details the review information.

To verify savings for measures installed at project sites, we use methods that depend on the type of measure.

Savings from Process Improvement Measures: Analysis of savings from process improvements, including changes to process equipment, is inherently project specific. Because of the specificity of such processes, analyzing impacts through building simulations is generally not feasible. The M&V effort therefore typically involves retrofit isolation. If pre-installation metering is not possible, then post-installation metering is coupled with regressions, engineering analysis, and production logs to determine energy savings. Whole-facility meter data analysis can be accurate and efficient, provided that the project's impacts are large relative to the amount of unexplained variation (e.g., not correlated with production or weather data) in the facility's energy usage. We often rely on engineering analysis of the process affected by the improvements. Where appropriate, we use a specialized analysis tool such as DOE's excellent Steam System Modeler Tool.

Savings from Air Compressor Measures: We analyze savings from air compressor system measures using custom analysis tools. We use the characteristics and monitoring data collected on-site to develop the air flow and kWh load profiles that are the inputs to our analytical tool. These data will include not only electrical load measurements for compressors and auxiliary equipment (e.g., dryers, fans, etc.) but also inlet and discharge pressure measurements to calculate flows and pressure measurements for the compressor, dryer, and other critical components of the air compression system. We have developed an R-based script to help process large data sets (compressed air data can sometimes come in 1-second intervals) that sometimes accompany this measure.

Savings from Motor and VFDs: Unless baseline data are available, estimates of the energy savings from use of high efficiency motors or of VFDs are derived through an "after-only" analysis. With this method, energy use is measured for the high efficiency motor or VFD after it has been installed. We (1) make one-time measurements of voltage, current, and power factor of the ASD/motor and (2) use loggers to take continuous measurements of power over a period of time in order to obtain the data needed on operating schedules. The data thus collected are then used in estimating what energy use would have been for the motor application if the high efficiency motor or VFD had not been installed.

Savings from Refrigeration Measures: Refrigeration measures are usually project-specific, and the methods used to evaluate savings may differ from case to case. In most cases, we perform the analysis using engineering principles aided by monitored data. Data on the efficiency of new equipment installed will be gathered from program records and verified with the manufacturers. Data on equipment runtime will be collected through short-term monitoring where applicable. We use these data to develop regression models of refrigeration energy usage, or as inputs for the eQuest refrigeration energy analysis program, which has the capability for simulating the energy use associated with various types of refrigeration. Utility interval meter data is particularly useful for evaluations of projects at refrigerated warehouses, or of multiple, similar projects at chains of grocery stores.

Savings from HVAC Measures: For the analysis of HVAC measures, we develop estimates of the savings through simulations with our energy analysis models (e.g., DOE-2, eQuest, EnergyPlus). Each simulation produces estimates of HVAC energy and demand usage to be expected under different assumptions about equipment and/or construction conditions. For the analysis of HVAC measures, we draw on the data collected through on-site visits and monitoring. For facility upgrades involving energy management system upgrades, central plant or plant operation upgrades ADM often employs retrofit isolation or calibrated simulations.

We have conducted numerous evaluations of custom energy efficiency measures and programs using this site-specific approach and are therefore well qualified to apply any of these methods of analysis.

Verified savings from sampled sites will be extrapolated to the program level achieving 90% confidence and 10% precision (90/10) for each fuel type in each state.

5.2.6 Estimating Net Savings

The net savings attributable to the Site-Specific Program may differ from gross savings due to free-ridership and spillover. Free ridership decreases net program impacts whereas spillover increases net program impacts. Spillover includes several effects. First, participants may be influenced by the program to invest in energy-efficient measures not included in the program. Second, non-participants may adopt measures promoted by the program as a direct result of the program but do so outside of the program. One impact of spillover is the additional energy savings that result because non-participants purchase greater efficiency than they otherwise would have, due to differences in dealer and contractor actions available at the time of purchase. There may also be additional energy savings from non-participants due to program marketing impact on awareness of energy efficiency. The goal of the net savings analysis is to infer the magnitude of free-ridership and spillover effects and to determine the net savings impact of a program. Net-to-gross ratios or factors are applied to the adjusted or verified gross savings to estimate net program savings.

Unlike deemed UES found in the RTF and Avista TRM, as well as billing analyses which have net savings 'baked in,' savings resulting from the methods described above will be *gross* savings. If required to report verified net savings, ADM offers to use self-reported survey data to evaluate free ridership, spillover, and overall net savings for most programs. Participant surveys for the Site-Specific Program will include a subsection of questions designed to measure both free-ridership and spillover. Survey free-ridership questions are followed by questions designed to measure spillover, referring to where a customer installed equipment through the program in the past year and then installed additional equipment due to program influences without the help of a rebate.

Resulting survey data will be used the develop individual state and fuel type net-to-gross ratios used to adjust verified program-level gross savings to verified net savings. Survey efforts will be such that we will attempt to reach 90/10 precision for NTG estimates. The NTG adjustment will be gathered via the methods described under the Section 2.6.

5.2.7 Timing and Cadence

This program is considered “high risk” and therefore will be evaluated each year in the 2024-2025 evaluation period.

5.2.8 Technical Comments

ADM provides no technical comments for this program’s evaluation.

5.3 C&I Prescriptive Lighting Program

This program is intended to prompt commercial electric customers to increase the energy efficiency of their lighting equipment through direct financial incentives. It indirectly supports the infrastructure and inventory necessary to ensure that the installation of high-efficiency equipment is a viable option for customers.

In an effort to streamline the process and make it easier for customers and vendors to participate in the program, Avista developed a prescriptive approach for commercial/industrial customers in 2004. This program provides for many common retrofits to receive a pre-determined incentive amount. The Prescriptive Lighting program makes it easier for customers – especially smaller customers and vendors – to participate in the program.

The measures included in the Prescriptive Lighting program include retrofits from fluorescent lamps and fixtures, HID, directional, and incandescent can fixtures to more energy-efficient LED light sources and controls.

The Prescriptive Lighting Program accounts for the second largest share of non-residential expected savings, or roughly 32% of the expected non-residential portfolio. Table 5-3 lists eligible program measures and proposed impact savings sources.

Table 5-3: Prescriptive Lighting Program Measures

Location	Measure	Savings Source
Interior	LED tubes	Standard prescriptive engineering algorithms with inputs from actual equipment and RTF lighting workbooks
	LED U-Bend	
	LED W reduction	
	LED Downlamps/Directional	
	Linear LED Fixtures	
	HID LED fixtures/lamps	
	Occupancy Sensors	
	LLLC Fixtures	
Exterior	HID LED fixtures/lamps	
	Sign Lighting	
New Construction	HID LED fixtures	

ADM will use the Avista TRM in place at the time of plan filing to estimate verified unit energy savings for the measures in the table above. ADM will verify a sample of participating rebates for detailed review of the rebate documentation and verification of measure type. ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Prescriptive Lighting Program in the section below.

5.3.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Prescriptive Lighting Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

If ADM finds any deviations between the tracking data and application values, ADM will note and summarize these differences to Avista through periodic updates and the final report. Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Prescriptive Lighting Program.

In addition, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure, displayed in Table 2-2 ADM will include questions such as:

- What type of lighting was installed?
- Is the equipment still installed and operational?

These questions will help ADM verify that the measure was documented accurately and that data collection activities are progressing smoothly for the program. This simple verification will help ADM more accurately estimate measure-level impacts using engineering algorithms.

5.3.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms and applicable invoices

5.3.3 Impact Analysis

Savings from lighting measures will be verified using a standard engineering algorithm shown below.

$$kWh_{savings} = \sum \left(\left[N_{fixt(i)} \times \frac{W_{fixt(i)}}{1000} \right]_{pre} - \left[N_{fixt(i)} \times \frac{W_{fixt(i)}}{1000} \right]_{post} \right) \times AOH \times ISR$$

Where:

Nfixt(i), pre = Pre-retrofit number of fixtures of type i
Nfixt(i), post = Post-retrofit number of fixtures of type i
Wfixt(i), pre = Rated wattage of pre-retrofit fixtures of type i (Standard Wattage Table developed from RTF materials)
Wfixt(i), post = Rated wattage of post-retrofit fixtures of type i (Varies). Self-reported, verified.
AOH = Annual operating hours for specified space type (Varies). Self-reported. Reported weekly hours were divided by seven, then multiplied by 365.25.
ISR = The In-Service Rate, based on type. RTF estimates.

Fixture/lamp quantities, wattages and hours of operation will be taken directly from program tracking data once their accuracy has been verified. In-service rates will be based on primary data collection and supplemented by RTF estimates as needed.

Table 5-4: Prescriptive Lighting Program Measures

Location	Measure	Impact Analysis Savings Section(s)
Interior	LED tubes	Standard prescriptive engineering algorithms with inputs from actual equipment and RTF lighting workbooks
	LED U-Bend	
	LED W reduction	
	LED Downlamps/Directional	
	Linear LED Fixtures	
	HID LED fixtures/lamps	
	Occupancy Sensors	
	LLLC Fixtures	
Exterior	HID LED fixtures/lamps	
	Sign Lighting	
New Construction	HID LED fixtures	

5.3.4 Timing and Cadence

This program is considered “low risk” and therefore will be evaluated once in the 2024-2025 evaluation period.

5.3.5 Technical Comments

ADM provides no technical comments for this program’s evaluation.

5.4 C&I Small Business Direct Install Lighting Program

The Direct Install Lighting Program is being offered starting 2024 in partnership with Resource Innovations, to supplement and enhance the ongoing customer engagement and energy efficiency

efforts already in place. Avista offers this program for customers who have traditionally been unable to participate in programs requiring upfront capital to receive new lighting and lower energy costs. The direct install delivery method also boosts local markets by endorsing local businesses and trade allies and providing training and upskill opportunities.

In contract with local electrical trade allies, customers receive installation of appropriate energy-saving lighting measures such as lamps, fixtures, and controls; a brief onsite audit identifying additional efficiency opportunities; and marketing and collateral handouts to encourage future program participation.

Table 5-5 lists eligible program measures and proposed impact savings sources.

Table 5-5: Direct Install Lighting Program Measures

Measure	Savings Source
Direct Installation – LED Lighting and Controls	Standard prescriptive engineering algorithms with inputs from actual equipment and RTF lighting workbooks

5.4.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Direct Install Lighting Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

If ADM finds any deviations between the tracking data and application values, ADM will note and summarize these differences to Avista through periodic updates and the final report. Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Direct Install Lighting Program.

In addition, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure, displayed in Table 2-2 ADM will include questions such as:

- What type of lighting was installed?
- Is the equipment still installed and operational?

These questions will help ADM verify that the measure was documented accurately and that data collection activities are progressing smoothly for the program. This simple verification will help ADM more accurately estimate measure-level impacts using engineering algorithms.

5.4.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms and applicable invoices

5.4.3 Impact Analysis

Savings from lighting measures will be verified using a standard engineering algorithm shown below.

$$kWh_{savings} = \sum \left(\left[N_{fixt(i)} \times \frac{W_{fixt(i)}}{1000} \right]_{pre} - \left[N_{fixt(i)} \times \frac{W_{fixt(i)}}{1000} \right]_{post} \right) \times AOH \times ISR$$

Where:

Nfixt(i), pre = Pre-retrofit number of fixtures of type i
Nfixt(i), post = Post-retrofit number of fixtures of type i
Wfixt(i), pre = Rated wattage of pre-retrofit fixtures of type i (Standard Wattage Table developed from RTF materials)
Wfixt(i), post = Rated wattage of post-retrofit fixtures of type i (Varies). Self-reported, verified.
AOH = Annual operating hours for specified space type (Varies). Self-reported. Reported weekly hours were divided by seven, then multiplied by 365.25.
ISR = The In-Service Rate, based on type. RTF estimates.

Similarly, savings from occupancy sensors will be verified using a standard engineering algorithm shown below.

$$kWh_{savings} = \left[N_{fixt(i)} \times \frac{W_{fixt(i)}}{1000} \right]_{post} \times AOH \times reduction$$

Where:

Nfixt(i), post = Post-retrofit number of fixtures of type i
Wfixt(i), post = Rated wattage of post-retrofit fixtures of type i (Varies). Self-reported, verified.
AOH = Annual operating hours for specified space type (Varies). Self-reported.
reduction = The reduction in operating hours as a result of the installation of occupancy sensors, 32%for fixture/ceiling mounted sensors.

In both cases, fixture/lamp quantities, wattages and hours of operation will be taken directly from program tracking data once their accuracy has been verified. In-service rates will be based on primary data collection and supplemented by RTF estimates as needed.

Table 5-6: Direct Install Lighting Program Measures

Measure	Savings Source
Direct Installation – LED Lighting and Controls	Standard prescriptive engineering algorithms with inputs from actual equipment and RTF lighting workbooks

5.4.4 Timing and Cadence

This program is considered “low risk” and therefore will be evaluated once in the 2024-2025 evaluation period.

5.4.5 Technical Comments

ADM provides no technical comments for this program’s evaluation.

5.5 C&I Prescriptive HVAC Variable Frequency Drive Program

The Prescriptive HVAC Variable Frequency Drive Program is intended to prompt customers to increase the energy efficiency of their HVAC fan or pump applications with a Variable Frequency Drive (VFD) retrofit. Adding a VFD to HVAC systems is an effective tool for cutting operating costs, improving overall system performance, and reducing wear and tear on motors. The prescriptive rebate approach issues payment to the customer after the measure has been installed. Commercial customers who use Avista electricity and apply the VFD to the eligible fan or pump measures are eligible for this program.

The Prescriptive HVAC Variable Frequency Drive Retrofit Program is offered for retrofitting VFDs on existing HVAC equipment. Customers must submit a completed rebate form, invoices, and documentation to verify the horsepower of the motor on which the VFD was installed within 90 days of installation. This program is promoted by trade allies, Avista account executives, the Avista website, and Avista marketing efforts. The website is also used to communicate program requirements, incentives, and forms.

Table 5-7 lists eligible program measures and proposed impact savings sources.

Table 5-7: Prescriptive HVAC VFD Program Measures

Measure	Savings Source
HVAC Cooling Pump	RTF Variable Speed Drives v3.1
HVAC Heating Pump or Combo	
HVAC Exhaust Fan	

ADM will use the Avista TRM to estimate verified savings for the measures in the table above, as approved UES values are estimated for each. ADM will verify a sample of participating rebates for detailed review of the rebate documentation and verification of measure type. ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Prescriptive HVAC VFD Program in the section below.

5.5.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Prescriptive HVAC VFD Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

If ADM finds any deviations between the tracking data and application values, ADM will note and summarize these differences to Avista through periodic updates and the final report. Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Prescriptive HVAC VFD Program.

In addition, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure, displayed in Table 2-2 ADM will include questions such as:

What type of pump/fans was the VFD installed on?

- Is the equipment still operational?

These questions will help ADM verify that the measure was documented accurately and that data collection activities are progressing smoothly for the program. This simple verification will help ADM more accurately estimate measure-level impacts using engineering algorithms.

5.5.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms and applicable invoices

5.5.3 Impact Analysis

All measures in the Prescriptive HVAC VFD Program have applicable electricity UES through the Avista TRM. Table 5-8 summarizes the anticipated measures offered under this program and corresponding impact M&V methodology sources. ADM will apply the TRM UES values to the types and quantities of each measure, after applying adjustments from database review and verification surveys, if necessary.

Table 5-8: Prescriptive HVAC VFD Program Measures

Measure	Impact Analysis Savings Section(s)
HVAC Cooling Pump	RTF Variable Speed Drives v3.1
HVAC Heating Pump or Combo	
HVAC Exhaust Fan	

5.5.4 Timing and Cadence

This program is considered “low risk” and therefore will be evaluated once in the 2024-2025 evaluation period.

5.5.5 Technical Comments

ADM provides no technical comments for this program’s evaluation.

5.6 C&I Midstream Program

ADM understands that Avista’s Prescriptive HVAC Program and Food Service Equipment Program measure offerings have transitioned to the midstream delivery method under the C&I Midstream Program, which works with distributors to incentivize contractors who purchase energy efficient equipment. This delivery mechanism change removes barriers from C&I customers by removing the requirement for customers to fill out rebate application forms themselves, and instead places the responsibility on professionals in the field, such as contractors. Many measures offered through the program do not have corresponding RTF workbooks

Table 5-9 lists eligible program measures and proposed impact savings sources.

Table 5-9: C&I Midstream Program Measures

Measure	Savings Source
Air Conditioners	Standard prescriptive engineering algorithms with inputs from actual equipment, RTF workbooks and regional data, as necessary
Heat Pumps	
Ductless Heat Pumps	
Furnaces	
Boilers	
Water Heaters	
Demand Control Ventilation for Kitchens	Current Avista Midstream TRM Workbook
Combination Ovens	RTF Combination Ovens v5.0
Convection Ovens	RTF Convection Ovens v5.1
Conveyor Ovens	CA eTRM SWFS008-02
Ice Machines	RTF Commercial ENERGY STAR Ice Machines v2.1
Hot Food Holding Cabinets	RTF Commercial Hot Food Holding Cabinets v5.1
Freezers	RTF Commercial Freezers v5.1
Griddles	RTF Commercial Griddles v2.1
Rack Ovens	RTF Commercial Rack Ovens v2.1
Steamers	RTF Commercial Steamers v5.1
Dishwashers	CA eTRM SWFS002-04, SWFS018-05
Hand Wraps	CA eTRM SWFS010-03
Fryers	RTF Commercial Fryers v5.1

ADM will use the RTF to estimate verified savings for the measures in the table above, as RTF-approved UES values are estimated for each. In the case where a measure is not covered by the RTF, such as certain heating zones for the Natural Gas Boiler measure, ADM will evaluate savings using the Avista TRM. ADM will verify a sample of participating rebates for detailed review of the rebate documentation and verification of measure type. ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the C&I Midstream Program in the section below.

5.6.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the C&I Midstream Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

If ADM finds any deviations between the tracking data and application values, ADM will note and summarize these differences to Avista through periodic updates and the final report. Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the C&I Midstream Program. ADM will not conduct verification surveys for this program. Instead, ADM will interview distributors and trade allies.

5.6.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install

- Filled rebate application forms and applicable invoices
- Monthly energy consumption for participating customers

5.6.3 Impact Analysis

Many measures in the C&I Midstream Program have applicable electric and natural gas UES through the RTF. These UES will be used as the primary savings source. For high impact measures, such as HVAC and water heating, not covered by RTF workbooks or whose capacities exceed those provided by the RTF, ADM will use industry standard engineering algorithms with actual equipment specifications and regional data as appropriate. For lower impact measures not covered by the RTF, ADM will first source applicable savings from the California eTRM, followed by the current Avista Midstream TRM document.

Table 5-10 summarizes the anticipated measures offered under this program and corresponding impact M&V methodology sources.

Table 5-10: C&I Midstream Program Measures

Measure	Savings Source
Air Conditioners	Standard prescriptive engineering algorithms with inputs from actual equipment, RTF workbooks and regional data, as necessary
Heat Pumps	
Ductless Heat Pumps	
Furnaces	
Boilers	
Water Heaters	
Demand Control Ventilation for Kitchens	Current Avista Midstream TRM Workbook
Combination Ovens	RTF Combination Ovens v5.0
Convection Ovens	RTF Convection Ovens v5.1
Conveyor Ovens	CA eTRM SWFS008-02
Ice Machines	RTF Commercial ENERGY STAR Ice Machines v2.1
Hot Food Holding Cabinets	RTF Commercial Hot Food Holding Cabinets v5.1
Freezers	RTF Commercial Freezers v5.1
Griddles	RTF Commercial Griddles v2.1
Rack Ovens	RTF Commercial Rack Ovens v2.1
Steamers	RTF Commercial Steamers v5.1
Dishwashers	CA eTRM SWFS002-04, SWFS018-05
Hand Wraps	CA eTRM SWFS010-03
Fryers	RTF Commercial Fryers v5.1

5.6.4 Timing and Cadence

This program is considered “high risk” and therefore will be evaluated each year in the 2024-2025 evaluation period.

5.6.5 Technical Comments

ADM provides no technical comments for this program’s evaluation.

5.7 C&I Prescriptive Shell Program

The Prescriptive Shell Program offers incentives to commercial customers who improve the envelopes of their existing buildings by adding insulation, which may make a business more energy-efficient and comfortable. This prescriptive rebate approach issues payment to the customer after the measure has been installed by a licensed contractor. Commercial customers must have an annual heating footprint for a fuel provided by Avista.

Customers must submit a completed rebate form, invoices, and an insulation certificate within 90 days after the installation has been completed. Avista will send incentive checks to customers or their designees after project approval. This program is promoted by trade allies, Avista account executives, the Avista website, and Avista marketing efforts. The website is also used to communicate program requirements, incentives, and forms.

Table 5-11 lists eligible program measures and proposed impact savings sources.

Table 5-11: Prescriptive Shell Program Measures

Measure	Savings Source
Attic Insulation	Avista TRM UES
Roof Insulation	
Wall Insulation	

Insulation measures are not covered by the RTF therefore, ADM will evaluate savings using the Avista TRM. ADM will verify a sample of participating rebates for detailed review of the rebate documentation and verification of measure type. ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Prescriptive Shell Program in the section below.

5.7.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Prescriptive Shell Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

If ADM finds any deviations between the tracking data and application values, ADM will note and summarize these differences to Avista through periodic updates and the final report. Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Prescriptive Shell Program.

In addition, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure, displayed in Table 2-2 ADM will include questions such as:

- Approximately how many square feet of insulation were installed?
- What is the final R-level of insulation?

These questions will help ADM verify that the measure was documented accurately and that data collection activities are progressing smoothly for the program. This simple verification will help ADM more accurately estimate measure-level impacts using engineering algorithms.

5.7.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms and applicable invoices

5.7.3 Impact Analysis

All measures in the Prescriptive Shell Program have applicable electricity and natural gas UES through the Avista TRM. Table 5-12 summarizes the anticipated measures offered under this program and corresponding impact M&V methodology sources. ADM will apply the TRM UES values to the types and quantities of each measure, after applying adjustments from database review and verification surveys, if necessary.

Table 5-12: Prescriptive Shell Program Measures

Measure	Impact Analysis Savings Section(s)
Attic Insulation	Avista TRM UES
Roof Insulation	
Wall Insulation	

5.7.4 Timing and Cadence

This program is considered “low risk” and therefore will be evaluated once in the 2024-2025 evaluation period.

5.7.5 Technical Comments

ADM provides no technical comments for this program’s evaluation.

5.8 C&I Green Motors Program

The Green Motors Program ensures quality rewinding that results in the motor maintaining its original efficiency, which is commonly called a "green rewind." The Green Motors Practices Group (GMPG) is a non-profit organization that identifies, promotes, and verifies only excellent member motor service centers. These companies are committed to consistently producing repair/rewinds that retain or improve reliability and efficiency and provide on-site motor driven systems assistance.

The incentive for this program is $1 per HP of the motor being rewound, up to $10,000 for 5,000 HP, and is taken directly off the customer bill at the service center. There is also a $1 per HP fee paid to the service center for participating.

The measure offered by the Green Motors Program, motor rewinding, will be analyzed using the RTF-approved UES form the RTF workbook. ADM will verify a sample of participating rebates for detailed review of the rebate documentation and verification of measure type. ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Green Motors Program in the section below.

Table 5-13: Green Motors Rewind Program Measures

Measure	Impact Analysis Savings Section(s)
Industrial Motor Rewind	RTF Green Motor Rewind v5.2
Agricultural Motor Rewind	

5.8.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Green Motors Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Green Motors Program. If ADM finds any deviations between the tracking data and application values, ADM will note and summarize these differences to Avista through periodic updates and the final report.

In addition, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure, displayed in Table 2-2 ADM will include questions such as:

- What is the horsepower of the rewound motor?
- Is the motor used in industrial or agricultural applications?
- Is the newly rewound motor properly functioning?

These questions will help ADM verify that the measure was documented accurately and that data collection activities are progressing smoothly for the program. This simple verification will help ADM more accurately estimate measure-level impacts using engineering algorithms.

5.8.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms and applicable invoices

5.8.3 Impact Analysis

The measure offered by the Green Motors Program, motor rewinding, will be analyzed using the RTF 'Industrial and Agricultural Motor Rewind v5.2 workbook and based upon horsepower and sector. ADM will apply the RTF UES values to the types and quantities of each measure, after applying adjustments from database review and verification surveys, if necessary.

Table 5-14: Green Motors Rewind Program Measures

Measure	Impact Analysis Savings Section(s)
Industrial Motor Rewind	RTF Green Motor Rewind v5.2
Agricultural Motor Rewind	

5.8.4 Timing and Cadence

This program is considered “low risk” and therefore will be evaluated once in the 2024-2025 evaluation period.

5.8.5 Technical Comments

ADM provides no technical comments for this program’s evaluation.

5.9 C&I Grocer Program

This program offers incentives to customers who increase the energy efficiency of their refrigerated cases and related grocery equipment. Refrigeration often represents the primary electricity expense in a grocery store or supermarket. The prescriptive rebate approach issues payment to the customer after the measure has been installed. Commercial customers who use Avista fuel for the measure applied for are eligible.

Customers must submit a completed rebate form and invoice within 90 days after the installation has been completed. This program is promoted by trade allies, Avista account executives, the Avista website, and Avista marketing efforts. The website is also used to communicate program requirements, incentives, and forms.

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Grocer Program in in the section below. Table 5-15 lists eligible program measures and proposed impact savings sources.

Table 5-15: Grocer Program Measures

Measure	Savings Source
Refrigerator Case Lighting	RTF UES
ASH Controls	RTF UES
Door Gaskets	Avista TRM UES
Floating Head Pressure Controls	RTF UES
Strip Curtains	RTF UES
Walk-In ECM Controllers	RTF UES
ECMs on Evaporator Fans	RTF UES
ECM Replacing Evaporator PS and PSC	RTF UES

ADM will use the RTF to estimate verified savings for the measures in the table above, as RTF-approved UES values are estimated for each. In the case where a measure is not covered by the RTF, ADM will evaluate savings using the Avista TRM. ADM will verify a sample of participating rebates for detailed review of the rebate documentation and verification of measure type. ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Grocer Program in the section below.

5.9.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Grocer Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

If ADM finds any deviations between the tracking data and application values, ADM will note and summarize these differences to Avista through periodic updates and the final report. Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Grocer Program.

In addition, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure, displayed in Table 2-2 ADM will include questions such as:

- Was the previous equipment functional?
- Is the newly installed equipment properly functioning?
- What is the efficiency and sizing of the newly installed equipment?

These questions will help ADM verify that the measure was documented accurately and that data collection activities are progressing smoothly for the program. This simple verification will help ADM more accurately estimate measure-level impacts using engineering algorithms.

5.9.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms and applicable invoices

5.9.3 Impact Analysis

All measures in the Grocer Program have applicable electricity and gas UES through the RTF and/or the Avista TRM. Table 5-16 summarizes the anticipated measures offered under this program and corresponding impact M&V methodology sources. ADM will apply the RTF or TRM UES values to the types and quantities of each measure, after applying adjustments from database review and verification surveys, if necessary.

Table 5-16: Grocer Program UES Sources

Measure	Impact Analysis Savings Section(s)
Refrigerator Case Lighting	RTF Commercial Grocery Display Case Lighting v1.2
ASH Controls	RTF Commercial Grocery Anti-Sweat Heater Controls v4.3
Door Gaskets	Avista TRM Gaskets for Reach-In and Walk-In Applications
Floating Head Pressure	RTF Commercial Grocery Floating Head Pressure Controls v2.1
Strip Curtains	RTF Commercial Grocery Strip Curtain v2.1
Walk-In ECM Controllers	RTF Grocery Walk-in Evaporator Fan ECM Controller v4.2
ECM Replacing Evaporator PS and PSC	RTF Com. Grocery Compressor Head Fan Motor Retrofit v4.2, Com. Grocery Walk-in ECM Retrofit v4.3, and/or Com Grocery Display Case Evap. Fan Motor Retrofit v5.2, depending upon application

5.9.4 Timing and Cadence

This program is considered “low risk” and therefore will be evaluated once in the 2024-2025 evaluation period.

5.9.5 Technical Comments

ADM provides no technical comments for this program's evaluation.

5.10 C&I Building Operator Certification Program

The C&I Building Operator Certification Program is being offered by Avista in the 2024-2025 biannual period. This program is offered to encourage building operator certified (BOC) credentialed operators to save electricity and natural gas in buildings they manage while reducing electrical demand. The BOC program has consistently produced positive documented energy savings and has proved to be cost effective. Third party evaluators have assessed and documented the BOC's energy savings impacts[26].

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Grocer Program in in the section below. Table 5-16 lists eligible program measures and proposed impact savings sources.

ADM will use the BOC independent impact evaluation approved by the Idaho Public Utilities Commission and Washington Utilities and Transportation Commission to estimate verified savings for the program. ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Grocer Program in the section below.

5.10.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Building Operator Certification Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

If ADM finds any deviations between the tracking data and application values, ADM will note and summarize these differences to Avista through periodic updates and the final report. Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Building Operator Certification Program. Instead of conducting a survey for these participants, ADM will conduct in-depth interviews with a sample of program participants.

5.10.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms and applicable invoices

5.10.3 Impact Analysis

All measures in the Grocer Program have applicable electricity and gas UES through the RTF and/or the Avista TRM. Table 5-17 summarizes the anticipated measures offered under this program and corresponding impact M&V methodology sources. ADM will apply the RTF or TRM UES values to the

[26] https://www.theboc.info/wp-content/uploads/2020/08/2020-BOC-Energy-Savings-FAQ_1.0.pdf

types and quantities of each measure, after applying adjustments from database review and verification surveys, if necessary.

Table 5-17: C&I Building Operator Certification Program UES Sources

Measure	Impact Analysis Savings Section(s)
Building Operator Certification – Electric	Energy Savings for the BOC Program Document[27]
Building Operator Certification – Natural Gas	

5.10.4 Timing and Cadence

This program is considered "high risk" and therefore will be evaluated each year in the 2024-2025 evaluation period.

5.10.5 Technical Comments

In the event that Avista wishes to conduct a more rigorous analysis to confirm the assumed and approved savings for the BOC program through the IPUC and WUTC, ADM will request monthly billing data to conduct a billing analysis across the population of participants in this program.

[27] https://www.theboc.info/wp-content/uploads/2020/08/2020-BOC-Energy-Savings-FAQ_1.0.pdf

6. Pilot Program-Level EM&V Approaches

ADM presents a summary of the pilot-specific impact evaluation work procedures for pilots presented in Avista's 2024 Natural Gas and Electric Energy Efficiency Annual Conservation Plans. ADM will work with Avista to adjust pilot-specific impact and sampling plans as additional information is received about pilot participation, pilot restrictions, measure offerings, implementation changes, and available data for each pilot.

6.1 Time-of-Use Pilot

Per the RFP, at the conclusion of the first full year of the initial Time of Use pilot for Washington electric customers, (June 1, 2024, through May 30, 2025) ADM will provide a bill impact evaluation of the pilot participants. ADM will also make it a priority to include Named Community with the general population in all evaluation, planning, and communication activities. Additionally, ADM will provide verification and review of the Avista's Load Impact analysis for the pilot participants.

6.1.1 Bill Impact Evaluation

For this effort, ADM plans to analyze Avista interval consumption data to estimate the program impacts for treatment in the TOU Pilot. ADM proposes to estimate total kWh and kW impacts for Avista's participating residential customers recruited in this pilot period.

ADM will assess the load impacts for the various pilot groups through statistical analysis of the hourly usage data for the TOU Pilot. The goal of this plan will be to estimate the percentage reduction in peak demand and percentage reduction in overall usage/responsiveness (demand shift) to the pilot prices as well as the impacts to the Avista system and identification of potential persistence of impacts from year to year. The evaluation will be designed in such a way that the effort will be able to be conducted each year for the same pilot participants, the results also indicate persistence energy and load impacts year over year.

The intent of this task is to determine the achieved impacts of the Time-of-Use Pilot within the participant group and whether it would be reasonable to expand the program for customers in the Washington and Utah service territories.

ADM will use several types of data in the analysis, including the following:

- Metered data on hourly loads of treatment and control customers in the trial
- Hourly weather data
- Assessors' data on characteristics of houses occupied by trial treatment and control customers

ADM will use the cleaned hourly load data to prepare simple statistical and graphical comparisons of average loads under different conditions. These descriptive statistics will provide a summary of customer responses under different conditions.

Estimates of load impacts for each treatment will be reported according to four standardized formats segmented by customer type:

- Average kWh reduction per customer per impact hour (where the impact hour is the hour of interest for the evaluation, e.g., peak hours for TOU rates)
- Average percent energy reduction per impact hour
- Total energy conservation, measured as average kWh reduction per customer per month over all hours in that month
- Average percent energy reduction per month over all hours in that month
- Average peak demand impact on all event days
- Peak demand impacts by event day
- Persistence of impacts for consecutive event days
- Event day peak impacts
- Bill distribution impacts by season
- Daily price elasticity
- Inter-period substitution elasticity
- Average change in customer arrears between treatment and control groups
- Average change in number of disconnects between treatment and control groups

Each of the above estimates will also include the following elements:

- Its standard error;
- A p-value and/or confidence interval indicating statistical significance;
- The number of treatment customers, the number of control customers, and the total number of observations used in the analysis;
- A description of the dates and hours used in the analysis if it is a subset of the total amount of data collected; and
- A description of the customers used in the analysis if it is a subset of the total number of treatment and control customers.

ADM will work with Avista staff to determine the final methods to be used to estimate the load impacts according to the various metrics. As a guide in determining the methods to be used, ADM will use the report prepared by LBNL/EPRI on Quantifying the Impacts of Time-Based Rates, Enabling Technology, and Other Treatments in Consumer Behavior Studies: Protocols and Guidelines (July 2013).

ADM will work with personnel from Avista's Rates department to perform difference-of-means and difference-of-differences calculations on the hourly load data. These calculations will be performed such that results can be reported to the WUTC, per their requirements.

ADM will extend the descriptive statistics approach by estimating the parameters of a regression model of customer demand for electricity. The data for the regression analysis are in "panel" format, with time series (hourly) observations of electricity use pooled across cross-sectional observations (customers). ADM will use estimation procedures for the regression analysis that take account of both the time-series and the cross-sectional dimensions of the data.

For the bill impacts analysis, a two-phase regression modeling approach will be used. In the first phase of regression modeling, ADM will use the data for each site individually in single equation regression estimation. For the regression analyses, the dependent variable is average hourly demand (kW).

The analysis of the data for each individual customer provides a set of coefficients showing the responsiveness of customers' electricity use to changes in explanatory variables. Because there may be commonality in responsiveness among different groups of customers, a second level of regression analysis is undertaken to relate the responsiveness coefficients to household characteristics (e.g., house size, vintage). For example, it may be appropriate to conduct separate analyses, one for electric-heated homes and another for gas-heated homes.

ADM will apply standard statistical tests and regression diagnostics to evaluate the performance of the regression modeling and to screen models for implausible results. ADM will use the results from the model providing the best "fit" in the analysis of electricity savings.

6.1.2 Arrears

ADM will also include a customer arrears analysis. ADM plans to aggregate data on customer bills, disconnects and arrearages, customer utility transactions, low-income and energy savings program enrollment, customer demographics, and address whether the Pilots impact electric service disconnections, and if so, to what extent. ADM will then compare the amount of arrears between pilot participation groups to determine if participation in the program impacted the customer's propensity to lead to a disconnect.

6.1.3 Customer Surveys

ADM also anticipates conducting a survey effort to collect customer survey responses in terms of demographics, behaviors, and satisfaction. ADM anticipates that there is a plan for the following survey efforts:

- Customer pre-pilot survey
- Customer post-pilot survey

Assuming a survey will be deployed newly enrolled Pilot participants, ADM will conduct the follow up survey for these same participants after a full year of Pilot deployment to enable evaluators to compare pre- and post-Pilot deployment survey responses.

ADM will survey customer participants in order to gauge the impact of Pilot participation towards customer energy usage behaviors in response to pricing. Survey questions may include, but not be limited to:

- How participants plan to change their energy usage habits to reduce their energy costs
- Customer feedback on actions taken during the Pilot to reduce energy usage
- Identification of barriers that prevent participants to change the energy usage habits
- Other questions identified by either Avista or ADM during the term of the Pilots

This effort will help Avista and implementors separate and characterize and quantify bill impacts for low-income households and retired households.

The pilot will be open to a maximum of 500 residential customers on an opt-in basis. ADM will develop a sampling plan that aims to achieve a sampling precision of ±10% with 90% statistical confidence – or "90/10 precision" – for households participating in the TOU Pilot during survey-based data collection

efforts. With a population size of 500, a sample size of 70 total survey completions will meet the 90/10 precision requirements for the TOU Pilot.

ADM anticipates conducting surveys as telephone, web, paper mail or mixed-phone/web/paper mail surveys. Survey efforts may require physical mail surveys to ensure representativeness. The selected sample participants will be offered a $20 gift card incentive to participate in and complete the demographics and satisfaction survey. ADM will deploy the pre-participation surveys to the newly registered customers every two weeks in order to capture accurate pre-participation behaviors and beliefs.

The survey will address the following topics:

- What are customers' motivations for participating in the program (i.e., decrease monthly energy bill, decrease energy usage)
- What are customers' current behaviors towards energy conservation?
- Are customers' energy use schedules flexible? (i.e., retirees schedules tend to be less flexible than the working class)
- How familiar are customers with their new TOU rate?
- Are customers receiving educational materials based on actions to help respond appropriately to the TOU rates?
- What are customers' current behaviors/actions undertaken due to messaging from the program?
- Is there other information that customers would find more beneficial to receive in messaging?
- Did customers feel they saved a meaningful amount on their bills?
- What is the satisfaction among customers for participation in the program?
- What is the satisfaction among customers of Avista as a utility provider?
- Do customers have electric vehicles (EVs) and EV charging stations installed in their household?
- What are the pilot customers' demographics? (e.g., household income, occupancy, heating/cooling type)

ADM will employ the use of our in-house call center, which is dedicated solely to energy efficiency-related efforts and comprised fully of full-time ADM staff. This allows maximum transparency of evaluation management and data collection efforts.

The goal of the Pilot participant customer survey responses for the questions listed above is to identify whether there are differences in demand reduction potential across customer groups. Therefore, ADM will use the participant responses to conduct additional bill impact analysis by subgroup.

In the case that low-income customers do not benefit from the TOU pilot, this information will help identify the need for a rate subsidy for low-income customers. This information will be useful to Avista and Avista stakeholders on how to proceed with implementation of the TOU rates.

6.1.4 Program Recommendations

Per the RFP, at the conclusion of the 2025 Program year, ADM will assist Avista in recommendations for Time of Use (TOU)/ Peak Time Rebate (PTR) program design/modifications in anticipation of full program rollout for the 2026-2027 biennium.

ADM anticipates the program recommendations will allude to the following topics:

- Recommendations for revisions or additions to evaluation plan
- Recommendations for customer survey plan and implementation
- Recommendations for customer eligibility requirements, and recruitment targets
- Recommendations for customer incentive and reimbursement

ADM further details each of the above items in the subsection below.

6.1.5 Program Evaluation Plan

ADM shall provide recommendations for edits or additions to the existing pilot evaluation plan, if necessary, with the goal of estimating the load impacts for the Pilot participants through statistical analysis of the hourly usage data for both the TOU and PTR Pilots. ADM will review plans to ensure that these methods can be used year after year to conduct a comparison of pilot improvements, successes, and learnings. Load metrics to be quantified include peak, off-peak, mid-day discount, average daily conservation impacts, and estimated load shift, by season. ADM anticipates a sufficient plan must:

- Capture data sources, data collection, tracking and storing, Avista tasks and responsibilities and the tasks for third-party service providers
- Ensure all metrics from the M&R Plans are included, as well as how they will be measured from the data.
- Include a schedule of all EM&V activities.
- Include a customer arrears analysis. The EM&V Plan will include efforts to gather data on customer bills, disconnects and arrearages, customer utility transactions, low-income and energy savings program enrollment, customer demographics, and address whether the Pilots impact electric service disconnections, and if so, to what extent.
- Include a method to assess the Pilots' impacts on participant program choices, payment behavior, and energy use.
- Include a method to assess the Pilots' impacts on access to essential services.

6.1.6 Customer Survey Plan & Implementation

ADM will also recommend adjustments to Avista's pilot survey plan and instruments, as well as the implementation schedule. ADM will make recommendations to maximize survey responses, such as the timing of survey deployment, the incentive amount provided to customers for completing the survey, and the method in which the surveys are conducted (online, mixed mode, etc.) to ensure the best success for survey responses.

6.1.7 Customer Eligibility & Recruitment Targets

ADM shall help ADM develop a final list of customer eligibility requirements, utilizing industry best practices. ADM will consider the following:

- Customer home type: single-family, manufactured home, multifamily, etc.
- Multi-premise customers: allowing more than one premise to participate if customer has multiple homes or businesses on their account.

- Customers secondary residences: vacation properties, auxiliary dwelling units, residential units used for business.
- Landlords
- Customers with on-site generation: solar, net metering, batteries.
- In addition, ADM shall use insights from Milestone 1 to guide recruitment strategy for behaviors observed among Avista residential and nonresidential customers, including analyzing AMI data to determine which customers have the highest potential to offset their peak time energy usage.

ADM shall develop, with input from Avista, a recruitment strategy, utilizing industry best practices, to develop a recruitment strategy to meet the designed participation limits of each Pilot Program while supporting accepted statistically valid design principals, including:

- Determining participants that will be most successful. (As used in this context, "successful" is defined as a participant whose bill does not increase because of their participation in the TOU Pilot.)
- Determining participants that have the potential to shift loads for positive bill impacts.

6.1.8 Customer Reimbursement Strategy

ADM will analyze the extent to which a customer required reimbursement in the pilot evaluation period. ADM will accomplish this by calculating a monthly comparison between the participant's monthly bill under the TOU Pilot ("TOU Bill") versus what participant's monthly bill would have been absent their participation ("Standard Bill"). The participant will receive a reimbursement at the end of the first year if their total annual TOU Bill is greater than their total Standard Bill.

ADM will also assist Avista with a recommended schedule for deploying reimbursement payments to customers and the messaging involved in the reimbursement notifications.

For this effort, ADM plans to analyze Avista interval consumption data to estimate the program impacts for treatment in the TOU Pilot. ADM proposes to estimate total kWh and kW impacts for Avista's participating residential customers recruited in this pilot period.

ADM will assess the load impacts for the various pilot groups through statistical analysis of the hourly usage data for both the TOU Pilot. The goal of this plan will be to estimate the percentage reduction in peak demand and percentage reduction in overall usage/responsiveness (demand shift) to the pilot prices as well as the impacts to the Avista system and identification of potential persistence of impacts from year to year. The evaluation will be designed in such a way that the effort will be able to be conducted each year for the same pilot participants, the results also indicate persistence energy and load impacts year over year.

The intent of this task is to determine the achieved impacts of the Time-of-Use Pilot within the participant group and whether it would be reasonable to expand the program for customers in the Washington and Utah service territories.

ADM will use several types of data in the analysis, including the following:

- Metered data on hourly loads of treatment and control customers in the trial

- Hourly weather data
- Assessors' data on characteristics of houses occupied by trial treatment and control customers

ADM will use the cleaned hourly load data to prepare simple statistical and graphical comparisons of average loads under different conditions. These descriptive statistics will provide a summary of customer responses under different conditions.

Estimates of load impacts for each treatment will be reported according to four standardized formats segmented by customer type:

- Average kWh reduction per customer per impact hour (where the impact hour is the hour of interest for the evaluation, e.g., peak hours for TOU rates)
- Average percent energy reduction per impact hour
- Total energy conservation, measured as average kWh reduction per customer per month over all hours in that month
- Average percent energy reduction per month over all hours in that month
- Average peak demand impact on all event days
- Peak demand impacts by event day
- Persistence of impacts for consecutive event days
- Event day peak impacts
- Bill distribution impacts by season
- Daily price elasticity
- Inter-period substitution elasticity
- Average change in customer arrears between treatment and control groups
- Average change in number of disconnects between treatment and control groups

Each of the above estimates will also include the following elements:

- Its standard error;
- A p-value and/or confidence interval indicating statistical significance;
- The number of treatment customers, the number of control customers, and the total number of observations used in the analysis;
- A description of the dates and hours used in the analysis if it is a subset of the total amount of data collected; and
- A description of the customers used in the analysis if it is a subset of the total number of treatment and control customers.

ADM will work with Avista staff to determine the final methods to be used to estimate the load impacts according to the various metrics. As a guide in determining the methods to be used, ADM will use the report prepared by LBNL/EPRI on Quantifying the Impacts of Time-Based Rates, Enabling Technology, and Other Treatments in Consumer Behavior Studies: Protocols and Guidelines (July 2013).

ADM will work with personnel from Avista's Rates department to perform difference-of-means and difference-of-differences calculations on the hourly load data. These calculations will be performed such that results can be reported to the WUTC, per their requirements.

ADM will extend the descriptive statistics approach by estimating the parameters of a regression model of customer demand for electricity. The data for the regression analysis are in “panel” format, with time series (hourly) observations of electricity use pooled across cross-sectional observations (customers). ADM will use estimation procedures for the regression analysis that take account of both the time-series and the cross-sectional dimensions of the data.

For the bill impacts analysis, a two-phase regression modeling approach will be used. In the first phase of regression modeling, ADM will use the data for each site individually in single equation regression estimation. For the regression analyses, the dependent variable is average hourly demand (kW).

The analysis of the data for each individual customer provides a set of coefficients showing the responsiveness of customers’ electricity use to changes in explanatory variables. Because there may be commonality in responsiveness among different groups of customers, a second level of regression analysis is undertaken to relate the responsiveness coefficients to household characteristics (e.g., house size, vintage). For example, it may be appropriate to conduct separate analyses, one for electric-heated homes and another for gas-heated homes.

ADM will apply standard statistical tests and regression diagnostics to evaluate the performance of the regression modeling and to screen models for implausible results. ADM will use the results from the model providing the best "fit" in the analysis of electricity savings.

6.1.9 Timing and Cadence

This program is considered “high risk” and therefore will be evaluated each year in the 2024-2025 evaluation period.

6.2 Peak Time Rebate Pilot

For this effort, ADM plans to analyze Avista interval consumption data to estimate the program impacts for treatment in the PTR Pilot. ADM will to estimate total kWh and kW impacts for Avista’s participating residential customers recruited in this pilot period.

ADM will assess the load impacts for the various pilot groups through statistical analysis of the hourly usage data for the PTR Pilot. The goal of this plan will be to estimate the percentage reduction in peak demand and percentage reduction in overall usage/responsiveness (demand shift) to the pilot prices as well as the impacts to the Avista system and identification of potential persistence of impacts from year to year. The evaluation will be designed in such a way that the effort will be able to be conducted each year for the same pilot participants, the results also indicate persistence energy and load impacts year over year.

The intent of this task is to determine the achieved impacts of the Peak Time Rebate Pilot within the participant group and whether it would be reasonable to expand the program for customers in the Washington and Idaho service territories.

ADM will use several types of data in the analysis, including the following:

- Metered data on hourly loads of treatment and control customers in the trial
- Hourly weather data

- Assessors' data on characteristics of houses occupied by trial treatment and control customers

ADM will use the cleaned hourly load data to prepare simple statistical and graphical comparisons of average loads under different conditions. These descriptive statistics will provide a summary of customer responses under different conditions.

Estimates of load impacts for each treatment will be reported according to four standardized formats segmented by customer type:

- Average kWh reduction per customer per impact hour (where the impact hour is the hour of interest for the evaluation, e.g., peak hours for PTR rates)
- Average percent energy reduction per impact hour
- Total energy conservation, measured as average kWh reduction per customer per month over all hours in that month
- Average percent energy reduction per month over all hours in that month
- Average peak demand impact on all event days
- Peak demand impacts by event day
- Persistence of impacts for consecutive event days
- Event day peak impacts
- Bill distribution impacts by season
- Daily price elasticity
- Inter-period substitution elasticity
- Average change in customer arrears between treatment and control groups
- Average change in number of disconnects between treatment and control groups

Each of the above estimates will also include the following elements:

- Its standard error;
- A p-value and/or confidence interval indicating statistical significance;
- The number of treatment customers, the number of control customers, and the total number of observations used in the analysis;
- A description of the dates and hours used in the analysis if it is a subset of the total amount of data collected; and
- A description of the customers used in the analysis if it is a subset of the total number of treatment and control customers.

ADM will work with Avista staff to determine the final methods to be used to estimate the load impacts according to the various metrics. As a guide in determining the methods to be used, ADM will use the report prepared by LBNL/EPRI on Quantifying the Impacts of Time-Based Rates, Enabling Technology, and Other Treatments in Consumer Behavior Studies: Protocols and Guidelines (July 2013).

ADM will work with personnel from Avista's Rates department to perform difference-of-means and difference-of-differences calculations on the hourly load data. These calculations will be performed such that results can be reported to the WUTC, per their requirements.

ADM will extend the descriptive statistics approach by estimating the parameters of a regression model of customer demand for electricity. The data for the regression analysis are in "panel" format, with time

series (hourly) observations of electricity use pooled across cross-sectional observations (customers). ADM will use estimation procedures for the regression analysis that take account of both the time-series and the cross-sectional dimensions of the data.

For the bill impacts analysis, a two-phase regression modeling approach will be used. In the first phase of regression modeling, ADM will use the data for each site individually in single equation regression estimation. For the regression analyses, the dependent variable is average hourly demand (kW).

The analysis of the data for each individual customer provides a set of coefficients showing the responsiveness of customers' electricity use to changes in explanatory variables. Because there may be commonality in responsiveness among different groups of customers, a second level of regression analysis is undertaken to relate the responsiveness coefficients to household characteristics (e.g., house size, vintage). For example, it may be appropriate to conduct separate analyses, one for electric-heated homes and another for gas-heated homes.

ADM will apply standard statistical tests and regression diagnostics to evaluate the performance of the regression modeling and to screen models for implausible results. ADM will use the results from the model providing the best "fit" in the analysis of electricity savings.

6.2.1 Arrears

ADM will also include a customer arrears analysis. ADM plans to aggregate data on customer bills, disconnects and arrearages, customer utility transactions, low-income and energy savings program enrollment, customer demographics, and address whether the Pilot impact electric service disconnections, and if so, to what extent. ADM will then compare the amount of arrears between pilot participation groups to determine if participation in the program impacted the customer's propensity to lead to a disconnect.

6.2.2 Customer Surveys

ADM also anticipates conducting a survey effort to collect customer survey responses in terms of demographics, behaviors, and satisfaction. ADM anticipates that there is a plan for the following survey efforts:

- Customer pre-pilot survey
- Customer post-pilot survey

Assuming a survey will be deployed newly enrolled Pilot participants, ADM will conduct the follow up survey for these same participants after a full year of Pilot deployment to enable evaluators to compare pre- and post-Pilot deployment survey responses.

ADM will survey customer participants in order to gauge the impact of Pilot participation towards customer energy usage behaviors in response to pricing. Survey questions may include, but not be limited to:

- How participants plan to change their energy usage habits to reduce their energy costs
- Customer feedback on actions taken during the Pilot to reduce energy usage
- Identification of barriers that prevent participants to change the energy usage habits

- Other questions identified by either Avista or ADM during the term of the Pilot

This effort will help Avista and implementors separate and characterize and quantify bill impacts for low-income households and retired households.

The pilot will be open to a maximum of 500 residential customers on an opt-in basis. ADM will develop a sampling plan that aims to achieve a sampling precision of ±10% with 90% statistical confidence – or "90/10 precision" – for households participating in the PTR Pilot during survey-based data collection efforts. With a population size of 500, a sample size of 70 total survey completions will meet the 90/10 precision requirements for the PTR Pilot.

ADM anticipates conducting surveys as telephone, web, paper mail or mixed-phone/web/paper mail surveys. Survey efforts may require physical mail surveys to ensure representativeness. The selected sample participants will be offered a $20 gift card incentive to participate in and complete the demographics and satisfaction survey. ADM will deploy the pre-participation surveys to the newly registered customers every two weeks in order to capture accurate pre-participation behaviors and beliefs.

The survey will address the following topics:

- What are customers' motivations for participating in the program (i.e., decrease monthly energy bill, decrease energy usage)
- What are customers' current behaviors towards energy conservation?
- Are customers' energy use schedules flexible? (i.e., retirees schedules tend to be less flexible than the working class)
- How familiar are customers with their new PTR rate?
- Are customers receiving educational materials based on actions to help respond appropriately to the PTR rates?
- What are customers' current behaviors/actions undertaken due to messaging from the program?
- Is there other information that customers would find more beneficial to receive in messaging?
- Did customers feel they saved a meaningful amount on their bills?
- What is the satisfaction among customers for participation in the program?
- What is the satisfaction among customers of Avista as a utility provider?
- Do customers have electric vehicles (EVs) and EV charging stations installed in their household?
- What are the pilot customers' demographics? (e.g., household income, occupancy, heating/cooling type)

ADM will employ the use of our in-house call center, which is dedicated solely to energy efficiency-related efforts and comprised fully of full-time ADM staff. This allows maximum transparency of evaluation management and data collection efforts.

The goal of the Pilot participant customer survey responses for the questions listed above is to identify whether there are differences in demand reduction potential across customer groups. Therefore, ADM will use the participant responses to conduct additional bill impact analysis by subgroup.

In the case that low-income customers do not benefit from the PTR pilot, this information will help identify the need for a rate subsidy for low-income customers. This information will be useful to Avista and Avista stakeholders on how to proceed with implementation of the PTR rates.

6.2.3 Program Recommendations

Per the RFP, at the conclusion of the 2025 program year, ADM will assist Avista in recommendations for Time of Use (TOU)/ Peak Time Rebate (PTR) program design/modifications in anticipation of full program rollout for the 2026-2027 biennium.

ADM anticipates the program recommendations will allude to the following topics:

- Recommendations for revisions or additions to evaluation plan
- Recommendations for customer survey plan and implementation
- Recommendations for customer eligibility requirements, and recruitment targets
- Recommendations for customer incentive and reimbursement

ADM further details each of the above items in the subsection below.

6.2.4 Program Evaluation Plan

ADM shall provide recommendations for edits or additions to the existing pilot evaluation plan, if necessary, with the goal of estimating the load impacts for the Pilot participants through statistical analysis of the hourly usage data for both the TOU and PTR Pilots. ADM will review plans to ensure that these methods can be used year after year to conduct a comparison of pilot improvements, successes, and learnings. Load metrics to be quantified include peak, off-peak, mid-day discount, average daily conservation impacts, and estimated load shift, by season. ADM anticipates a sufficient plan must:

- Capture data sources, data collection, tracking and storing, Avista tasks and responsibilities and the tasks for third-party service providers
- Ensure all metrics from the M&R Plans are included, as well as how they will be measured from the data.
- Include a schedule of all EM&V activities.
- Include a customer arrears analysis. The EM&V Plan will include efforts to gather data on customer bills, disconnects and arrearages, customer utility transactions, low-income and energy savings program enrollment, customer demographics, and address whether the Pilots impact electric service disconnections, and if so, to what extent.
- Include a method to assess the Pilots' impacts on participant program choices, payment behavior, and energy use.
- Include a method to assess the Pilots' impacts on access to essential services.

6.2.5 Customer Survey Plan & Implementation

ADM will also recommend adjustments to Avista's pilot survey plan and instruments, as well as the implementation schedule. ADM will make recommendations to maximize survey responses, such as the timing of survey deployment, the incentive amount provided to customers for completing the survey,

and the method in which the surveys are conducted (online, mixed mode, etc.) to ensure the best success for survey responses.

6.2.6 Customer Eligibility & Recruitment Targets

ADM shall help ADM develop a final list of customer eligibility requirements, utilizing industry best practices. ADM will consider the following:

- Customer home type: single-family, manufactured home, multifamily, etc.
- Multi-premise customers: allowing more than one premise to participate if the customer has multiple homes or businesses on their account.
- Customers secondary residences: vacation properties, auxiliary dwelling units, residential units used for business.
- Landlords
- Customers with on-site generation: solar, net metering, batteries.
- In addition, ADM shall use insights from Milestone 1 to guide recruitment strategy for behaviors observed among Avista residential and nonresidential customers, including analyzing AMI data to determine which customers have the highest potential to offset their peak time energy usage.

ADM shall develop, with input from Avista, a recruitment strategy, utilizing industry best practices, to develop a recruitment strategy to meet the designed participation limits of each Pilot Program while supporting accepted statistically valid design principals, including:

- Determining participants that will be most successful. (As used in this context, “successful” is defined as a participant whose bill does not increase because of their participation in the PTR Pilot.)
- Determining participants that have the potential to shift loads for positive bill impacts.

For this effort, ADM plans to analyze Avista interval consumption data to estimate the program impacts for treatment in the PTR Pilot. ADM proposes to estimate total kWh and kW impacts for Avista’s participating residential customers recruited in this pilot period.

ADM will assess the load impacts for the various pilot groups through statistical analysis of the hourly usage data for both the PTR Pilot. The goal of this plan will be to estimate the percentage reduction in peak demand and percentage reduction in overall usage/responsiveness (demand shift) to the pilot prices as well as the impacts to the Avista system and identification of potential persistence of impacts from year to year. The evaluation will be designed in such a way that the effort will be able to be conducted each year for the same pilot participants, the results also indicate persistence energy and load impacts year over year.

The intent of this task is to determine the achieved impacts of the Time-of-Use Pilot within the participant group and whether it would be reasonable to expand the program for customers in the Washington and Utah service territories.

ADM will use several types of data in the analysis, including the following:

- Metered data on hourly loads of treatment and control customers in the trial

- Hourly weather data
- Assessors' data on characteristics of houses occupied by trial treatment and control customers

ADM will use the cleaned hourly load data to prepare simple statistical and graphical comparisons of average loads under different conditions. These descriptive statistics will provide a summary of customer responses under different conditions.

Estimates of load impacts for each treatment will be reported according to four standardized formats segmented by customer type:

- Average kWh reduction per customer per impact hour (where the impact hour is the hour of interest for the evaluation, e.g., peak hours for PTR rates)
- Average percent energy reduction per impact hour
- Total energy conservation, measured as average kWh reduction per customer per month over all hours in that month
- Average percent energy reduction per month over all hours in that month
- Average peak demand impact on all event days
- Peak demand impacts by event day
- Persistence of impacts for consecutive event days
- Event day peak impacts
- Bill distribution impacts by season
- Daily price elasticity
- Inter-period substitution elasticity
- Average change in customer arrears between treatment and control groups
- Average change in number of disconnects between treatment and control groups

Each of the above estimates will also include the following elements:

- Its standard error;
- A p-value and/or confidence interval indicating statistical significance;
- The number of treatment customers, the number of control customers, and the total number of observations used in the analysis;
- A description of the dates and hours used in the analysis if it is a subset of the total amount of data collected; and
- A description of the customers used in the analysis if it is a subset of the total number of treatment and control customers.

ADM will work with Avista staff to determine the final methods to be used to estimate the load impacts according to the various metrics. As a guide in determining the methods to be used, ADM will use the report prepared by LBNL/EPRI on Quantifying the Impacts of Time-Based Rates, Enabling Technology, and Other Treatments in Consumer Behavior Studies: Protocols and Guidelines (July 2013).

ADM will work with personnel from Avista's Rates department to perform difference-of-means and difference-of-differences calculations on the hourly load data. These calculations will be performed such that results can be reported to the WUTC, per their requirements.

ADM will extend the descriptive statistics approach by estimating the parameters of a regression model of customer demand for electricity. The data for the regression analysis are in “panel” format, with time series (hourly) observations of electricity use pooled across cross-sectional observations (customers). ADM will use estimation procedures for the regression analysis that take account of both the time-series and the cross-sectional dimensions of the data.

For the bill impacts analysis, a two-phase regression modeling approach will be used. In the first phase of regression modeling, ADM will use the data for each site individually in single equation regression estimation. For the regression analyses, the dependent variable is average hourly demand (kW).

The analysis of the data for each individual customer provides a set of coefficients showing the responsiveness of customers’ electricity use to changes in explanatory variables. Because there may be commonality in responsiveness among different groups of customers, a second level of regression analysis is undertaken to relate the responsiveness coefficients to household characteristics (e.g., house size, vintage). For example, it may be appropriate to conduct separate analyses, one for electric-heated homes and another for gas-heated homes.

ADM will apply standard statistical tests and regression diagnostics to evaluate the performance of the regression modeling and to screen models for implausible results. ADM will use the results from the model providing the best "fit" in the analysis of electricity savings.

6.2.7 Timing and Cadence

This program is considered “high risk” and therefore will be evaluated each year in the 2024-2025 evaluation period.

6.3 Hybrid Heat Pump Pilot

Starting in 2024, Avista plans to conduct a pilot program to explore the differences between cold climate heat pumps and hybrid heat pumps, with a focus on learning more about the performance of each type. Avista defines a hybrid heat pump as an electric heat pump with natural gas backup heating. ADM will focus on determining the feasibility of adding these measures to the company’s efficiency programs.

The pilot will subsidize the installation costs of 12 heat pumps in total – six cold climate and six hybrid. In addition to the pilot’s primary goals, Avista hopes to learn more about the factors that influence customers (economic, environmental, behavioral, emotional) as they consider significant HVAC upgrades. In addition, ADM will conduct in-depth interviews with the 12 participants in order to learn more about perceived home comfort for each of these systems. The pilot will span two years in order to allow Avista to collect data over two cooling and two heating seasons, with a total budget of approximately $500,000.

In addition to this pilot, Avista is also exploring a possible pilot to evaluate gas absorption heat pumps. This pilot is in preliminary planning phases but may move forward in the late spring or early summer of 2024. Avista will consult with its advisory group if it intends to move forward with this pilot. After the decision is made, ADM will work with Avista to develop a more comprehensive evaluation plan. In the meantime, ADM anticipates the following methodology to evaluate the measures in the Hybrid Heat Pump Pilot Program.

Table 6-1: Hybrid Heat Pump Pilot Measures

Measure	Impact Analysis Methodology
Hybrid heat pump	Billing Analysis
Gas absorption heat pumps	Billing Analysis
E Ductless heat pump (with existing FAF)	RTF UES, ResDHPonFAF_v3_1

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Hybrid Heat Pump Pilot Program in the section below.

6.3.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Hybrid Heat Pump Pilot Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)
- Survey-based verification for a random subset of customers (Section 2.3.2)

ADM will work with Avista to determine a preliminary sampling plan once participation trends are better informed. During document-based verification, if any deviations between the tracking data and application values are found, ADM will communicate these differences to Avista through periodic updates and summarize deviations in the final report.

During survey-based verification, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure and documentation of prior equipment. ADM will include questions such as:

- Was this hybrid heat pump a new construction, or did it replace another heat pump?
- Was the previous heat pump functional?
- Is the newly installed heat pump still properly functioning?
- What is the efficiency and sizing of the newly installed heat pump?

These questions will help ADM verify that the measure was collected and documented accurately and will allow ADM to calculate measure-level savings more accurately. In addition, in the event that billing analysis is infeasible due to low participation, this simple verification will help ADM more accurately estimate measure-level impacts for the other measures using engineering algorithms.

6.3.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms, applicable invoices, and equipment certificates if available
- Monthly billed consumption data for participating customers and for similar, non-participating customers

6.3.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodologies to estimate verified net energy savings in the Hybrid Heat Pump Pilot Program:

- Billing Analysis with counterfactual group (IPMVP Option C)

ADM does not anticipate RTF UES are available for this measure – therefore, we propose a billing analysis to estimate verified savings for the measure. ADM proposes to measure verified net savings by conducting a billing analysis with a counterfactual group selected via propensity score matching. The methodology used to select the quasi-experimental counterfactual group and the methodology for linear regression billing analysis are summarized in further detail in the "Billing Analysis (IPMVP Option C)" section. ADM will isolate each unique measure and verify each participant included in the analysis did not also participate in other programs; therefore, ADM will be able to isolate the measure effects using the household's billed consumption data.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

6.3.4 Timing and Cadence

This program is considered "high risk" because it is a new pilot, and therefore will be evaluated each year in the 2024-2025 evaluation period.

6.3.5 Technical Comments

In the event that the required data is not available or sufficient to conduct a billing regression analysis, ADM will conduct a benchmarking analysis and literature review and apply the most reasonable savings estimates for the novel measure.

6.4 Building Operator IQ Pilot

The Building Operator IQ (BEIQ) Pilot Program provides incentives and energy management services to commercial, industrial, and agricultural customers to implement energy efficiency measures, adjust and tune existing equipment, systems and behaviors in a Retrocomissioning-type program.

As a proof-of-concept pilot, Avista aims to evaluate the program by providing sufficient information to better understand the potential energy savings of implementing the BEIQ pilot.

ADM summarizes the program-specific impact analysis activities and requirements for the BEIQ pilot in the section below. These methodologies are similar to the Site-Specific program evaluation, described above in 5.1.

6.4.1 Sampling and Precision

Depending upon participation levels, ADM may choose to analyze a census of projects. If participation exceeds approximately 10 projects, ADM will select a representative sample of projects to analyze and extrapolate pilot-level results from. For this, simple random sampling is not an effective sampling methodology as the CV values observed in business programs are typically very high because the distributions of savings are generally positively skewed. Often, a relatively small number of projects account for a high percentage of the estimated savings for the program.

To address this situation, we will use a sample design for selecting projects for the M&V sample that takes such skewness into account. With this approach, we select a number of sites with large savings for the sample with certainty and take a random sample of the remaining sites. To further improve the precision, non-certainty sites are selected for the sample through systematic random sampling. That is, a random sample of sites remaining after the certainty sites have been selected is selected by ordering them according to the magnitude of their savings and using systematic random sampling. Sampling systematically from a list that is ordered according to the magnitude of savings ensures that any sample selected will have some units with high savings, some with moderate savings, and some with low savings. Samples cannot result that have concentrations of sites with atypically high savings or atypically low savings. We will establish sample sizes to safely exceed ±10% precision at 90% confidence (90/10 confidence precision).

6.4.2 Data Required

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms and applicable invoices
- Individual project files and supporting documentation for sampled projects including:
    a. Facility square footage, facility occupancy, detailed information on facility type, schedule of operations, list of dates in which facility was shut down or closed, information on efficiency measures installed
    b. Changes in facility or building operations or production unrelated to program, but affecting energy consumption

- Facility billing data from two years prior to project installation through the time the data request is sent (typically 3 months to one year of post data)
- A list of all other energy savings measures installed at the facility which are not part of the BEIQ pathway.

6.4.3 Impact Analysis

The goals and methods of the BEIQ Pilot aligns with a Retrocomissioning (RCx) program. Therefore, ADM proposes to evaluate energy savings for this program that aligns with the methodologies presented in the UMP chapter for RCx. This involves analyzing whole-facility energy consumption data for each facility to estimate observed savings through retrofitting projects. By evaluating energy consumption data on a facility-level, completed by comparing building energy usage before retrofitting with building energy usage after retrofitting, the evaluators are able to measure all individual equipment retrofit savings as well as capture all interactive effects resulting from a combination of measures being installed in a single facility. In addition, this method avoids costly monitoring efforts for a large volume and variety of equipment within a single facility.

ADM proposes to utilize the following impact evaluation methodology to estimate verified net energy savings in the BEIQ pilot:

- Facility-level Regression Analysis (IPMVP Option C)

ADM proposes to measure verified net savings by conducting a billing analysis which compares each facility's pre-retrofit meter consumption to the same facility's post-retrofit meter consumption. The methodology used for linear regression analysis are summarized in further detail in the "Facility-Level Regression Analysis (IPMVP Option C)" section. This analysis is a whole building analysis. Therefore, any retrofitting projects, along with non-retrofitting projects, that affect building energy consumption, will be included in this analysis. ADM proposes this analysis because it is an accurate method to quantify observed savings at the facility level and includes interactive effects of multiple energy efficiency measures. ADM will focus analysis efforts for the building's meters which comprise the retrofitted areas of the building.

For projects whose savings cannot be measured through billing analysis, a separate IPMVP option or options will be selected. See section 5.2.5 for details.

For facilities who have opted to install energy savings measures outside of the BEIQ Pilot pathway, ADM will conduct separate analyses of these measures using the appropriate IPMVP option and deduct these savings from the BEIQ project billing analyses.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

6.4.4 Timing and Cadence

This program is considered "high risk" because it is a new pilot, and therefore will be evaluated each year in the 2024-2025 evaluation period.

6.4.5 Technical Comments

ADM provides no technical comments for this program's evaluation.

6.5 Compressed Air Pilot

Avista plans to launch the Compressed Air Pilot Program to nonresidential customers during tis biannual period. ADM expects this pilot to offer direct installation of a programmable line isolation device that will automatically detect leaks in a compressed air line. This line isolation technology works by eliminating demand on the air compressor from air leaks or timer drains. The program applicant performs a pre and post logging around the install date to capture and quantify kWh savings.

Commercial customers who use Avista electricity to operate rotary screw compressors of at least 15 horsepower that are not turned off daily are eligible for this program. Customers must submit a completed application form, invoice and the pre and post logging report summarizing kWh savings and photos of actual install along with the compressor nameplate within 90 days are eligible to receive up to $0.20/verified kWh savings.

ADM summarizes the expected program-specific and measure-specific impact analysis activities and requirements for the Compressed Air Pilot in the section below.

6.5.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Compressed Air Pilot Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

ADM will select a subset of rebate applications to cross-verify tracking data inputs, to be determined once the pilot has launched and initial program tracking data is available. If ADM finds any deviations between the tracking data and application values, ADM will note and summarize these differences to Avista through periodic updates and the final report.

In addition, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure to meet 90/10 confidence and precision requirements. ADM will include questions such as:

- How much horsepower is being controlled?
- Is the newly installed equipment properly functioning?

These questions will help ADM verify that the installed equipment was documented accurately and that data collection activities are progressing smoothly for the program. This simple verification will help ADM more accurately estimate unit-level savings using engineering algorithms.

6.5.2 Impact Analysis

ADM will utilize the following impact evaluation methodologies to estimate verified net energy savings in the Compressed Air Pilot Program:

- Deemed savings using RTF UES or Avista TRM values
- Partial/Full Measure Isolation (IPMVP Option A & B)

ADM will review engineering calculations for the projects completed in the Compressed Air Pilot Program. If any changes are necessitated during review, ADM will also apply adjustments in addition to adjustments from deviations are found between invoices and tracking data or if in-service rates deviate from 100% in verification surveys, if applicable. This methodology is summarized in further detail in Section 2.5.1, *Deemed Savings*.

ADM will also explore partial or full measure isolation, described in Section 2.5.2, Partially/Fully Measured Retrofit Isolation (IPMVP Options A & B). End-use metering will be used to obtain data that directly measures pre- or post-measure (or both) energy use for those specific end-uses affected by an energy efficiency measure. Having both the experience and the proper tools, ADM will provide end-use monitoring very cost effectively for this evaluation effort.

ADM will perform engineering reviews of Compressed Air Pilot Program projects to ensure methodology and inputs are sound and calculations have been carried out correctly. For a subset of high-savings projects, ADM will request project documentation and logging data to perform a secondary verification analysis.

Using the International Performance Measure Verification Protocol (IPMVP), ADM will develop a comparison of before and after energy consumption (pre and post install of compressed air isolation device). IVPMP's framework requires that certain energy logging activities happen at key points in this process and describes other important activities that much be included as part of the M&V impact analysis. ADM will analyze savings from air compressor system measures using custom analysis tools. We use the characteristics and monitoring data collected on-site to develop the air flow and kWh load profiles that are the inputs to our analytical tool. These data will include not only electrical load measurements for compressors and auxiliary equipment (e.g., dryers, fans, etc.) but also inlet and discharge pressure measurements to calculate flows and pressure measurements for the compressor, dryer, and other critical components of the air compression system. ADM will utilize our R-based script developed to help process large data sets (compressed air data can sometimes come in 1-second intervals) that sometimes accompany this measure.

6.5.3 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Rebate application forms and applicable invoices
- Individual project files, supporting documentation and logging data for any sampled projects

For this effort, ADM plans to analyze Avista interval consumption data to estimate the program impacts for treatment in the TOU Pilot. ADM proposes to estimate total kWh and kW impacts for Avista's participating residential customers recruited in this pilot period.

ADM will assess the load impacts for the various pilot groups through statistical analysis of the hourly usage data for both the TOU Pilot. The goal of this plan will be to estimate the percentage reduction in

peak demand and percentage reduction in overall usage/responsiveness (demand shift) to the pilot prices as well as the impacts to the Avista system and identification of potential persistence of impacts from year to year. The evaluation will be designed in such a way that the effort will be able to be conducted each year for the same pilot participants, the results also indicate persistence energy and load impacts year over year.

The intent of this task is to determine the achieved impacts of the Time-of-Use Pilot within the participant group and whether it would be reasonable to expand the program for customers in the Washington and Utah service territories.

ADM will use several types of data in the analysis, including the following:

- Metered data on hourly loads of treatment and control customers in the trial
- Hourly weather data
- Assessors' data on characteristics of houses occupied by trial treatment and control customers

ADM will use the cleaned hourly load data to prepare simple statistical and graphical comparisons of average loads under different conditions. These descriptive statistics will provide a summary of customer responses under different conditions.

Estimates of load impacts for each treatment will be reported according to four standardized formats segmented by customer type:

- Average kWh reduction per customer per impact hour (where the impact hour is the hour of interest for the evaluation, e.g., peak hours for TOU rates)
- Average percent energy reduction per impact hour
- Total energy conservation, measured as average kWh reduction per customer per month over all hours in that month
- Average percent energy reduction per month over all hours in that month
- Average peak demand impact on all event days
- Peak demand impacts by event day
- Persistence of impacts for consecutive event days
- Event day peak impacts
- Bill distribution impacts by season
- Daily price elasticity
- Inter-period substitution elasticity
- Average change in customer arrears between treatment and control groups
- Average change in number of disconnects between treatment and control groups

Each of the above estimates will also include the following elements:

- Its standard error;
- A p-value and/or confidence interval indicating statistical significance;
- The number of treatment customers, the number of control customers, and the total number of observations used in the analysis;
- A description of the dates and hours used in the analysis if it is a subset of the total amount of data collected; and

- A description of the customers used in the analysis if it is a subset of the total number of treatment and control customers.

ADM will work with Avista staff to determine the final methods to be used to estimate the load impacts according to the various metrics. As a guide in determining the methods to be used, ADM will use the report prepared by LBNL/EPRI on Quantifying the Impacts of Time-Based Rates, Enabling Technology, and Other Treatments in Consumer Behavior Studies: Protocols and Guidelines (July 2013).

ADM will work with personnel from Avista's Rates department to perform difference-of-means and difference-of-differences calculations on the hourly load data. These calculations will be performed such that results can be reported to the WUTC, per their requirements.

ADM will extend the descriptive statistics approach by estimating the parameters of a regression model of customer demand for electricity. The data for the regression analysis are in "panel" format, with time series (hourly) observations of electricity use pooled across cross-sectional observations (customers). ADM will use estimation procedures for the regression analysis that take account of both the time-series and the cross-sectional dimensions of the data.

For the bill impacts analysis, a two-phase regression modeling approach will be used. In the first phase of regression modeling, ADM will use the data for each site individually in single equation regression estimation. For the regression analyses, the dependent variable is average hourly demand (kW).

The analysis of the data for each individual customer provides a set of coefficients showing the responsiveness of customers' electricity use to changes in explanatory variables. Because there may be commonality in responsiveness among different groups of customers, a second level of regression analysis is undertaken to relate the responsiveness coefficients to household characteristics (e.g., house size, vintage). For example, it may be appropriate to conduct separate analyses, one for electric-heated homes and another for gas-heated homes.

ADM will apply standard statistical tests and regression diagnostics to evaluate the performance of the regression modeling and to screen models for implausible results. ADM will use the results from the model providing the best "fit" in the analysis of electricity savings.

6.5.4 Arrears

ADM will also include a customer arrears analysis. ADM plans to aggregate data on customer bills, disconnects and arrearages, customer utility transactions, low-income and energy savings program enrollment, customer demographics, and address whether the Pilots impact electric service disconnections, and if so, to what extent. ADM will then compare the amount of arrears between pilot participation groups to determine if participation in the program impacted the customer's propensity to lead to a disconnect.

6.5.5 Customer Surveys

ADM also anticipates conducting a survey effort to collect customer survey responses in terms of demographics, behaviors, and satisfaction. ADM anticipates that there is a plan for the following survey efforts:

- Customer pre-pilot survey

- Customer post-pilot survey

Assuming a survey will be deployed newly enrolled Pilot participants, ADM will conduct the follow up survey for these same participants after a full year of Pilot deployment to enable evaluators to compare pre- and post-Pilot deployment survey responses.

ADM will survey customer participants in order to gauge the impact of Pilot participation towards customer energy usage behaviors in response to pricing. Survey questions may include, but not be limited to:

- How participants plan to change their energy usage habits to reduce their energy costs
- Customer feedback on actions taken during the Pilot to reduce energy usage
- Identification of barriers that prevent participants to change the energy usage habits
- Other questions identified by either Avista or ADM during the term of the Pilots

This effort will help Avista and implementors separate and characterize and quantify bill impacts for low-income households and retired households.

The pilot will be open to a maximum of 500 residential customers on an opt-in basis. ADM will develop a sampling plan that aims to achieve a sampling precision of ±10% with 90% statistical confidence – or "90/10 precision" – for households participating in the TOU Pilot during survey-based data collection efforts. With a population size of 500, a sample size of 70 total survey completions will meet the 90/10 precision requirements for the TOU Pilot.

ADM anticipates conducting surveys as telephone, web, paper mail or mixed-phone/web/paper mail surveys. Survey efforts may require physical mail surveys to ensure representativeness. The selected sample participants will be offered a $20 gift card incentive to participate in and complete the demographics and satisfaction survey.

The survey will address the following topics:

- What are customers' motivations for participating in the program (i.e., decrease monthly energy bill, decrease energy usage)
- What are customers' current behaviors towards energy conservation?
- Are customers' energy use schedules flexible? (i.e., retirees schedules tend to be less flexible than the working class)
- How familiar are customers with their new TOU rate?
- Are customers receiving educational materials based on actions to help respond appropriately to the TOU rates?
- What are customers' current behaviors/actions undertaken due to messaging from the program?
- Is there other information that customers would find more beneficial to receive in messaging?
- Did customers feel they saved a meaningful amount on their bills?
- What is the satisfaction among customers for participation in the program?
- What is the satisfaction among customers of Avista as a utility provider?
- Do customers have electric vehicles (EVs) and EV charging stations installed in their household?

- What are the pilot customers' demographics? (e.g., household income, occupancy, heating/cooling type)

ADM will employ the use of our in-house call center, which is dedicated solely to energy efficiency-related efforts and comprised fully of full-time ADM staff. This allows maximum transparency of evaluation management and data collection efforts.

The goal of the Pilot participant customer survey responses for the questions listed above is to identify whether there are differences in demand reduction potential across customer groups. Therefore, ADM will use the participant responses to conduct additional bill impact analysis by subgroup.

In the case that low-income customers do not benefit from the TOU pilot, this information will help identify the need for a rate subsidy for low-income customers. This information will be useful to Avista and Avista stakeholders on how to proceed with implementation of the TOU rates.

6.5.6 Program Recommendations

Per the RFP, at the conclusion of the 2025 Program year, ADM will assist Avista in recommendations for Time of Use (TOU)/ Peak Time Rebate (PTR) program design/modifications in anticipation of full program rollout for the 2026-2027 biennium.

ADM anticipates the program recommendations will allude to the following topics:

- Recommendations for revisions or additions to evaluation plan
- Recommendations for customer survey plan and implementation
- Recommendations for customer eligibility requirements, and recruitment targets
- Recommendations for customer incentive and reimbursement

ADM further details each of the above items in the subsection below.

6.5.7 Program Evaluation Plan

ADM shall provide recommendations for edits or additions to the existing pilot evaluation plan, if necessary, with the goal of estimating the load impacts for the Pilot participants through statistical analysis of the hourly usage data for both the TOU and PTR Pilots. ADM will review plans to ensure that these methods can be used year after year to conduct a comparison of pilot improvements, successes, and learnings. Load metrics to be quantified include peak, off-peak, mid-day discount, average daily conservation impacts, and estimated load shift, by season. ADM anticipates a sufficient plan must:

- Capture data sources, data collection, tracking and storing, Avista tasks and responsibilities and the tasks for third-party service providers
- Ensure all metrics from the M&R Plans are included, as well as how they will be measured from the data.
- Include a schedule of all EM&V activities.
- Include a customer arrears analysis. The EM&V Plan will include efforts to gather data on customer bills, disconnects and arrearages, customer utility transactions, low-income and energy savings program enrollment, customer demographics, and address whether the Pilots impact electric service disconnections, and if so, to what extent.

- Include a method to assess the Pilots' impacts on participant program choices, payment behavior, and energy use.
- Include a method to assess the Pilots' impacts on access to essential services.

6.5.8 Customer Survey Plan & Implementation

ADM will also recommend adjustments to Avista's pilot survey plan and instruments, as well as the implementation schedule. ADM will make recommendations to maximize survey responses, such as the timing of survey deployment, the incentive amount provided to customers for completing the survey, and the method in which the surveys are conducted (online, mixed mode, etc.) to ensure the best success for survey responses.

6.5.9 Customer Eligibility & Recruitment Targets

ADM shall help ADM develop a final list of customer eligibility requirements, utilizing industry best practices. ADM will consider the following:

- Customer home type: single-family, manufactured home, multifamily, etc.
- Multi-premise customers: allowing more than one premise to participate if customer has multiple homes or businesses on their account.
- Customers secondary residences: vacation properties, auxiliary dwelling units, residential units used for business.
- Landlords
- Customers with on-site generation: solar, net metering, batteries.
- In addition, ADM shall use insights from Milestone 1 to guide recruitment strategy for behaviors observed among Avista residential and nonresidential customers, including analyzing AMI data to determine which customers have the highest potential to offset their peak time energy usage.

ADM shall develop, with input from Avista, a recruitment strategy, utilizing industry best practices, to develop a recruitment strategy to meet the designed participation limits of each Pilot Program while supporting accepted statistically valid design principals, including:

- Determining participants that will be most successful. (As used in this context, "successful" is defined as a participant whose bill does not increase because of their participation in the TOU Pilot.)
- Determining participants that have the potential to shift loads for positive bill impacts.

6.5.10 Customer Reimbursement Strategy

ADM will analyze the extent to which a customer required reimbursement in the pilot evaluation period. ADM will accomplish this by calculating a monthly comparison between the participant's monthly bill under the TOU Pilot ("TOU Bill") versus what participant's monthly bill would have been absent their participation ("Standard Bill"). The participant will receive a reimbursement at the end of the first year if their total annual TOU Bill is greater than their total Standard Bill.

ADM will also assist Avista with a recommended schedule for deploying reimbursement payments to customers and the messaging involved in the reimbursement notifications.

6.5.11 Timing and Cadence

This program is considered "high risk" because it is a new pilot, and therefore will be evaluated each year in the 2024-2025 evaluation period.

6.5.12 Technical Comments

ADM provides no technical comments for this program's evaluation.

6.6 Pay for Performance Pilot

The Pay for Performance Program is an incentive program that pays customers for actual energy savings at the meter. Energy savings can come from building retrofits and equipment upgrades, as well as from behavioral, operations and maintenance, and retro-commissioning activities.

The Pay for Performance Program pays annual incentives for all electricity/natural gas saved, rather than separate incentives for individual measures. Qualifying customers who implement whole-building energy retrofits will receive a set incentive rate for measurable savings that are achieved over the course of three years, with incentive payments made at the end of each year. Incentives are paid at $0.08 per kWh and $1.25 per therm.

This program is available for any Avista commercial customer who owns or operates buildings with at least 20,000 square feet of heated or cooled space and has consistent and measurable energy usage. Each building must have stable energy use over the past year and be metered separately, preferably with interval meters. To be eligible for this program, savings from planned improvements must be at least 10 percent of the building's baseline kWh or therm consumption. Manufacturing/industrial processes are excluded under this program but may be eligible under the site-specific path. Customers submit a completed rebate form, and Avista establishes a usage baseline, approves the projects, and sends a contract for the project. After improvements are implemented, savings are measured against the baseline, and payments are made annually for three years if savings are met.

6.6.1 Sampling and Precision

Depending upon participation levels, ADM may choose to analyze a census of projects. If participation exceeds approximately 10 projects, ADM will select a representative sample of projects to analyze and extrapolate pilot-level results from. For this, simple random sampling is not an effective sampling methodology as the CV values observed in business programs are typically very high because the distributions of savings are generally positively skewed. Often, a relatively small number of projects account for a high percentage of the estimated savings for the program.

To address this situation, we will use a sample design for selecting projects for the M&V sample that takes such skewness into account. With this approach, we select a number of sites with large savings for the sample with certainty and take a random sample of the remaining sites. To further improve the precision, non-certainty sites are selected for the sample through systematic random sampling. That is, a random sample of sites remaining after the certainty sites have been selected is selected by ordering

them according to the magnitude of their savings and using systematic random sampling. Sampling systematically from a list that is ordered according to the magnitude of savings ensures that any sample selected will have some units with high savings, some with moderate savings, and some with low savings. Samples cannot result that have concentrations of sites with atypically high savings or atypically low savings. We will establish sample sizes to safely exceed ±10% precision at 90% confidence (90/10 confidence precision).

6.6.2 Data Required

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms and applicable invoices
- Individual project files and supporting documentation for sampled projects including:
    a. Facility square footage, facility occupancy, detailed information on facility type, schedule of operations, list of dates in which facility was shut down or closed, information on efficiency measures installed
    b. Changes in facility or building operations or production unrelated to program, but affecting energy consumption
- Facility billing data from two years prior to project installation through the time the data request is sent (typically 3 months to one year of post data)
- A list of all other energy savings measures installed at the facility which are not part of the Pay for Performance pathway.

6.6.3 Impact Analysis

The goals and methods of the Pay for Performance Pilot aligns with a custom or retrocommissioning program. Therefore, ADM proposes to evaluate energy savings for this program that aligns with the methodologies presented in the UMP chapter for RCx. This involves analyzing whole-facility energy consumption data for each facility to estimate observed savings through retrofitting projects. By evaluating energy consumption data on a facility-level, completed by comparing building energy usage before retrofitting with building energy usage after retrofitting, the evaluators are able to measure all individual equipment retrofit savings as well as capture all interactive effects resulting from a combination of measures being installed in a single facility. In addition, this method avoids costly monitoring efforts for a large volume and variety of equipment within a single facility.

ADM proposes to utilize the following impact evaluation methodology to estimate verified net energy savings in the Pay for Performance Pilot:

- Facility-level Regression Analysis (IPMVP Option C)

ADM proposes to measure verified net savings by conducting a billing analysis which compares each facility's pre-retrofit meter consumption to the same facility's post-retrofit meter consumption. The methodology used for linear regression analysis are summarized in further detail in the "Facility-Level Regression Analysis (IPMVP Option C)" section. This analysis is a whole building analysis. Therefore, any retrofitting projects, along with non-retrofitting projects, that affect building energy consumption, will be included in this analysis. ADM proposes this analysis because it is an accurate method to quantify

observed savings at the facility level and includes interactive effects of multiple energy efficiency measures. ADM will focus analysis efforts for the building's meters which comprise the retrofitted areas of the building.

For projects whose savings cannot be measured through billing analysis, a separate IPMVP option or options will be selected. See section 5.2.5 for details.

For facilities who have opted to install energy savings measures outside of the Pay for Performance Pilot pathway, ADM will conduct separate analyses of these measures using the appropriate IPMVP option and deduct these savings from the Pay for Performance project billing analyses.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

6.6.4 Timing and Cadence

This program is considered "high risk" because it is a new pilot, and therefore will be evaluated each year in the 2024-2025 evaluation period.

6.6.5 Technical Comments

ADM provides no technical comments for this program's evaluation.

7. ADM Schedule and Management Plan

This section presents information on the ADM evaluation team's proposed schedule and management plan. Table 7-1 presents our preliminary schedule for the impact and process evaluation efforts. During project initiation, ADM will work with Avista to develop and revise the schedule as needed. This schedule is proposed for the 2024 program year for the Washington Electric, Washington Natural Gas, Idaho Electric, and Idaho Natural Gas Evaluation Reports. A similar timeline will be developed for 2025 that meets 2025 program evaluation deadlines and 2025-specific deliverables set forth in the RFP. This will give ample time for meeting deliverables set forth in the RFP.

Table 7-1: Proposed Schedule

Activity	Time Period
Kickoff Meeting	One week subsequent to contract award
ADM submits draft 2024 impact and process EM&V Plan	Kick-off meeting + 4 weeks
ADM submits final 2024 impact and process EM&V Plan	Kick-off meeting + 6 weeks
ADM submits impact and process data request for Q1/Q2	Thursday, June 13, 2024
Avista fulfills impact and process data request for Q1/Q2	Thursday, June 27, 2024
ADM finalizes sampling plan for Q1/Q2	Thursday, July 4, 2024
ADM submits impact and process staff and trade ally interview guides for Q1/Q2	Thursday August 29, 2024
ADM submits impact and process participant survey instruments for Q1/Q2	Thursday August 29, 2024
ADM conducts impact and process survey data collection for Q1/Q2	Thursday August 29 - Monday October 28, 2024
ADM conducts preliminary impact desk reviews for Q1/Q2	Thursday August 29 - Monday October 28, 2024
ADM submits impact and process data request for full program year	Thursday, January 2, 2025
Avista fulfills impact and process data request for full program year	Monday, January 13, 2025
ADM adjusts impact and process sampling plan for full program year	Friday, January 17, 2025
ADM conducts impact and process survey data collection for full program year	Friday, January 17 - Friday, February 21, 2025
ADM conducts final impact desk reviews and billing analyses for full program year	Friday, January 17 - Monday, February 24, 2025
Perform cost-effectiveness analysis	Thursday, February 20 - Monday, February 24, 2025
Submit draft version of 2024 WA Electric & Natural Gas Impact Evaluation, 2024 WA Cost Effectiveness Analysis (Electric and Natural Gas)	Friday, February 28, 2025
Submit final version of 2024 WA Electric & Natural Gas Impact Evaluation, 2024 WA Cost Effectiveness Analysis (Electric and Natural Gas)	Saturday, March 15, 2025
Submit draft version of 2024 ID Electric & Natural Gas Impact Evaluation	Saturday, March 15, 2025

Activity	Time Period
Submit final version of 2024 ID Electric & Natural Gas Impact Evaluation	Tuesday, April 15, 2025
Submit draft version of 2025 WA Electric & Natural Gas Impact Evaluation, 2025 WA Cost Effectiveness Analysis (Electric and Natural Gas)	Saturday, February 28, 2026
Submit final version of 2025 WA Electric & Natural Gas Impact Evaluation, 2025 WA Cost Effectiveness Analysis (Electric and Natural Gas)	Sunday, March 15, 2026
Submit draft version of 2025 ID Electric & Natural Gas Impact Evaluation	Sunday, March 15, 2026
Submit draft version of 2025 WA & ID Process Evaluation	Sunday, March 15, 2026
Submit final version of 2025 ID Electric & Natural Gas Impact Evaluation	Wednesday, April 15, 2026
Submit final version of 2025 WA & ID Process Evaluation	Wednesday, April 15, 2026

ADM details the following proposed schedule for the TOU and PTR impact evaluation and recommendation deliverables.

Table 7-2: Proposed TOU/PTR Schedule

Activity	Time Period
ADM submits request for TOU & PTR billing data	Monday, June 2, 2025
ADM submits draft results of TOU & PTR impact analysis	Monday, September 22, 2025
ADM submits final results of TOU & PTR impact analysis	Wednesday, October 1, 2025
ADM submits draft PTR/TOU Full Program Design Recommendations	Sunday, March 15, 2026
ADM submits final PTR/TOU Full Program Design Recommendations	Wednesday, April 15, 2026

In addition to the above schedule, ADM commits to meeting and participating with advisory groups, subcommittees, and others as needed, in addition to presenting annual results at Avista's convenience.

7.1 Team Members

ADM proposes an efficient organization for this project. The Project Manager, Melissa Kosla, will serve as a primary point of contact with Avista and will have overall responsibility for management of project activities. She will be responsible for ensuring the work is completed in a timely fashion and within budget.

The Project Manager will be supported by evaluation leads in planning and implementing all project tasks. We will have separate evaluation leads for the residential sector impact evaluation (Chris Johnson); the nonresidential sector impact evaluation (Zephaniah Davis); and the process evaluations of both sectors (Nathaniel Albers). The evaluation leads will directly supervise the planning and execution of data collection and analysis for their respective parts of the evaluation. Each impact lead will coordinate with the process evaluation lead in the development and programming of survey instruments and coordination with the call center. Zephaniah Davis also will serve as Deputy Project Manager and will be able to step in and carry out all project management activities (under the PIC's supervision), if needed, in the Project Manager's absence.

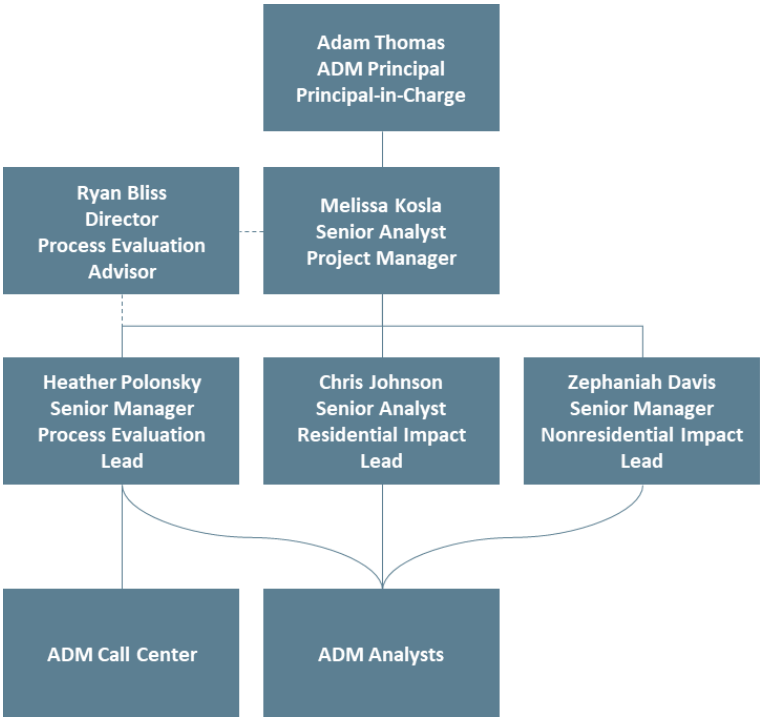
ADM has a deep reserve of analysts and data scientists capable of staffing this project. All have extensive experience in data analysis and survey programming. We have included resumes for several of these, all of whom are either located in Oregon or have done significant work in the Pacific Northwest.

To effectively manage the study and meet Avista's research needs, the Project Manager will report to Principal-in-Charge, Adam Thomas. Adam is a Principal at ADM. In this role, he regularly reviews the status of the technical work with the Project Manager and works with him so that potential problems can be identified and avoided. He also works with the Project Manager to solve problems when they do arise and to ensure that the required administrative and technical support is being supplied. On the contractual side, Mr. Thomas ensures that contract costs are managed and that we provide the personnel and equipment needed to successfully conduct the project.

In addition, Ryan Bliss, an ADM Director with more than 37 years' social science research experience, including 14 years' experience in energy efficiency process evaluation research, will provide high-level advice and supervision of process evaluation activities.

ADM is accurate, thorough, and efficient in our evaluation work. ADM staff have deep expertise, e.g., Adam Thomas has conducted similar consulting activities for utility clients for 15-plus years, Heather has led survey development and deployment activities for dozens of clients per year, and Melissa Kosla and Chris Johnson have a combined 15-plus years of conducting technical billing analyses related to their roles in this evaluation project. Zephaniah Davis is a subject matter expert in nonresidential sector impact evaluation and has over 10 years of experience evaluating complex projects. The experienced, talented, motivated ADM team has all the skills to achieve a rigorous evaluation expertly and efficiently within this scope of work. Figure 7-1 shows our project organization.

Figure 7-1: Project Organization



Appendix B – Cost-Effectiveness Methodology

The cost-effectiveness evaluation of Avista's energy efficiency programs has been standardized to a significant degree in order to provide for greater transparency and understanding of the metrics. Avista has brought these standardized[11] approaches into the evaluation of the cost-effectiveness of its portfolio through a series of specific interpretations, approaches, and policies. The summarization of these key guidelines provides a greater insight into the evaluation and how to interpret the results.

The cost-effectiveness of energy efficiency programs can be viewed from a variety of perspectives, each of which leads to a specific standardized cost-effectiveness test. The below outlines and describes the various perspectives.

1. ***Total Resource Cost:*** The perspective of the entire customer class of a particular utility. This includes not only what they individually and directly pay for efficiency (through the incremental cost associated with higher efficiency options) but also the utility costs that they will indirectly bear through their utility bill. When looking at the full customer population, incentives are considered to be a transfer between ratepayers and not a cost for the overall ratepayer class. This perspective is represented in the total resource cost (TRC) test. Avista has included a 10 percent conservation credit to the TRC calculation adding a benefit to the overall cost effectiveness.
2. ***Utility Cost Test:*** If the objective is to minimize the utility bill – without regard to costs borne by the customer outside of that which is paid through the utility bill – then cost-effectiveness simply comes down to a comparison of reduced utility avoided cost and the full cost (incentive and non-incentive cost) of delivering the utility program. This is the utility cost test (UCT), also known as the program administrator cost test (PAC).
3. ***Participant Cost Test:*** A participating customer's view of cost-effectiveness is focused upon reduced energy cost (at the customer's retail rate). Avista also includes the value of any non-energy benefits that they may receive. Incentives received by the customer offset the incremental cost associated with the efficiency measure. This is the participant cost test (PCT). Since participation within utility programs is voluntary, it could be asserted that well-informed participating customers are performing their own cost-effectiveness test based on their own circumstances and voluntarily participate only to the extent that it is beneficial for them to do so.
4. ***Ratepayer Impact Measure:*** Non-participating customers are affected by a utility program solely through the impact on their retail rate. Their usage, since they are non-participants, is unaffected by the program. The impact of energy efficiency programs on the utility rate imposed upon these non-participating customers is the result of the reduced utility energy costs, diminished utility revenues, and the cost associated with the utility program. Since utility retail energy rates exceed the avoided cost under almost all scenarios (peak end-use load and a few other exceptions apply), the non-participant rarely benefits. This is the rate impact measure (RIM), also known as the non-participant test.

[11]) California Standard Practice Manual: Economic Analysis of Demand Side Program and Projects

Per Docket UE-230897 the commission currently uses a modified TRC test, consistent with the council, as its primary cost-effectiveness test. Rate Schedule 90, "Electric Energy Efficiency Programs," also requires Avista to maintain a TRC cost-effectiveness of 1.0 or higher at the portfolio level (excluding low-income programs, which can be paid up to 100 percent of project cost). Avista therefore considers the modified TRC to be its primary cost-effectiveness test, and relies primarily on this test when evaluating existing and potential measures and programs, as well as when evaluating cost-effectiveness at the portfolio level. This modified TRC test includes all quantifiable non-energy impacts, a risk adder, and a 10 percent conservation benefit adder. All cost-effectiveness calculations assume a net-to-gross ratio of 1.0, consistent with the council's methodology.

The following table summarizes Avista's approach to calculating the four basic cost-effectiveness tests. The categorization and nomenclature provide clarity regarding each cost and benefit component. Although the TRC test is considered to be the primary test, Avista also provides Utility Cost Test ratios, in compliance with *BCP* condition 8b (Docket UE-230897), as well as the Participant Cost Test and the Ratepayer Impact test. The two latter tests provide insights into cost impacts for program participants as well as for ratepayers, which are important considerations for Avista's program designs and evaluations. Please note that some of the values within the table below represent negative values.

SUMMARIZATION OF STANDARD PRACTICE TEST BENEFITS AND COSTS

	TRC	UCT	PCT	RIM
Benefit Components				
Avoided Cost of Utility Energy	$	$		$
Value of Non-Utility Energy Savings	$		$	
Non-Energy Impacts	$		$	
Reduced Retail Cost of Energy			$	
Cost Components				
Customer Incremental Cost	$		$	
Utility Incentive Cost		$	($)	$
Utility Non-Incentive Cost	$	$		$
Imported Funds (tax credits, federal funding, etc)	($)		($)	
Reduced Retail Revenues				$

A summary of some of the approaches by which Avista measures these values and how they are applied within Avista's evaluation of cost-effectiveness is contained below.

Avoided cost of utility energy: The avoided cost of electricity and natural gas is based on the results of the most recent *Integrated Resource Plan* (*IRP*) to include the valuation of

several avoided costs that are somewhat unique to energy efficiency (e.g., distribution losses, the monetary cost of carbon, etc.). The cost of electric transmission and distribution (T&D) capacity benefits was adjusted to align with the seventh power plan, and a $26.90 per kW-yr for 20-year levelized cost was used to bring electricity into the Avista balancing area from the mid-C market.
The electric *IRP* provides 20 years of mid-C prices for every hour of the year (8,760 hours) and system capacity benefits for generation and T&D. Different measures have different distribution of their savings of the year, so to properly value the commodity portion for individual measures the 175,200 market prices (8,760 x 20) are multiplied by the individual load shapes yielding 23 different end-use commodity-avoided costs.

To calculate the capacity value, an average of the percentage of savings on January weekdays between 7:00-12:00 and 18:00-23:00 was used to estimate the peak coincidence to be multiplied by that year's generation, transmission, and distribution capacity benefits.

The commodity and capacity benefits are summed for each year and the combined avoided costs are increased to account for avoided line loss rates.

The avoided cost of the natural gas *IRP* produces an annual and winter avoided therm value which an avoided delivery charge is added (represented by the demand portion of Schedule 150) to each.

The application of the avoided cost of energy-to-energy efficiency measures includes all interactive impacts upon the fuel specific to the measure (e.g., interactive impacts upon electric consumption by electric programs) as well as cross-fuel (e.g., interactive impacts upon natural gas usage as a result of an electric program).

Value of non-utility energy: For forms of energy not provided by the utility – such as propane or wood fuel – and for which there is no *IRP* valuation of the avoided cost, all savings are valued based on the customer's retail cost of energy.

Non-energy impacts: Impacts of efficiency measures unrelated to energy usage are incorporated into the appropriate standard practice tests to the extent that they can be reasonably quantified and externally represented to a rational but critical audience. Avista sources its NEIs from regional and national studies, and NEI values are applied with adjustment factors for the company's service territory. NEI values currently range from $0.08-$0.00002/kWh.

When Avista pays the full cost of a measure within the low-income portfolio, and includes that full cost as a customer incremental cost, the value of the baseline measure is included as a non-energy benefit as a representation of the end-use service beyond the energy efficiency impact. Those impacts that have been determined to be unquantifiable within reasonable standards of rigor consist of both benefits and costs. For example, Avista has not been able to quantify the value of comfort, preventing the company from valuing the benefit of draft reduction from efficient windows, or the increased productivity due to lighting upgrades.

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Reduced retail cost of energy: For the participant test, it is the participating customer's reduced retail cost of energy, and not the utility avoided cost of energy, that is relevant to that perspective.

Customer incremental cost: This represents the additional cost of an efficient measure or behavior above the baseline alternative. To the maximum extent possible the determination of customer incremental cost is based on alternatives that are identical in all aspects other than efficiency. When a clear comparison isn't feasible, an individualized adjustment is made to the extent possible.

Utility incentive cost: Direct financial incentives, or the utility cost of physical products or services distributed to individual customers, are transfer payments between participating and non-participating customers. The provision of program delivery services is not a transfer cost and is not incorporated into the definition of the utility incentive cost.

Utility non-incentive cost: These costs consist of all utility costs that are outside of the previously defined incentive costs. It typically consists of costs associated with the administration of the program such as labor, EM&V, training, outreach, marketing, pilot programs, conservation potential assessments, organizational memberships, etc.

Imported funds: Avista includes the value of imported funds (generally tax credits or governmental co-funding of programs) to be a reduction in the customer incremental cost of the measure for purposes of calculating the TRC test and the participant test. These funds are acquired from entities outside the ratepayer population or the individual participant.

The alternative approach to treating imported funds as an offset to the customer incremental cost is to consider these funds to be a benefit. For the purposes of Avista's cost-effectiveness objective (maximize residual net TRC benefit), there would be no mathematical difference between these two approaches.

Reduced retail revenues: For the purposes of the RIM test, the loss of retail revenue is a cost to the non-participating customer.

The means by which Avista's energy efficiency portfolio is defined for the purposes of evaluation and cost allocation is also an important part of the company's methodology. The various definitions used for the different levels of aggregation are explained below, followed by an explanation of how these are applied in the allocation of costs.

Sub-Measure: A sub-measure is a component of a measure that cannot be coherently offered without aggregating it with other sub-measures. For example, an efficient three-pan fryer couldn't be offered as part of a sensible customer-facing program if the program did not also include two-pan and four-pan fryers. Avista may offer sub-measures that fail cost-effectiveness criteria if the overall measure is cost-effective. This is the only area where Avista permits the bundling of technologies for the purposes of testing offerings against the

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cost-effectiveness screen. There are relatively few sub-measures meeting the criteria specified above within the portfolio.

Measure: Measures are standalone energy efficiency options. Consequently, measures are generally expected to pass cost-effectiveness requirements barring justifiable exceptions. Exceptions include, but are not necessarily limited to, measures with market transformation value not incorporated into the assessment of the individual measure, significant non-energy benefits that cannot be quantified with reasonable rigor, and cooperative participation in larger regional programs.

Program: Programs consist of one or more related measures. The relation among the measures may be based on technology (e.g., an aggregation of efficient lighting technologies) or market segment (e.g., aggregation of efficient food service measures). The aggregation is generally performed to improve the marketability and/or management of the component measures.

Portfolio: Portfolios are composed of aggregations of programs. The aggregating factor will vary based on the definition of the portfolio. The following portfolios are frequently defined in the course of Avista's energy efficiency reporting and management:

- *Customer segment portfolio* – An aggregation of programs within a customer segment (e.g., low-income, residential, commercial/industrial).
- *Fuel portfolio* – Aggregating electric or natural gas energy efficiency programs.
- *Regular vs. low-income portfolios* – Separating income-qualified measures delivered through CAP agencies from the remainder of the portfolio.
- *Jurisdictional portfolio* – Aggregating programs within either the Washington or Idaho jurisdiction.
- *Local or regional portfolio* – Aggregating all elements of the local energy efficiency portfolio vs. the regional market transformation portfolio.
- *Fuel/Jurisdictional portfolio* – Aggregating all programs within a given fuel and jurisdiction (Washington electric, Washington natural gas, Idaho electric, or the currently suspended Idaho natural gas portfolio).

Overall portfolio: Aggregating all aspects of the Washington and Idaho, electric and natural gas energy efficiency portfolio.

Methodology for Allocation of Energy Efficiency Costs

The Avista methodology for cost allocation builds from the measure or sub-measure analysis to the program and ultimately portfolio analysis. At each level of aggregation, those costs that are incremental at that stage are incorporated into the cost-effectiveness analysis. Incremental customer cost and benefits are fully incorporated into measure-level analysis. Utility costs (both labor and non-labor) are currently fully incorporated within the program level of aggregation based on previous advisory group discussions regarding the company's ability to expand or contract the portfolio to meet acquisition target. Cost allocations are made based on the expected adjusted Btu acquisition of the program, with adjustments by the relative avoided cost of electricity and natural gas (e.g., a kWh is a highly processed Btu compared with an equivalent natural gas).

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Generally, little of the non-incentive utility cost (labor and non-labor) is allocated at the measure level, with the exception of programs delivered through a third-party contractor where those costs are truly incremental. Other non-incentive utility costs are allocated at the program level in the belief that the addition or elimination of programs would lead to a change in the scale of the overall portfolio, and that, therefore, these costs are incremental at the program level.

It should be noted that costs not associated with the delivery of local energy efficiency programs within the planned year are excluded from the cost-effectiveness calculations. These are termed "supplemental costs," and consist of:

- The funding associated with regional programs (NEEA)
- Cost to perform conservation potential assessment studies (CPA)
- Evaluation, Measurement, and Verification engagements (EM&V)
- Funding of low-income educational outreach programs in Idaho
- Idaho research funding and similar expenses unrelated to the planned local portfolio

Unit Energy Savings

The quantification of energy savings applicable toward achieving Washington EIA acquisition targets has been an ongoing topic of discussion since the effective date of the requirement. The company plan will create an annual locked Unit Energy Savings (UES) associated with the Technical Reference Manual (TRM) that will be updated on an annual basis. The savings will primarily be derived from the Regional Technical Forum (RTF) or previous impact evaluations.

For planning purposes, the business plan has applied the same assumptions regarding UES to the Idaho portfolio as the best current estimate of savings. However, the retrospective *Annual Conservation Report* may displace these assumptions with the results of actual impact evaluations when available and appropriate.

Analytical Methodology Applicable to Low-Income Programs

Avista has developed several analytical methodologies specific to the evaluation needs of the low-income portfolio. These include the (1) accommodation of incentive levels equal to the entire cost of the measure, including the cost of the baseline measure, and (2) the treatment and quantification of the considerable non-energy benefits incorporated within the low-income portfolio. Beyond these two rather significant analytical issues, the treatment of the low-income portfolio is similar to that applied to the other portfolios.

Except for the Low-Income Program, as well as for certain programs and services offered thorough the Named Communities Investment Fund to bring equitable benefits to members of Named Communities, Avista does not typically fully fund the customer incremental cost, and even less frequently the full installed cost of an end-use service. For low-income programs delivered with Avista funding in partnership with Community Action Agencies (CAAs) , as well as through programs that serve Named Communities, the participating customer may receive full funding of the end-use service. There is a need to appropriately represent this expenditure within the overall energy efficiency expenditure budget, but at the same time it is necessary to recognize that only a portion of this expenditure is dedicated toward energy efficiency. The company does so by recognizing the full expenditure as a cost, but also recognizing that there is a non-energy benefit

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associated with the provision of base-case end-use services. The full cost less this non-energy benefit is equal to the amount invested in energy efficiency. Thus the assessment of the cost-effectiveness of the energy efficiency investment is appropriately based upon the value of the energy savings of the efficient measure in comparison to this incremental cost. In situations where a measure might be found cost-effective under one fuel, it will be reimbursed at the full cost for both fuels.

Avista has also defined the expenditure of non-energy health and safety funds as a non-energy benefit (on a dollar-for-dollar basis). This quantification is based on the individual assessment of each of these expenditures by the CAA prior to the improvements being made. This approval process provides reasonable evidence that the improvements are worth, at a minimum, the amount that has been expended upon them through CAA funds.

As a consequence of these two assumptions, the low-income portfolio accrues considerable non-energy benefits, as do programs designed to serve Named Communities.

For low-income programs, the administrative reimbursement permitted to the CAA is considered to be a component of the measure cost. This amount reimburses the CAA for back-office costs that would, in a typical trade ally bid, be incorporated into the project invoice. For 2026, the admin reimbursement is 30 percent of the total allocated amount per agency.

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Appendix C – Electric Program Summary

Program	kWh	NEI	Estimated Budget
Low-Income Programs			
Low-Income Programs	733,803	$1,128,230	$2,137,646
Named Communities Investment Fund	-	$-	$2,000,000
Low-Income Programs Total	**733,803**	**$1,128,230**	**$4,137,646**
Residential Programs			
Appliances	235,035	$215,774	$88,650
ENERGY Star Homes	12,554	$2,637	$23,000
Home Energy Audit	20,743	$-	$-
Home Energy Reports	7,969,000	$-	$-
Home Insulation Program	762,510	$160,194	$1,590,144
Multi-Family Windows	101,800	$922,946	$41,075
On-Bill Repayment	-	$-	$16,000
Residential Midstream	4,995,456	$1,695,137	$1,080,550
Single Family Windows	16,132	$1,400	$33,005
Residential Programs Total	**14,113,230**	**$2,998,087**	**$2,872,424**
Commercial/Industrial Programs			
Building Operator Certification	595,000	$-	$1,000
Direct Install Lighting	7,201,831	$1,680,232	$3,600,915
Exterior Lighting	1,824,966	$449,849	$474,641
Green Motors	1,568	$103	$300
Grocer	88,239	$-	$42,040
Interior Lighting	4,651,002	$1,125,468	$1,030,482
Non-Residential Midstream	805,910	$-	$209,288
Non-Residential Shell	51,540	$-	$614
Pay for Performance	5,306	$-	$4,245
Site Specific	15,206,507	$4,590,817	$2,975,622
Commercial/Industrial Programs Total	**30,431,869**	**$7,846,469**	**$8,339,147**
Other Program and Administrative			
NEEA	7,008,000	$-	$1,539,138
CPA, EM&V	-	$-	$704,899
Third Party Implementation	-	$-	$2,323,790
Labor, Marketing, General Implementation	-	$-	$4,965,048
Outreach	-	$-	$126,000
Pilot Programs	-	$-	$961,158
Total Other Program and Administrative	**7,008,000**	**$-**	**$10,620,032**
Total Electric Budget	**52,286,902**	**$11,953,469**	**$25,969,249**

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Appendix C – 2026 Natural Gas Energy Efficiency ACP

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Draft 2026 Washington Natural Gas

Energy Efficiency Annual Conservation Plan

November 1, 2025

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Such risks, uncertainties, and other factors include, among others, those contained within the company's most recent annual report on Form 10-K, or quarterly report on Form 10-Q, filed with the Securities and Exchange Commission. Those reports are available at avistacorp.com.

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Introduction

Avista Utilities' Natural Gas *Annual Conservation Plan* (*ACP*) is provided in alignment with RCW 80.28.380 and in accordance with the requirements outlined in Order No. 01 in Docket No. UG-230898, through which the Commission approved Avista's 2024-2025 *Biennial Conservation Plan* (*BCP*) with conditions.[1]

The 2026 *ACP* outlines Avista's energy efficiency program offerings and provides details on the company's process for verifying and reporting savings. Avista remains focused on acquiring all conservation measures that are available and cost-effective. Avista accomplishes this objective by offering financial incentives for energy-saving measures, while using the most effective mechanism to deliver energy efficiency services to customers. These mechanisms are varied, and include prescriptive programs or standard offerings, such as high-efficiency appliance rebates; site-specific or customized analyses at customer premises; midstream incentives, which encourage partnerships with HVAC and hot water heating equipment distributors; regional market transformation efforts in collaboration with other utilities; programs to encourage and incentivize efficient behaviors; provision of low-income weatherization services through local community action agencies (CAAs); new programs to serve energy needs for members of Named Communities; a multi-channel communication effort; and support for cost-effective appliance standards and building codes.

As with the electric *ACP*, Avista's natural gas *ACP* represents a planning process that relies on meaningful and extensive engagement from Avista's Energy Efficiency Advisory Group (EEAG) as well as its Equity Advisory Group (EAG). Avista consults with its advisory groups multiple times over the course of a year – seeking input and guidance on best practices for new programs, as well as advice on possible changes to existing programs and services – to adaptively manage its program portfolio in a nimble way that reflects changing market conditions.

The planning process for Avista's energy efficiency efforts builds upon the electric and natural gas *Integrated Resource Plan* (*IRP*) and Conservation Potential Assessment (CPA) processes – overall resource planning, completed every two years, which integrates energy efficiency and generation resources into a preferred resource scenario. The purpose of the process, and resulting plan, is to create an operational strategy for reaching the aggregate targets identified within the *IRP* in a manner that is cost-effective and with due consideration to all aspects of customer value.

Budgetary projections established as part of Avista's biennial planning process, and in this *ACP*, are tracked continuously as part of the company's adaptive management of its programs and associated costs. Revisions to the conservation tariff rider funding mechanisms contained within the Schedule 191 natural gas tariff are completed on an annual basis, if needed. These adjustments to the tariff rider surcharges are made with the objective of moving these balances toward zero and reflecting, at all times, the most appropriate collection rate in support of Avista's energy efficiency programs.

Definitions

Table 1 below provides a list of definitions for select terms used throughout Avista's 2026 *ACP*.

[1] Docket UG-230898, Order 01, Attachment A contains the approved Conditions for 2024-2025 Avista Natural Gas Biennial Conservation Plan.

These terms are specific to the conservation standards set forth within the RCW 80.28.380 and affirmed through previous planning cycles.[2]

TABLE 1 – NATURAL GAS CONSERVATION TERMS

Natural Gas Conservation Terms	
Two-Year Conservation Target	All cost-effective conservation potential as required by RCW 80.28.380. Includes the Pro-Rata Share from Avista's CPA, plus other programs/measures with confident savings omitted from the CPA, such as distribution-level efficiency, pilots with uncertain savings, and additional portfolio buildout.
Decoupling Commitment	Five percent of the Two-Year Conservation Target, as established in Dockets UE-140188 and UG-140189, Order No. 05, with incremental penalties established in Dockets UE-190334, UG-190335, and UE-190222 (consolidated), Order No. 09.
Total Local Biennium Target	Two-Year Conservation Target plus Decoupling Commitment.
Total Conservation Goal	Two-Year Conservation Target plus Decoupling Commitment plus any additional targets identified by the utility.

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[2] See Dockets UG-210827 and UG-230898.

Executive Summary

The 2026 *ACP* provides details on programs and initiatives the company intends to offer to customers to achieve eligible acquisition savings as it enters the first year of the 2026-2027 biennium. For 2026, Avista has identified estimated conservation savings to be 704,656 therms from local efforts as well as 3,734 therms of regionally acquired savings through the Northwest Energy Efficiency Alliance (NEEA), combining for a total estimate of 708,390 therms. The 2026 *ACP*'s expected acquisition matches the conservation target, with overall budgeted expenditures estimated to be $9,356,062.

Table 2 provides the estimated conservation achievement (in therms) and anticipated expenses for each market sector in Avista's program portfolio, as well as estimated expenses Evaluation, Measurement, and Verification (EM&V).

TABLE 2 – 2026 PORTFOLIO SAVINGS AND BUDGET BY SECTOR

Sector	Therms	Budget
Low-Income Programs	14,879	$2,862,364.84
Residential Programs	544,009	$2,954,579.00
Commercial/Industrial Programs	110,716	$471,691.94
NEEA Savings	6,600	$551,692.60
CPA, EM&V	-	$78,322.12
Third Party Implementation	-	$1,134,913.13
Labor, Marketing, General Implementation	-	$458,442.39
Outreach	-	$14,000.00
Pilot Programs	-	$421,987.50
Total	**676,204**	**$8,947,993.52**

As Avista enters the first year of its biennial period, its energy efficiency programs remain well positioned to achieve the biennial conservation target identified through its CPA process.[3] Market conditions that have continued to create headwinds for customers remain – including inflation, economic uncertainty, and labor shortages – however, the company is confident the planned program offerings provide ample and adaptive efficiency opportunities for customers. Avista continues to deliver efficiency choices that meet customers' evolving energy needs while prioritizing affordability.

Cost-effectiveness remains a key indicator of Avista's energy efficiency portfolio performance. While Avista pursues all cost-effective measures, the company also retains flexibility in its program portfolio so that meaningful energy efficiency can be achieved by all natural gas customers. Avista's program portfolio includes a segment of programs designed to serve low-

[3] See Avista's 2026-2027 BCP, filed in conjunction with this ACP, for information regarding the full biennium.

income customers, providing a higher level of benefit (incentive) to these more vulnerable populations. Table 3 below provides a summary of portfolio cost-effectiveness for Avista's natural gas program portfolio.

TABLE 3 – PORTFOLIO COST-EFFECTIVENESS

	Total Portfolio	Portfolio without Low-Income
Total Resource Cost	1.46	1.99
Utility Cost Test	1.02	1.56

For 2026, the achievable economic potential identified for the first year of the biennium is 717,400 therms, which is inclusive of residential, commercial/industrial, and low-income segments. Table 4 below builds upon this single-year look to provide a more comprehensive view of the total 2026-2027 total local biennium target, which includes both Avista's two-year conservation target in addition to its decoupling commitment.[4]

TABLE 4 – NATURAL GAS BIENNIAL CONSERVATION TARGET

Biennial Conservation Target (therms)	
CPA Two-Year Conservation Target	1,552,260
Decoupling Commitment	77,613
Total Two-year Natural Gas Savings Goal	**1,629,873**

The level of conservation estimated to be achieved in 2026 (and further, throughout the 2026-2027 biennium) will have a direct impact the current balances within the energy efficiency tariff rider (Schedule 191). Anticipated spending is expected to produce an underfunded balance by the end of 2026. To appropriately and adequately meet the anticipated costs of achieving the savings targets outlined in this 2026 ACP and associated 2026-2027 BCP – in addition to remedying an existing underfunded balance – Avista filed revisions to its Schedule 191 on May 30, 2025. The new collection rates for Schedule 191 were approved effective August 1, 2025. Tariff rider balance estimates for 2026 are shown in Table 5 below.

TABLE 5 – 2026 TARIFF RIDER BALANCE ESTIMATES

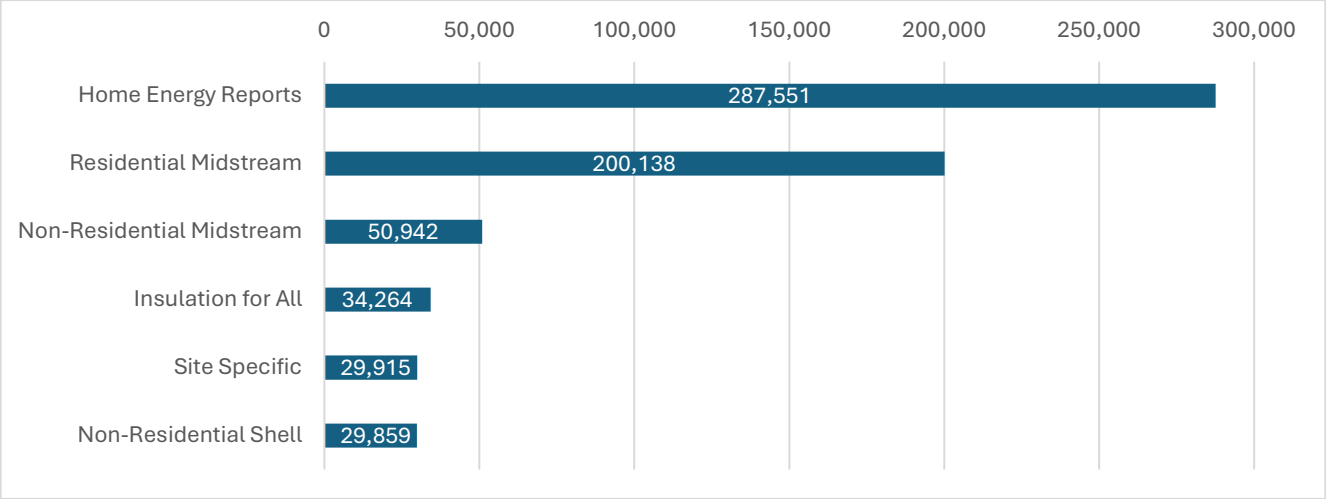
Estimated Natural Gas Energy Efficiency Balances	(Underfunded) / Overfunded
Estimated Balance at January 1, 2026	$(6,709,057)
Tariff Rider Funding	$14,926,764
Annual Expenditures	$8,947,994
Estimated Balance at December 31, 2026	$(730,287)

[4] As established within Avista's 2019 General Rate Case (GRC), Dockets UE-190334, UG-190335, and UE-190222 (Consolidated), Final Order 09.

Energy Efficiency Portfolio Overview

Avista's energy efficiency portfolio is composed of residential, low-income, and commercial/industrial programs. For 2026, the company anticipates savings of approximately 676,204 therms from its program offerings. Figure 1 illustrates the major categories from which savings are achieved.

FIGURE 1 – SAVINGS FROM ENERGY EFFICIENCY PROGRAMS (THERMS)



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Overall Energy Efficiency Budget Projections

Avista's budget process is consistent with the company's commitment to achieve all cost-effective energy efficiency measures and maximize the value of the portfolio without budgetary constraints. This process assumes that prudently incurred expenditures will be fully recoverable through the conservation tariff rider, and that revisions in the tariff rider surcharge will be timely enough to maintain a materially neutral tariff rider balance. The budget is thus a product of the planning process rather than a planning objective. The company recognizes that customer demand and market factors exist outside of the budgeting process and that forecasted expenses may be higher or lower than actual results. The forecasted budget does not represent an expectation or commitment to limit expenses to the planned amounts, nor does it represent any minimum commitment or achievement of savings for any given program.

The overall 2026 budget projection is summarized in Table 6, which includes elements of the energy efficiency budget that have been designated as "supplemental" to indicate they are not included in the cost-effectiveness calculation. These supplemental costs include the funding associated with regional programs like NEEA, as well as funds for third-party CPA and EM&V studies.

TABLE 6 – ENERGY EFFICIENCY BUDGET SUMMARY

	2026 Natural Gas Budget	Supplemental Budget	Non-Supplemental Budget
Total Incentives	$6,288,636	$ -	$6,288,636
Administrative Labor	$125,216	$ -	$125,216

Total Non-Labor/Non-Incentive	$1,982,449	$598,310	$1,384,140
NEEA	$551,693	$551,693	$ -
Total	**$8,947,994**	**$1,150,002**	**$7,797,991**

Program-by-program details of the expected incentive expenditures for 2026 are provided in greater detail in Table 7. Direct incentive expenditures represent the estimated incentives that will be paid to customers directly or indirectly for participation in energy efficiency programs. The overall level of expense is highly correlated to programs' throughput and energy acquisition and, based on customer participation, the amounts are subject to change.

TABLE 7 – CUSTOMER DIRECT INCENTIVE EXPENDITURE DETAIL

Energy Efficiency Program	Direct Incentive Expenditures
Low-Income Programs	
Low-Income	$2,862,364.84
Total Low-Income Incentives	**$2,862,364.84**
Residential Programs	
Residential Prescriptive	$1,424,704.00
Residential Midstream	$1,529,875.00
Total Residential Incentives	**$2,954,579.00**
Commercial/Industrial Programs	
Prescriptive Shell	$188,815.50
Commercial Midstream	$178,175.00
Site-Specific	$104,701.44
Total Commercial/Industrial Incentives	**$471,691.94**
Total of All Incentives	**$6,288,635.78**

Non-incentive expenses, including both non-supplemental and supplemental expenditures, are detailed to a lower level of aggregation and broken out by portfolio in Table 8. These expenses are allocated by the percentage of overall avoided cost achieved through each program's energy efficiency achievements. An exception to this allocation methodology is that third-party non-incentive payments are directly attributable to the programs they originate from.

TABLE 8 – NON-INCENTIVE UTILITY EXPENSE DETAIL

Expense Type	Washington Natural Gas Portfolio	Supplemental Budget	Non-Supplemental Budget
NEEA	$551,693	$551,693	$ -
CPA, EM&V	$78,322	$78,322	$ -
Third Party Implementation	$1,134,913	$ -	$1,134,913
Outreach	$14,000	$14,000	$ -
Labor, Marketing, General Implementation	$458,442	$84,000	$374,442
Pilot Programs	$421,988	$ -	$421,988
Total	**$2,659,358**	**$728,015**	**$1,931,343**

Projections of expected labor requirements by job classification are made by managers within the energy efficiency team, and labor overheads are applied. Labor is allocated to programs based on the weighted value of benefits the program brings to the overall portfolio.

Residential Portfolio Overview

Avista's residential portfolio is comprised of several approaches to engage and encourage customers to make energy efficiency improvements in their home. The Midstream program is the largest contributor of therm savings to the residential portfolio and includes incentive offerings for HVAC and water heating measures.

Windows and ENERGY STAR Manufactured homes incentives are offered through a long-standing prescriptive rebate model. Avista also recently launched its Home Insulation Program, a direct-install offering for insulation and air sealing measures for residential customers in Washington. The On-Bill Repayment (OBR) Program provides customers access to a simple and convenient financing option for efficiency upgrades at an affordable interest rate. These programs are supplemented by educational and outreach efforts, including a residential Home Energy Audit Program.

For the 2026 program year, Avista anticipates approximately 544,010 therms to be achieved through residential programs with an expected spend of $2,954,579. Table 9 summarizes 2026 residential program savings and budget estimates.

TABLE 9 – RESIDENTIAL PROGRAM OVERVIEW

Residential Programs	Natural Gas Program Savings (Therms)	Expected Incentive Spend
Residential Midstream	200,138	$1,529,875
Residential Prescriptive	343,872	$1,424,704
Total Residential	**544,010**	**$2,954,579**

Residential Marketing

Avista has a robust residential marketing strategy. Historically, the company utilized traditional marketing tactics like broadcast and print media. Over the past several years, residential marketing tactics have shifted to align with commercial ones. The company has expanded its use of digital, search, streaming, and video sharing platforms, in addition to organic and unpaid tactics. Education and awareness messaging focuses on energy-saving tips, available rebate programs, and customer success stories.

In 2024, Avista launched the "Power of Change" campaign to reach customers on social media channels, streaming and digital platforms, and YouTube. The campaign provides energy efficiency tips and promotes rebates and programs. It is designed to increase customer awareness and engagement with energy efficiency, ideally helping to drive program participation. Its creative collateral is approachable and seasonally relevant, designed to reach customers in target demographics with customized messaging. Through this campaign, Avista is reaching out to customers on the platforms they are increasingly turning to for trusted communication. It increases their exposure to energy efficiency messaging and provides relatable content through both static and motion ads. Due to its continued success, the "Power of Change" campaign has been extended through at least 2026.

FIGURE 2 – RESIDENTIAL "POWER OF CHANGE" DIGITAL ADVERTISING CAMPAIGN EXAMPLES

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Residential Programs

Residential Prescriptive Program

Program Description

Prescriptive measures offer a simple pathway to encourage customers to adopt qualifying efficiency measures. Prescriptive programs do not require a pre-installation contract, instead offering a fixed incentive amount for eligible measures. Measures offered through prescriptive programs are evaluated based on the typical application of that measure by program participants. Prescriptive measures are generally limited to those that are low-cost, offer relatively homogenous performance across the spectrum of likely applications, and would not significantly benefit from a more customized approach. Specific plans for Avista's prescriptive programs are enumerated in this section.

TABLE 10 – RESIDENTIAL PRESCRIPTIVE PROGRAM METRICS

Projected Program Metrics	
Overall Therm Savings	343,872
Incentives	$1,424,704
Non-Incentive Utility Costs	$404,693
Total Costs	**$1,829,397**

Residential Appliance Program

Program Description

Residential appliance measures are intended to motivate customers to purchase appliances that demonstrate higher than average energy-efficient performance by meeting ENERGY STAR criteria for efficiency. ENERGY STAR acts as an independent third-party, maintaining a website of qualified products and verifying the performance of various appliances. Customers are asked to provide an ENERGY STAR certificate for each appliance they purchase, along with an application and purchase documentation.

Program Eligibility

All Washington residential natural gas customers who utilize a natural gas water heater and who purchase ENERGY STAR certified front-load clothes washers are eligible for appliance rebates. Appliance rebates for natural gas dryers are also available for customers who have Avista-provided natural gas.

Program Revisions

The Residential Appliance Program will retain its existing measures through the 2026 program year. While no new measures are being introduced at this time, program staff are actively reviewing RTF findings and exploring additional opportunities to expand offerings. The clothes washer and dryer measures are under consideration for sunset in 2027, and customers will begin to be informed that rebate submission deadlines for these items may be approaching. Final decisions regarding measure updates will be made following further evaluation in late 2026.

Residential Window Measures

Program Description

This program encourages customers to improve their home's shell or exterior envelope with upgrades to windows and storm windows. Energy efficiency marketing efforts build considerable awareness of opportunities in the home and drive customers to Avista's website for rebate information. Vendors generate participation in the program using rebates as a sales tool for their services. Other communications the company uses to encourage program participation includes utility website promotion, vendor training, and presentations at various customer events throughout the year.

Program Eligibility

All Avista Washington residential natural gas customers who install qualified windows and meet all program requirements for installation are eligible for the program. Self-install options for windows and storm windows will also continue. Rebates are offered on a per-window basis and are tiered, offering a higher rebate for a lower u-factor rating.

TABLE 11 – RESIDENTIAL SINGLE FAMILY WINDOW MEASURES

Projected Program Metrics	
Overall Therm Savings	16,589
Incentives	$279,136
Non-Incentive Utility Costs	$96,992
Total Costs	$373,128

TABLE 12 – RESIDENTIAL MULTIFAMILY WINDOW MEASURES

Projected Program Metrics	
Overall Therm Savings	4,205
Incentives	$15,400
Non-Incentive Utility Costs	$22,347
Total Costs	$37,747

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Home Insulation Program

Program Description

This program, launched in August of 2025, offers a direct-install insulation and air sealing service for residential customers. The program is intended to deliver energy savings while increasing customer engagement and satisfaction through innovative marketing and delivery approaches.

Program Implementation

Avista is partnering with Resource Innovations and C+C as third-party implementers for the program. Their delivery model includes onsite audits to assess insulation needs and identify air sealing opportunities in walls, attics, and floor spaces. The implementers will enforce program guidelines with Avista's trusted network of trade allies, who will then install appropriate energy-saving measures at each residence.

Program offerings for gas measures are designed to cover approximately 70 percent of project costs, on average.

TABLE 13 – HOME INSULATION PROGRAM

Projected Program Metrics	2026 Delivery
Overall Therm Savings Projected	34,264
Total Incentives Projected (Materials,Labor)	$1,119,318
Non-Incentive Utility Costs	$194,146
Total Costs	$1,313,464

Program Eligibility

The program is available to natural gas service residential customers in Washington who use natural gas as their primary heating source and live in single-family homes, condominiums, or multifamily properties of up to four units. Eligibility is determined by meeting pre- and post-installation R-value requirements for insulated areas, which may include floors, attics, and walls.

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Residential Midstream Program

Program Description

Common barriers to participation in traditional downstream rebate programs include: a lack of customer awareness of rebate programs; language and technology barriers; and distributors' tendency to stock low-cost, low efficiency units because of the high cost of energy-efficient equipment. Prior to the implementation of Avista's Midstream Program, customers who requested high-efficiency equipment often had to wait weeks for the equipment. By focusing efforts on distributors directly, Avista's Midstream Program leverages distributors' recognized influence over contractors and specific equipment sales while mitigating many participation barriers. Distributors work with contractors to submit claims for Avista customers, and claims are then paid promptly. This approach benefits both the customer as well as the company. Customers have improved equitable access, as they may receive an incentive without having to complete any paperwork or have background knowledge of the rebate program, and Avista gains additional savings without the burden of customers having to submit paperwork to the utility.

TABLE 14 – MIDSTREAM RESIDENTIAL PROGRAM METRICS

Projected Program Metrics	
Overall Therm Savings	200,138
Incentives	$1,529,875
Non-Incentive Utility Costs	$665,535
Total Costs	$2,195,410

Program Eligibility

Residential customers are eligible for the program if they have Avista natural gas service and install qualifying equipment through a participating contractor. Avista's implementation partner, Energy Solutions, engages in outreach and education for distributors, who utilize a software system to enter and track claims. Avista has provided basic data to Energy Solutions to enable verification of customer eligibility primarily at the time of claim submittal.

Program Revisions

No major changes are anticipated for the program in 2026; however, if new measures are planned to be added during the program year, Avista will consult with the EEAG in accordance with established procedures.

On-Bill Repayment Program

Program Description

Avista continues to partner with Puget Sound Cooperative Credit Union (PSCCU) to offer the On-Bill Repayment Program, which provides a funding solution for Washington State customers who need capital to implement energy efficiency projects.

PSCCU offers Energy-Smart Loans for energy-efficient projects to home and business owners in Washington State, along with personalized underwriting practices and interest rates that are lower than other options in the finance market. Participants reap immediate benefits from energy efficiency upgrades. Paying the loan back on their Avista bill further provides participants with the ease and convenience of one less bill to manage.

Customers' Energy-Smart Loan installments are billed monthly as a line item on the Avista bill until either the term of the loan is completed or Avista is otherwise instructed by PSCCU to remove the loan from the bill. Extra principal payments or early loan payoffs are made directly to PSCCU.

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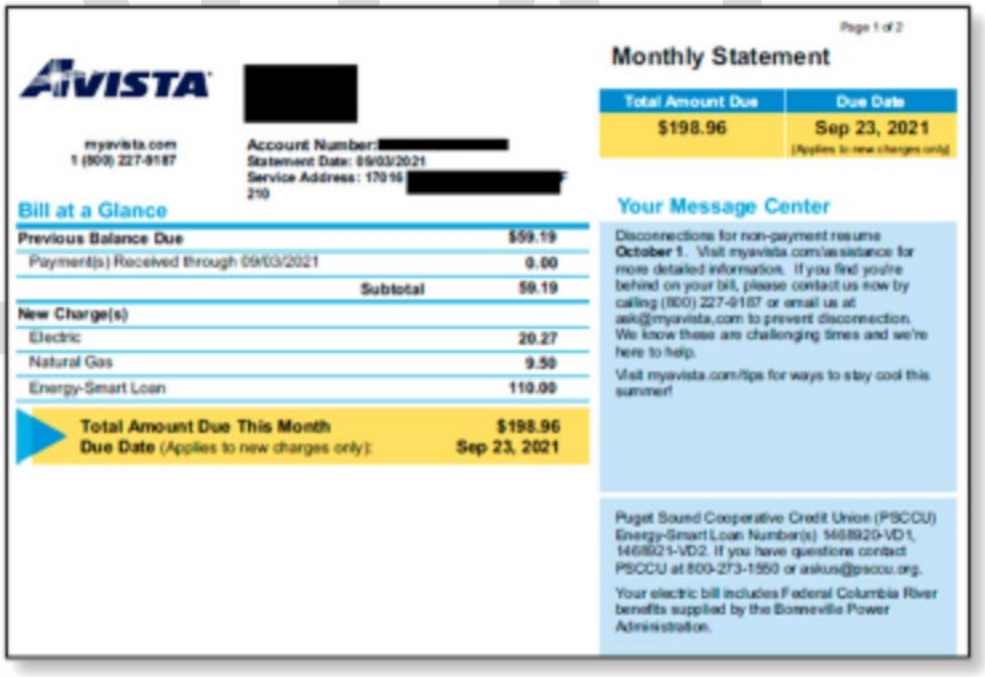
FIGURE 3 – ON-BILL REPAYMENT BILL EXAMPLE



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AVISTA

myavista.com
1 (800) 227-9187

Account Number: [redacted]
Statement Date: 09/03/2021
Service Address: 17016 [redacted] 210

Monthly Statement

Total Amount Due	Due Date
$198.96	Sep 23, 2021

(Applies to new charges only)

Bill at a Glance

Previous Balance Due	$59.19
Payment(s) Received through 09/03/2021	0.00
Subtotal	59.19
New Charge(s)	
Electric	20.27
Natural Gas	9.50
Energy-Smart Loan	110.00
Total Amount Due This Month	$198.96
Due Date (Applies to new charges only):	Sep 23, 2021

Your Message Center

Disconnections for non-payment resume October 1. Visit myavista.com/assistance for more detailed information. If you find you're behind on your bill, please contact us now by calling (800) 227-9187 or email us at ask@myavista.com to prevent disconnection. We know these are challenging times and we're here to help.

Visit myavista.com/tips for ways to stay cool this summer!

Puget Sound Cooperative Credit Union (PSCCU) Energy-Smart Loan Number(s): 1468920-VD1, 1468921-VD2. If you have questions contact PSCCU at 800-273-1550 or askus@psccu.org.

Your electric bill includes Federal Columbia River benefits supplied by the Bonneville Power Administration.

PSCCU's favorable interest rates are further lowered by Avista subsidies to allow more customers access to energy efficiency project funding.

TABLE 15 – ON-BILL REPAYMENT PROGRAM RATES AND TERMS

Loan Amount	$1,000 – $30,000 Residential	$5,000 – $75,000 Small Business
Interest rate	Up to 7.50% APR	Up to 7.50% APR
Term	Up to 15 years	Up to 15 years
Recording fee	$700 UCC filing fee*	Varies*

Example	$15,000 loan at 7.50% APR; 180 payments at $139.05 per month	

* Fees can be paid up front or added to the loan at the borrower's discretion.

Participation in the On-Bill Repayment Program is outlined below.

FIGURE 4 – ON-BILL REPAYMENT CUSTOMER PARTICIPATION JOURNEY

Energy-Smart Loans through Avista's On-Bill Repayment Program are intended for customers who need assistance for upfront capital for the purchase of energy efficiency equipment and related labor. However, the program is not intended to divert income-qualified customers from obtaining no-cost weatherization services through their local Community Action Agency (CAA). To this end, processes are in place to ensure that income-qualified customers are directed to Community Action Agencies (CAAs) for qualification. Income-qualified customers may apply for an Energy-Smart Loan and participate in the OBR program if they choose to do so, after all other options have been shared with them.

Program Eligibility

Residential and small business customers in owner-occupied buildings may be eligible for OBR; funded measures must be fueled by Avista. An eligible projects list created by Avista and supported by Washington State's Clean Energy Fund program guidelines is maintained on both Avista's and PSCCU's websites; customers can refer to this list when considering this funding solution for their project.

Program Revisions

Avista will offer a loan rate of 7.5% for the OBR program in 2026. Avista recognizes the key to the program's success is Avista's trade allies, who will help promote and deliver the program. Multi-channel Avista marketing efforts also drive customers to the OBR program.

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Home Energy Audit Program

Program Description

The Home Energy Audit Program is designed to educate and drive customer engagement around conservation and promote Avista's energy efficiency programs and renewable-energy options. Energy savings are captured for direct-installation measures. Additional energy savings have been observed as a result of program participants implementing recommended efficiency measures. Some of these measures qualify for Avista rebates, and savings are captured through those programs.

Key components of this program include (a) providing customers with a home assessment from a knowledgeable and qualified home inspector with energy auditor credentials, (b) direct installation measures such as pipe wrap and LEDs, (c) marketing efforts to drive customers to the program, and (d) energy efficiency education that includes increasing awareness of behavioral impacts on energy use, as well as awareness of Avista's rebate programs, products, and services. The Avista website also communicates program requirements and highlights opportunities for customers. Customers participating in the program receive a comprehensive and detailed Home Energy Assessment Report that includes energy savings measures targeted to the specific home, as well as direct installation and leave-behind materials.

TABLE 16 – HOME ENERGY AUDIT PROGRAM METRICS

Projected Program Metrics	
Overall Therm Savings	
Incentives	$0
Non-Incentive Utility Costs	$90,479
Total Costs	$90,479

Program Implementation

Avista anticipates continued growth in demand for the Home Energy Audit Program in early 2026, driven by weather-related factors and expanded marketing efforts. In 2025, demand exceeded auditor capacity, a trend expected to persist into 2026. To enhance accessibility and reduce wait times, Avista has partnered with Homeboost to introduce a do-it-yourself audit option. This offering enables customers to complete an audit using a mailed kit and mobile application, generating results comparable to the traditional in-home audit. Both options will be available in 2026, providing greater flexibility for participants. Avista projects approximately 2,027 audits will be completed during the program year.

Program Eligibility

This program is applicable to residential customers who use Avista natural gas as their primary heating source in Washington and Idaho.

Program Measures and Incentives

With an audit, the customer receives a comprehensive and detailed Home Energy Assessment Report that includes energy savings measures targeted to the specific home, as well as direct installation and leave-behind materials.

Home Energy Reports (HERs) Program

Program Description

Avista launched its Home Energy Reports (HERs) program in the second quarter of 2025 to randomly selected residential dual-fuel and electric only customers. Leveraging a data-driven approach, the reports deliver personalized insights into household energy usage identify opportunities for savings. The reports align with the information available on Avista's website, which customers can access by logging into their MyAccount.

Unlike the company's customer-facing web portal, which allows customers to pull detailed information on demand, the HERs proactively push tailored content directly to customers. This multichannel strategy is designed to enhance customer engagement and promote energy savings through increased awareness and behavior change.

The HERs program began as an educational initiative but is expected to generate measurable energy savings after an initial evaluation and verification of savings assumptions by Avista's third-party evaluator. Avista plans to seek support from the Energy Efficiency Advisory Group before 2026 to transition the program from educational to claimable status. If consensus is reached, Avista intends to claim both electric and natural gas savings. Otherwise, the program will continue to operate as an educational offering. The program is currently scheduled to run through Q2 2027.

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Pilot Programs for 2026

Hybrid Heat Pump Study

Program Description

Avista is halfway through a two-year study evaluating the performance differences between cold climate heat pumps and standard heat pumps, both utilizing a natural gas furnace as backup heating. The study is scheduled to conclude Q4 2026, with final measurement and verification expected by March 2027. The primary objective is to assess the feasibility of incorporating these technologies into Avista's energy efficiency program offerings. In addition to technical performance, the study aims to better understand the economic, environmental, behavioral, and emotional factors that influence customer decision-making when considering major HVAC upgrades. Avista is also exploring customer perceptions of home comfort associated with each system type to support broader clean energy transition efforts.

Avista, working with third-party HVAC and EM&V contractors, installed 12 heat pump systems (six cold-climate and six with natural gas back-up furnaces), and performance monitoring equipment in homes with existing natural gas furnaces with central air-conditioning in fall of 2024. Monitoring equipment was also installed to collect performance data across two heating and cooling seasons.

In 2025, half of the homes in each group received weatherization upgrades to evaluate the impacts of heat-pump sizing. The pilot is supported by an $800,000 budget.

In addition to its own hybrid heat pump study, Avista is actively supporting and participating in a parallel research initiative by the Energy Trust of Oregon (ETO). Like Avista's study, the ETO study is still underway and focuses on evaluating hybrid electric and gas systems in low- to moderate-income households across Oregon.

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Low-Income Portfolio Overview

Program Description

Low-income programs are offered through a collaborative effort via partnerships between Avista and eight CAAs, including one Tribal Housing Authority, each of which holds a bi-annual contract with Avista. This funding offers significant flexibility for CAAs to deliver weatherization services tailored to the specific needs of each low-income client, using a combination of the most suitable measures for their home.

TABLE 17 – LOW-INCOME PROGRAM METRICS

Projected Program Metrics	
Overall Therm Savings	14,879
Incentives	$2,862,365
Non-Incentive Utility Costs	$65,221
Total Costs	**$2,927,585**

As trusted partners in Avista's low-income energy efficiency programs, Community Action Agencies (CAAs) play a vital role in identifying and qualifying eligible customers, often leveraging referrals from their bill assistance programs. They also coordinate multiple funding sources to deliver comprehensive solutions that address each household's unique energy needs. Together, Avista and its partner agencies share a common goal: to improve home energy efficiency, reduce energy bills, and alleviate energy burden for income-qualified customers.

Agencies serving Avista's Washington service territory receive an annual aggregate funding allocation of $4.25 million. This funding supports a comprehensive range of services, including energy efficiency upgrades, health and safety improvements, necessary home repairs, agency administration, and overall program support. It applies to both electric and natural gas weatherization programs across the state.

Avista does not require agencies to serve a specific number of homes based on heating fuel type. Instead, in alignment with 2024-2025 BCP Condition 13(a),[5] priority is given to households with high energy use, high energy burden, or other qualifying characteristics, such as seniors, individuals with disabilities, and Native American communities.

Although funding is allocated to individual agencies, Avista maintains flexibility to respond to evolving needs within the communities served, ensuring that resources are directed where they can have the greatest impact.

The budgets allocated to each agency represent annual funding levels, but they remain flexible and may be adjusted at Avista's discretion. In 2026, Avista will initiate new two-year agreements with participating agencies, aligning with the 2026–2027 biennium. This two-year budget structure allows agencies to access future-year funds in advance, enabling them to continue serving Avista customers without disruption as they transition into a new contract cycle.

[5] Docket UG-230898, Order 01, Attachment A.

Because many external funding sources operate on a fiscal year while Avista's utility funding is typically based on a calendar year, utility dollars are often deployed later in the year. This shift in funding availability supports a more consistent and continuous use of utility funds throughout the year, helping establish a regular cadence for utility billing and avoiding a concentration of expenses in the latter half of the calendar year.

Table 18 shows the 2026 budgeted annual funding allocation by agency and counties served. Please note that the contract amounts below include funding for both electric and natural gas weatherization programs.

TABLE 18 – LOW-INCOME PROGRAM FUNDING BY COMMUNITY ACTION AGENCY

Agency	County	Funding
Spokane Neighborhood Action Partners (SNAP)	Spokane	$ 3,000,000
Rural Resources Community Action	Ferry, Lincoln, Pend Oreille, Stevens	$250,000
Community Action Center	Whitman	$300,000
Opportunities Industrialization Council	Adams, Grant	$125,000
Spokane Indian Housing Authority	Stevens County	$ 85,000
Northwest Community Action Center	Klickitat, Skamania	$ 35,000
Benton Franklin County Community Action	Franklin	$ 35,000
Community Action Partnership	Asotin	$400,000
Set aside/TBD		$ 20,000
Total		**$ 4,250,000**

Agencies are authorized to allocate up to 30 percent of these funds for administrative cost reimbursement. Additionally, Avista permits up to 30 percent of the contract value to be used for health, safety, and essential home repairs. This discretionary funding provides agencies with the flexibility to address critical needs that prepare homes for energy efficiency upgrades and help ensure the long-term durability of installed measures.

Avista fully funds a substantial list of energy efficiency measures for natural gas. The list includes all measures on the Deemed Measure Priority List (DMPL) in the Washington State Department of Commerce's *Weatherization Manual, July 2022* edition, as well as additional utility-approved measures.

TABLE 19 – LOW-INCOME APPROVED MEASURES AND DIRECT CUSTOMER BENEFITS

	Projected Participation		Per-Unit Therm Savings	Funding	Direct Benefit to Customer
Air Infiltration – Natural Gas	40	Sq. Ft.	16.09	Fully Fund	$979.20
ENERGY STAR-Rated Doors	31	Units	12.32	Fully Fund	$704.40
ENERGY STAR-Rated Windows (u-factor .29)	70,913	Sq. Ft.	0.31	Fully Fund	$30.74
High-Efficiency Natural Gas Furnace	7	Units	73.55	Fully Fund	$3,612.67

Water Heater	3	Units	7.74	Fully Fund	$2,515.62
Attic Insulation	32,807	Sq. Ft.	0.04	Fully Fund	$1.87
Duct Insulation	3	Sq. Ft.	0.17	Fully Fund	$2.92
Floor Insulation	25,372	Sq. Ft.	0.05	Fully Fund	$2.67
Wall Insulation	13,508	Sq. Ft.	0.06	Fully Fund	$2.12
Duct Sealing	3	Units	20.17	Fully Fund	$793.95

In the 2026 program year, many common gas efficiency improvements will remain fully funded. Health, safety, and repair projects will also be eligible for full funding; however, no more than 30 percent of the annual contract may be allocated to these projects, and they must be paired with a qualifying efficiency measure

According to WAC 480-109-100(10)(a), measures identified through the deemed measure priority list in the Weatherization Manual are considered cost-effective. Agencies may use their health, safety, and repair allocation to cover the full cost of the rebated measure if other funding sources are not available. Agencies are encouraged to collaborate with Avista when identifying energy efficiency opportunities that are not on either the approved or the rebate list.

At the conclusion of the 2026 program year, and in alignment with BCP Condition 13a(i)(1), Avista will include in its annual and biennial reporting the impact of low-income conservation programs on reducing energy burden, along with the total number of program participants. The utility remains committed to developing and refining strategies that address barriers to participation for eligible customers, ensuring equitable access to energy efficiency services.

Low-Income Agency Workforce Development Initiative

Program Description

In late 2023 and early 2024, Avista conducted interviews with Community Action Agencies (CAAs) across its service territory and identified a key challenge: limited access to weatherization training. With most training opportunities located in Bellingham, Washington, agency staff faced significant travel burdens that hindered ongoing professional development.

To address this issue, Avista launched the Low-Income Agency Workforce Development Pilot in 2024, partnering with a nonprofit training provider to deliver multi-day sessions in eastern Washington. These trainings focused on core weatherization skills and principles, helping build local capacity and reduce barriers to participation.

In 2025, the pilot program continued with the same foundational trainings, while introducing two important enhancements. First, the Building Analyst Technician (BA-T) training was expanded to include a proctored field exam, allowing participants to earn certification locally and further professionalize their skillsets. Second, Avista added a customizable, one-on-one Program Manager coaching component focused on program policies and procedures. This new offer provided targeted support tailored to the unique operational needs of each CAA.

Throughout both years, all training courses emphasized Healthy Housing Principles and were designed in direct response to agency feedback, reinforcing Avista's commitment to collaborative, community-driven workforce development.

In 2026, Avista will continue its Workforce Development Training Series in collaboration with its Community Action Agency partners. At the beginning of the year, Avista will work closely with each agency to develop a tailored training plan that reflects their specific needs and priorities.

Avista will maintain key offerings introduced in 2025, including one-on-one Program Manager training and proctored BA-T exams. Agencies have shared that this series has been especially valuable given the limited availability of federal funding, and Avista is proud to support their teams through meaningful, accessible training opportunities.

Avista remains committed to investing in workforce development and strengthening its partnerships with Community Action Agencies to better serve communities. Avista looks forward to continuing its collaboration with the Building Performance Center and expanding the impact of this program in the year ahead.

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Commercial/Industrial Portfolio Overview

The commercial/industrial energy efficiency market is served through a combination of prescriptive and site-specific offerings, as well as through midstream and clean buildings support programs.

Prescriptive paths do not require pre-project contracting, thus lending themselves to streamlined administrative and marketing efforts, resulting in a straightforward customer experience. Incentives are established for these prescriptive programs following Avista's guidelines and standard operating procedures. Actual costs and savings are tracked, reported, and available to the third-party impact evaluator. Many, but not all, of the prescriptive measures use Regional Technical Forum's (RTF) Unit Energy Savings (UES).

When the prescriptive or midstream channels are not available, Avista offers commercial/industrial customers the opportunity to propose any energy efficiency project with documentable energy savings for technical review and potential incentive through the Site-Specific Program. Multifamily residential developments may also be treated through the Site-Specific Program when all or a large number of the residences and common areas are treated. The determination of incentive eligibility is based on projects' individual characteristics as they apply to the company's guidelines and standard operating procedures.

For the 2026 program year, Avista anticipates approximately 113,536 therms to be achieved through commercial/industrial programs, with an expected spend of $472,000. Table 20 summarizes 2026 commercial/industrial program estimates.

TABLE 20 – COMMERCIAL/INDUSTRIAL PROGRAM OVERVIEW

Commercial/Industrial Programs	Natural Gas Program Savings (Therms)	Expected Incentive Spend
Prescriptive Shell	29,859	$188,815.50
Site-Specific	29,915	$104,701.44
Commercial Midstream	50,942	$178,175.00
Building Operator Certification	2,820	$400.00
Total Commercial/Industrial	**113,536**	**$472,091.94**

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Commercial/Industrial Marketing

Avista has a robust commercial energy efficiency marketing strategy. Historically, the company's account executives were tasked with promoting programs and energy efficiency and were the primary source of outreach. However, since the COVID-19 pandemic, tactics have shifted to include a greater digital presence. A broad spectrum of paid tactics is now used in addition to promotion by the account executives, energy engineering, and community outreach teams. These paid tactics include digital, streaming, video sharing, and broadcast platforms. They also include emails, customer newsletters, direct mail, and print advertisements. Several commercial programs are also marketed by their third-party implementors. Commercial customers are targeted by industry type, size, geographic location, and other demographic factors.

In 2025, paid social media advertising was added to the company's commercial energy efficiency marketing strategy when Avista launched the "Power of Change" campaign aimed at increasing customer awareness of energy efficiency benefits. The campaign's initial goal was to help drive engagement and, ultimately, participation in the company's programs. Due to its initial success in 2025, the campaign will continue into 2026 with messaging centered around approachable and seasonally relevant energy saving tips, energy efficiency rebates, and programs. Demonstrating adjustments to changing customer preferences, the "Power of Change" campaign humanizes energy savings and includes paid social media ads, both static and motion.

FIGURE 5 – COMMERCIAL/INDUSTRIAL "POWER OF CHANGE" DIGITAL ADVERTISING CAMPAIGN EXAMPLES

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Commercial/Industrial Programs

Business Partner Program

Program Description

The Business Partner Program (BPP) is a strategic outreach initiative designed to engage Avista's small business customers by raising awareness of utility programs and services that can help them better manage their energy costs. Recognizing that small business owners and managers are often focused on day-to-day operations and may lack the time or resources to pursue energy improvements, the BPP offers a comprehensive, high-touch approach to support their needs.

Through personalized engagement, the BPP educates these traditionally hard-to-reach customers about their utility bills, available billing options, and financial incentives for implementing energy efficiency measures. The program also highlights valuable services such as electric vehicle resources, loan programs, and energy efficiency rebates, while connecting customers with trade allies who can assist with bid proposals and project implementation.

By building trust and providing tailored information, the BPP empowers small businesses to make informed decisions. The goal is to motivate these customers to take action on improvements that can lead to long-term energy savings and sustainability, resulting in lower monthly energy bills.

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Site-Specific Program

Program Description

Avista's Site-Specific Program provides calculated incentives to support the installation of qualifying energy efficiency equipment at commercial/industrial sites. These projects typically involve a higher degree of complexity than the traditional prescriptive or midstream offerings and require custom engineering analysis to determine energy savings and appropriate cost-effective incentive levels. Examples include process improvements, upgrades to specialized manufacturing equipment, advanced lighting systems with integrated controls, and other measures tailored to the customer's operational needs.

Avista's Site-Specific Program is a foundational element of its commercial/industrial offerings and has consistently ranked among the most cost-effective components of the overall energy efficiency portfolio. The program provides customers with technical assistance and customized incentives in accordance with Avista's Schedule 190, supporting energy efficiency projects that deliver measurable savings within the program criteria. Designed for flexibility, the Site-Specific Program accommodates energy efficiency projects that fall outside prescriptive or midstream pathways. These projects typically involve custom engineering analysis and are tailored to the unique operational needs of each customer. Common project types include custom lighting systems, HVAC upgrades, building envelope improvements, and industrial process load reductions.

TABLE 21 – COMMERCIAL/INDUSTRIAL SITE-SPECIFIC PROGRAM METRICS

Projected Program Metrics	
Overall Therm Savings	29,915
Incentives	$104,701
Non-Incentive Utility Costs	$108,236
Total Costs	**$212,937**

Program Implementation

This program offers incentives for qualifying energy-saving measures, up to the incremental cost of the efficiency upgrade, provided the measure's simple payback period is less than its expected useful life. To maximize cost-effectiveness, Avista adjusts the percentage of incremental cost paid, aiming to achieve the greatest energy savings at the lowest cost. Unless a specific business case is presented, incentives are capped at 70 percent of the incremental cost, and measures must demonstrate a simple payback of 15 years or less, based on energy cost savings. Due to the scale and complexity of site-specific projects, savings can be difficult to forecast. Long sales cycles and broader economic conditions may influence customer willingness to invest in energy efficiency. Additionally, increased complexity in eligibility requirements, higher participation costs beyond capital investment, and expenses related to post-installation measurement and verification are actively managed to maintain customer engagement and program effectiveness.

Key components of the program include:

- Direct financial incentives to encourage customer interest
- Targeted marketing efforts

- Dedicated account executives who provide guidance and support throughout the project lifecycle
- Collaboration with trade allies to ensure technical capacity and responsiveness to customer demand

Program requirements, incentive details, and application forms are communicated through the Avista website and the trade ally network, ensuring transparency and accessibility for all eligible participants.

Program Eligibility

The program is available to all commercial and Industrial natural gas customers and has historically contributed the largest share of verified savings to Avista's energy efficiency portfolio. Its adaptive structure enables Avista to respond effectively to diverse customer opportunities while maintaining alignment with regulatory criteria and cost-effectiveness goals.

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Pay for Performance Program

Program Description

The Commercial Pay for Performance Program is an incentive-based program that pays customers for verified energy savings measured directly at the meter. These savings may result from a variety of projects, including building retrofits, equipment upgrades, behavioral changes, operational improvements, maintenance practices, and retro-commissioning efforts. While savings are submitted through the Site-Specific Program, the Pay for Performance differs from the traditional Site-Specific mechanism, offering a distinct approach to compensating customers based on actual performance outcomes.

Program Implementation

Avista's commercial Pay for Performance Program provides annual incentives based on total verified electricity and natural gas savings, rather than separate incentives for individual energy efficiency measures. Eligible commercial customers who undertake whole-building energy retrofits receive a fixed incentive rate for measurable savings achieved over the course of a three-year period. Incentive payments are issued annually at the end of each year, contingent on verified savings, at rates of $0.08 per kWh and $1.25 per therm.

Participation involves submitting a completed rebate application. Avista then establishes a usage baseline, reviews and approves the proposed projects, and issues an Agreement. Following implementation, energy savings are measured against the established baseline, and incentive payments are made annually for up to three years, provided savings targets are met.

Program Eligibility

This program is open to all Avista commercial customers who own or operate buildings with conditioned heated or cooled space and demonstrate consistent, measurable energy usage. Each participating building must have stable energy consumption over the prior 12 months and be individually metered – preferably with interval meters to support accurate measurement and verification. To qualify, planned improvements must yield at least a 10 percent reduction in the building’s baseline electricity or natural gas consumption. Industrial and manufacturing process loads are excluded from this program but may be eligible under Avista's Site-Specific program.

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Washington State Clean Buildings Law Support Programs

Program Description

Washington State House Bill 1257 was codified into law late in 2019 and expanded in 2024. This law currently requires most existing commercial buildings over 20,000 square feet to benchmark energy use, and complete both energy management and operations and maintenance plans. Larger buildings must also either seek exemption, meet their performance standard or take additional steps that may include an audit and project work.

Avista is working cooperatively with the Department of Commerce to execute the new law and to support building owners as they navigate the compliance process. Avista has identified the four key areas of support shown in Table 20.

TABLE 22 – COMMERCIAL/INDUSTRIAL WASHINGTON STATE CLEAN BUILDINGS ACT SUPPORT EFFORTS

Service	Start Date	Description
Energy Efficiency Engineering	Late 1970s	Various customer support to identify and incentivize efficiency
ENERGY STAR Portfolio Manager	2009	Monthly energy use data pushes
Clean Buildings Accelerator Program	2022	Cohort-based, comprehensive compliance assistance
Pay for Performance Early Adopter Incentive	2025	Avista pays customer and then gets credit against Public Utility Tax

Avista has offered energy efficiency engineering support for several decades, assisting customers in identifying and incentivizing energy efficient processes and equipment, and working to quantify savings. The engineering team assists commercial and industrial customers within this space.

Since 2009, Avista has supported customers by uploading energy use data to Energy Star Portfolio Manager. The Clean Buildings Law requirement to utilize this resource in benchmarking and reporting has significantly increased the number of customers who utilize Energy Star Portfolio Manager to track energy use at their facilities. The system provides visual tools for assessing energy use at a facility wholistically, over time.

Avista has continued to offer a Clean Buildings Accelerator Program to guide customers through the process of compliance. This strategic energy management program educates customers about the law and provides tools including benchmarking assistance, document preparation and controls reviews. Using a cohort-based model allows customers to learn from the facilitators and from their peers. Avista will continue to offer this program based on customer interest. Avista will continue offering the program based on customer interest and the activities and guidance of the Department of Commerce.

Avista will provide early adopter incentive funds to customers under the guidance of the Department of Commerce. The Department of Commerce is responsible for assuring compliance and determining early adopter incentive fund allocations. Avista will administer the payment process and be made whole through Public Utility Tax offsets that will correspond with approved

incentives. The first incentives came through in late 2025 and are expected to continue until state funding caps are reached.

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Nonresidential Prescriptive Insulation Program

Program Description

The Commercial Prescriptive Shell Program provides incentives to customers who improve the envelope of their existing buildings by adding insulation, which may make a business more energy-efficient and comfortable.

TABLE 23 – COMMERCIAL/INDUSTRIAL PRESCRIPTIVE INSULATION PROGRAM METRICS

Projected Program Metrics	
Overall Therm Savings	29,859
Incentives	$188,816
Non-Incentive Utility Costs	$111,577
Total Costs	$300,392

Program Implementation

Under the commercial insulation program, incentives are issued to eligible customers following the installation of qualifying insulation measures by a licensed contractor. To participate, commercial customers must demonstrate an annual heating footprint using fuel supplied by Avista. After installation, customers are required to submit a completed rebate form, itemized invoices, and an insulation certificate. Once the project is reviewed and approved, Avista will issue an incentive check either directly to the customer or to a designated recipient. Rebates are capped at the total amount listed on the customer's invoice and are processed through iEnergy using the current-year calculator. Program awareness and participation are supported through outreach by trade allies, Avista account executives, targeted marketing efforts, and the Avista website, which also serves as a central hub for program requirements, incentive details, and downloadable forms.

TABLE 24 – COMMERCIAL/INDUSTRIAL PRESCRIPTIVE INSULATION PROGRAM MEASURES AND INCENTIVES

	Projected Participation		Per-Unit Therm Savings	Incentive
Less than R11 Attic Insulation (E/G) to R45+ Attic Insulation	67,205	Sq. Ft.	0.13	$1.25
Less than R11 Roof Insulation (E/G) to R30+ Roof Insulation	-	Sq. Ft.	0.12	$1.00
Less than R4 Wall Insulation (E/G) to R11-R18 Wall Insulation	-	Sq. Ft.	0.24	$1.00
Less than R4 Wall Insulation (E/G) to R19+ Wall Insulation	58,672	Sq. Ft.	0.36	$1.25

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Commercial Midstream Program

Program Description

Common barriers to participation in traditional downstream rebate programs include: a lack of customer awareness of rebate programs; language and technology barriers; and distributors' tendency to stock low-cost, low efficiency units because of the high cost of energy-efficient equipment. Prior to the implementation of Avista's Midstream Program, customers who requested high-efficiency equipment often had to wait weeks for the equipment. By focusing efforts on distributors directly, Avista's Midstream Program leverages distributors' recognized influence over contractors and specific equipment sales while mitigating many participation barriers. Distributors work with contractors to submit claims for Avista customers, and claims are then paid promptly. This approach benefits both the customer as well as the company. Customers have improved equitable access, as they may receive an incentive without having to complete any paperwork or have background knowledge of the rebate program, and Avista gains additional savings without the burden of customers having to submit paperwork to the utility.

The Food Service Program is a national model that is familiar to many large commercial chains yet also has the benefit of partnering with local distributors to reach non-chain food service providers.

TABLE 25 – MIDSTREAM COMMERCIAL PROGRAM METRICS

Projected Program Metrics	
Overall Therm Savings	50,942
Incentives	$178,175
Non-Incentive Utility Costs	$157,868
Total Costs	**$336,043**

Program Eligibility

Commercial customers are eligible for the program if they have Avista natural gas service and install qualifying equipment through a participating contractor. Avista's implementation partner, Energy Solutions, engages in outreach and education for distributors, who utilize a software system to enter and track claims. Avista has provided basic data to Energy Solutions to enable verification of customer eligibility primarily at the time of claim submittal. Equipment utilized for industrial processes is not part of the Midstream Program.

Program Revisions

The Midstream Program for HVAC, water heating, and commercial food service will continue in 2026, with Avista considering the addition of radiant heaters and condensing unit heaters to natural gas offerings. Within the food service area of the program, changes in baseline efficiencies for commercial oven measures will require adjustments to both the savings and types of ovens incentivized through the program. The changes will align program offerings with Washington State's House Bill 1619. Avista will continue to evaluate all measures offered through the midstream program and will revise program offerings or incentives as necessary.

Building Operator Certification Program

Program Description

Avista offers customers a discount on Building Operator Certification (BOC) training. BOC is a nationally recognized program for building engineers and maintenance personnel to learn how to improve comfort and efficiency within the buildings they operate.

Program Implementation

The BOC training program and discount are offered in partnership with Building Performance, the regional program administrator. In person and virtual trainings are offered throughout the year in both in-person and virtual settings. Building Performance handles logistics, including hiring instructors and administering registration. The program is advertised by both Building Performance and Avista. Avista staff participate in courses by sharing energy efficiency opportunities with participants.

Program Eligibility

BOC training is open to building engineers and maintenance staff who oversee one or more commercial buildings within the Avista service territory.

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Commercial/Industrial Pilot Programs

Roof Top Unit (RTU) Controls Pilot Program

Program Description

This pilot initiative seeks to address a commonly overlooked gap in space heating and cooling controls, particularly among small- to medium-sized businesses using rooftop units (RTUs) without an accompanying energy management system (EMS), also known as BAS or BMS. These businesses typically rely on standalone thermostat controls, which may be manual or programmable.

The proposed RTU controls solution includes a controller unit, Wi-Fi-enabled thermostats, a software subscription, and a customer-facing dashboard. To ensure reliable connectivity, Avista will provide a dedicated Wi-Fi access point and cellular service for select pilot sites, minimizing dependence on customer-provided internet.

The RTU controls software operates on a "control you don't notice" algorithm, which is projected to deliver up to 15% energy savings compared to conventional RTU thermostat controls. Additionally, the system offers building operators enhanced visibility into RTU performance trends, anomalies, and thermostat overrides—enabling improved operational efficiency, asset performance, and control over indoor climate conditions.

Given the emerging nature of this technology, the pilot will follow a phased approach over two years. Phase one will involve a single test site in a controlled environment. Should the initial results demonstrate measurable energy savings, phase two will expand to multiple customer sites to validate consistency and scalability. If proven cost-effective, the technology may be integrated into Avista's broader energy efficiency program offerings.

Contracting is currently underway, with equipment installation targeted ahead of the 2025–2026 heating season. One full heating and cooling season will be evaluated before determining progression to phase two. Any updates to scope and budget will be provided upon that decision.

The budget for phase one is set at $10,000.

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Regional Market Transformation

Market transformation consists of defined interventions occurring for a finite period of time, utilizing strategically selected approaches to influence the energy market (customer, trade allies, manufacturers or combinations thereof) followed by an exit strategy. Successful market transformations permanently change the trajectory of markets in favor of more cost-effective energy efficiency choices, well beyond the termination of the active intervention.

Electric utilities within the Northwest came together in 1997 to establish and fund a cooperative effort toward sustaining market transformation on a regional basis, with sufficient scale and diversity to deliver a portfolio capable of providing a cost-effective electric-efficiency resource.

That organization, NEEA, is currently in the second year of its 2025-29 funding cycle. Avista has been an active participant and funder of this collaborative effort since its inception. NEEA's successful residential lighting efforts – and many other ventures – are difficult to replicate. Nevertheless, there is little doubt that there are cost-effective opportunities that can only be achieved, or that are best achieved, through a regionally cooperative effort.

For 2026, Avista's Washington portion of the NEEA natural gas budget is expected to be approximately $551,000. NEEA funding requirements are incorporated within the budget but are supplementary expenditures outside of the scope of the current year's local portfolio. The NEEA portfolio has not been incorporated within either the acquisition projection or the cost-effectiveness of the 2026 local portfolio developed within this *ACP*. NEEA provided Avista with a 2026 savings forecast of 6,600 therms[6] derived from an estimated 900 therms attributed to efficient rooftop units, 3,100 therms attributed to commercial kitchen equipment, and 2,600 therms attributed to commercial new construction.

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[6] If NEEA fails to achieve this target, Avista will be invoiced only for actual savings achieved.

Avista-Specific Methodologies and Analytical Practices

Over time, Avista has evolved in its approach to calculate the various metrics applied within the planning effort to meet the needs of its portfolio and jurisdictional regulation. Care has been taken to ensure that these approaches are consistent with the intent of the Northwest Power and Conservation Council's (NWPCC) methodologies for the analysis of energy efficiency. Avista completes an *Annual Conservation Report* (*ACR*) in the spring of each year, based on a retrospective review of actual results from the prior year. This process includes the calculation of each of the four basic standard practice tests (summarized in Appendix B – Summarization of Cost Effectiveness Methodology). Because the total resource cost (TRC) test and utility cost test (UCT) are the basis for optimizing the portfolio, the explanation of Avista's methodologies, for planning purposes, focus on these two tests.

The calculation of portfolio cost-effectiveness excludes costs that are unrelated to the local energy efficiency portfolio in that particular year. Those excluded costs, termed "supplemental" costs in Avista's calculations, include:

- The funding associated with regional programs (NEEA)
- The cost to perform CPAs
- Costs related to EM&V

Individual measures are aggregated into programs composed of similar measures. At the program level, non-incentive portfolio costs are allocated based on direct assignment to the extent possible, and costs are allocated based on a program's share of portfolio-avoided cost-value acquisition when direct assignment is not possible. The result is a program-level TRC test and UCT cost-effectiveness analysis that incorporates these allocated costs.

Since the costs and benefits associated with the adoption of a measure may accrue over time, it is necessary to establish a discount rate. Future costs and benefits are discounted to the present value and compared for cost-effectiveness purposes. Generally, energy and non-energy benefits (NEBs) accrue over the measure life and costs are incurred up front.

The calculation of the TRC test benefits, to be consistent with NWPCC methodologies, includes an assessment of non-energy impacts (both benefits and costs), or NEIs, accruing to the customer. These impacts most frequently include maintenance cost, water, and sewer savings, and – in the case of the low-income program – inclusion of the cost of providing base-case end-use equipment as part of a fully funded measure as well as the value of health and human safety funding (on a dollar-for-dollar basis). Starting in 2024, the modified TRC test will become the primary cost-effectiveness test for natural gas programs in Avista's Washington portfolio.

For the purposes of calculating TRC cost-effectiveness, any funding obtained from outside of Avista's customer population (generally through tax credits or state- or federally-administered programs) is not considered to be a TRC. These costs are regarded as imported funds and, from the perspective of Avista's customer population appropriate to the TRC test, are not costs borne by Avista customers. Co-funding of efficiency measures from state and federal programs for low-

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income programs applicable to a home that is also being treated with Avista funding is not incorporated within the program cost. This is consistent with permitting tax credits to offset customer incremental cost as described within the California Standard Practice Manual description of the TRC test.

Avista's energy efficiency portfolios are built from the bottom up, starting with the identification of prospective efficiency measures based on the most recent CPA and augmented with other specific opportunities as necessary. Since potential assessments are only performed every two years and the inputs are locked many months in advance of filing the *IRP* itself, there is considerable time for movement in these inputs and the development of other opportunities.

Evaluation, Measurement, and Verification

Within its energy efficiency portfolio, Avista incorporates EM&V activities to validate and report verified energy savings related to its energy efficiency measures and programs. EM&V protocols serve to represent the comprehensive analyses and assessments necessary to supply useful information to management and non-company parties that adequately identify the acquisition of energy efficiencies attributable to Avista's conservation programs, as well as potential process improvements necessary to improve operations both internally and for customers. EM&V includes impact evaluation and process evaluation. Taken as a whole, EM&V is analogous with other industry standard terms such as portfolio evaluation and program evaluation.

To support planning and reporting requirements, several guiding EM&V documents are maintained and published. This includes the EM&V framework, an annual EM&V plan, and EM&V contributions within other energy efficiency and Avista corporate publications. Program-specific EM&V plans are created, as necessary, to inform and benefit the energy efficiency activities. These documents are reviewed and updated regularly, reflecting improvements to processes and protocols.

EM&V efforts will also be applied to evaluating emerging technologies and applications being considered for inclusion in the company's energy efficiency portfolio. In the electric portfolio, Avista may spend up to 10 percent of its conservation budget on programs whose savings impact have not yet been measured if the overall portfolio of conservation passes the applicable cost-effectiveness test. These programs may include educational, behavior change, and other types of investigatory or pilot projects. Specific activities can include product and application document reviews, development of formal evaluation plans, field studies, data collection, statistical analysis, and solicitation of user feedback.

Because of the benefits to customers and to Avista, Avista actively participates in regional energy efficiency activities. The company has a voting role on the Regional Technical Forum (RTF), a critical advisory committee to the NWPCC. The RTF oversees standardization of energy savings and measurement processes for electric applications in the Pacific Northwest. This knowledge base provides energy efficiency data, metrics, non-energy benefits, and references suitable for inclusion in Avista's *Technical Reference Manual* (*TRM*) relating to acquisition planning and reporting. In addition, the company engages with other northwest utilities and NEEA in various pilot projects or subcommittee evaluations. Portions of the energy efficiency savings acquired

through NEEA's programs within the region are attributable to Avista's portfolio.

Avista's commitment to the critical role of EM&V is supported by the company's continued focus on the development of best practices for its processes and reporting. The International Performance Measurement and Verification Protocol serves as the basis of measurement and verification plans developed and applied to Avista programs. In addition, the compilation of EM&V protocols released under the U.S. Department of Energy's Uniform Methods Project will be considered and applied where applicable to support the consistency and credibility of reported results. Verification of a statistically significant number of projects is often extrapolated to perform impact analysis on complete programs, within reasonable standards of rigor and degree of conservatism. This process serves to ensure that Avista will manage its energy efficiency portfolio in a manner consistent with both utility and public interests.

The EM&V vendor for evaluation of program year 2026 has not been determined as of this writing. Avista will be issuing a Request for Proposal (RFP) in Q4, 2025 to select the independent third-party evaluator for the 2026-2027 biennium. Once the contract has been awarded, the EEAG will be informed of the selection.

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Cost-Effectiveness Metrics, Methodology, and Objectives

Avista's planning approach aims to maximize cost-effective conservation acquired by analyzing the cost-effectiveness of each segment (residential, low-income, and commercial/industrial), as well as the ways in which measures within programs contribute to the cost-effectiveness of that segment and eventually the individual portfolios. Avista is appreciative of the valuable work the RTF has done to quantify NEIs for the region and where values have not been identified, Avista will look to the RTF to supplement values. The company views these efforts as an iterative process and expects that more discovery will take place in the future.

As with other utilities in the region, Avista actively participates in RTF meetings and provides measure-level data back to the RTF to further refine their estimates. Avista acknowledges that it has the responsibility to use the best available data no matter the source; at times, that comes from internal estimates. Avista will continue to work with members from the RTF to identify measures or technologies that may have gaps in data and provide information where needed. These efforts further refine the RTF measures and form UES values that are more specific to Avista's service territory.

The company maintains an active involvement in the regional energy efficiency community and is committed to acknowledging and addressing new energy efficiency developments as they are presented. Avista will continue to work with interested parties as conversations around cost-effectiveness arise.

Schedule 190 – Energy Efficiency Programs

Avista's natural gas energy efficiency operations are governed by Schedule 190 tariff

requirements. This tariff details the eligibility and allowable funding that the company provides for energy efficiency measures. Though the tariff allows for considerable flexibility in how programs are designed and delivered – and accommodates a degree of flexibility around incentives for prescriptive programs subject to reasonable justification – there remains the occasional need to modify the tariff to meet current and future market conditions and opportunities.

For 2026, Avista has not proposed any changes to the language in this schedule.

Schedule 191 – Demand Side Management Rate Adjustment

Avista evaluates the need for revisions to its natural gas tariff Schedule 191 – Demand Side Management Rate Adjustment tariff on an annual basis with revisions occurring each June 1, if needed.

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Conclusion and Contact Information

This 2026 *ACP* represents program efforts by Avista to achieve its expected eligible acquisition savings for the first year of the 2026-27 biennium. For additional supporting information, please see the following appendices:

- Appendix A – 2024-2025 Energy Efficiency Evaluation, Measurement, and Verification Work Plan
- Appendix B – Cost Effectiveness Methodology
- Appendix C – Natural Gas Program Summary

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Glossary of Terms

Active Energy Management (AEM): The implementation of continuous building monitoring to improve building performance in real time.

adder: An additional amount, typically a percentage, added to a quantification of conservation savings, risks, and/or benefits.

adjusted market baseline: Based on the RTF guidelines, represents a measurement between the energy efficient measure and the standard efficiency case that is characterized by current market practice or the minimum requirements of applicable codes or standards, whichever is more efficient. When applying an adjusted market baseline, no net-to-gross factor would be applied since the resultant unit energy savings amount would represent the applicable savings to the grid.

Advanced Metering Infrastructure (AMI): Systems that measure, collect and analyze energy usage, from advanced devices such as electricity meters, natural gas meters and/or water meters through various communication media on request or on a predetermined schedule.

advisory group: Avista's group of external interested persons and efficiency program experts who advise on the company's planned energy efficiency activities, as well as activities under consideration.

Air-Conditioning, Heating, and Refrigeration Institute (AHRI): The trade association representing manufacturers of HVAC and water heating equipment within the global industry.

aMW: The amount of energy that would be generated by one megawatt of capacity operating continuously for one full year. Equals 8,760 MWhs of energy.

American National Standards Institute (ANSI): A source for information on national, regional, and international standards and conformity assessment issues.

American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE): Devoted to the advancement of indoor-environment-control technology in the heating, ventilation, and air conditioning (HVAC) industry, ASHRAE's mission is "to advance technology to serve humanity and promote a sustainable world."

Annual Conservation Plan (ACP): An Avista-prepared resource document that outlines Avista's conservation offerings, its approach to energy efficiency, and details on verifying and reporting savings.

Annual Conservation Report (ACR): An Avista-prepared resource document that summarizes its annual energy efficiency achievements.

Annual Fuel Utilization Efficiency (AFUE): A measurement on how efficient an appliance is in converting the energy in its fuel to heat over the course of a typical year.

avoided cost: An investment guideline, describing the value of conservation and generation resource investments in terms of the cost of more expensive resources that would otherwise have to be acquired.

baseline: Conditions, including energy consumption, which would have occurred without implementation of the subject energy efficiency activity. Baseline conditions are sometimes referred to as "business-as-

usual" conditions.

baseline efficiency: The energy use of the baseline equipment, process, or practice that is being replaced by a more efficient approach to providing the same energy service. It is used to determine the energy savings obtained by the more efficient approach.

baseline period: The period of time selected as representative of facility operations before the energy efficiency activity takes place.

Biennial Conservation Plan (BCP): An Avista-prepared resource document that outlines Avista's conservation offerings, its approach to energy efficiency, and details on verifying and reporting savings for a two-year period.

Building Owners & Managers Association (BOMA): An international federation of U.S. local associations and global affiliates that represents the owners, managers, service providers, and other property professionals of all commercial building types.

Business Partner Program (BPP): An outreach effort designed to raise awareness of utility programs and services that can assist small business customers in managing their energy bills.

British Thermal Unit (Btu): The amount of heat energy necessary to raise the temperature of one pound of water one degree Fahrenheit (3,413 Btu are equal to one kilowatt-hour).

busbar: The physical electrical connection between the generator and transmission system. Load on the system is typically measured at busbar.

capacity: The maximum power that a machine or system can produce or carry under specified conditions. The capacity of generating equipment is generally expressed in kilowatts or megawatts. In terms of transmission lines, capacity refers to the maximum load a line is capable of carrying under specified conditions.

Clean Energy Implementation Plan (CEIP): Introduced within a subsection of the Clean Energy Transformation Act, a CEIP must describe the utility's plan for making progress toward meeting the clean energy transformation standards while it continues to pursue all cost-effective, reliable, and feasible conservation and efficiency resources.

Clean Energy Transformation Act (CETA): Signed into law in 2019, the Clean Energy Transformation Act requires electric utilities to supply their Washington customers with 100 percent renewable or non-emitting electricity with no provision for offsets.

Community Action Partnership (CAP): General term for Community Action Programs, Community Action Agencies, and Community Action Centers that provide services such as low-income weatherization through federal and state agencies and other funding sources (e.g. utility constitutions).

Community Energy Efficiency Program (CEEP): Created by the Washington State Legislature in 2009, CEEP encourages homeowners and small businesses across the state to make energy efficiency retrofits and upgrades.

conservation: According to the Northwest Power Act, any reduction in electric power consumption as a result of increases in the efficiency of energy use, production or distribution.

Conservation Potential Assessment (CPA): An analysis of the amount of conservation available in a defined area. Provides savings amounts associated with energy efficiency measures to input into the company's Integrated Resource Planning (IRP) process.

cooling degree days: A measure of how hot the temperature was on a given day or during a period of days. Cooling degree days per day are calculated by subtracting from a fixed temperature the average temperature over the day. Historically, the fixed temperature has been set at 65 degrees Fahrenheit, the outdoor temperature above which cooling is typically needed. As an example, a day with a mean temperature of 80°F has 15 cooling degree days. If the next day has a mean temperature of 83°F, it has 18 cooling degree days.

cost-effective: According to the Northwest Power Act, a cost-effective measure or resource must be forecast to be reliable and available within the time it is needed, and to meet or reduce electrical power demand of consumers at an estimated incremental system cost no greater than that of the least-costly, similarly reliable and available alternative or combination of alternatives.

Customer Benefit Indicator (CBI): An attribute, either quantitative or qualitative, of a resource or related distribution investment associated with customer benefits.

customer/customer classes: A category, or categories, of customers defined by provisions found in tariff(s) published by the entity providing service, approved by the PUC. Examples of customer classes are residential, commercial, industrial, agricultural, local distribution company, core and non-core.

decoupling: In conventional utility regulation, utilities make money based on how much energy they sell. A utility's rates are set based largely on an estimation of costs of providing service over a certain set time period, with an allowed profit margin, divided by a forecasted amount of unit sales over the same time period. If the actual sales turn out to be as forecasted, the utility will recover all of its fixed costs and its set profit margin. If the actual sales exceed the forecast, the utility will earn extra profit.

deemed savings: Primarily referenced as unit energy savings, an estimate of an energy savings for a single unit of an installed energy efficiency measure that (a) has been developed from data sources and analytical methods that are widely considered acceptable for the measure and purpose, and (b) is applicable to the situation being evaluated.

demand: The load that is drawn from the source of supply over a specified interval of time (in kilowatts, kilovolt-amperes, or amperes). Also, the rate at which natural gas is delivered to or by a system, part of a system or piece of equipment, expressed in cubic feet, therms, Btu or multiples thereof, for a designated period of time such as during a 24-hour day.

Demand Response (DR): A voluntary and temporary change in consumers' use of electricity when the power system is stressed.

Demand Side Management (DSM): The process of helping customers use energy more efficiently. Used interchangeably with Energy Efficiency and Conservation, although conservation technically means using less while DSM and energy efficiency means using less while still having the same useful output of function.

Direct Load Control (DLC): The means by which a utility can signal a customer's appliance to stop operations in order to reduce the demand for electricity. Such rationing generally involves a financial incentive for the affected customer.

discount rate: The rate used in a formula to convert future costs or benefits to their present value.

distribution: The transfer of electricity from the transmission network to the consumer. Distribution systems generally include the equipment to transfer power from the substation to the customer's meter.

Distributed Generation (DG): An approach that employs a variety of small-scale technologies to both produce and store electricity close to the end users of power.

Effective Useful Life (EUL): Sometimes referred to as measure life and often used to describe persistence. EUL is an estimate of the duration of savings from a measure.

end-use: A term referring to the final use of energy; it often refers to the specific energy services (for example, space heating), or the type of energy-consuming equipment (for example, motors).

energy assistance advisory group: An ongoing energy assistance program advisory group to monitor and explore ways to improve Avista's Low-Income Rate Assistance Program (LIRAP).

Energy Efficiency Advisory Group (EEAG): A group which advises investor-owned utilities on the development of integrated resource plans and conservation programs.

energy efficiency measure: Refers to either an individual project conducted or technology implemented to reduce the consumption of energy at the same or an improved level of service. Often referred to as simply a "measure."

Energy Independence Act (EIA): Requires electric utilities serving at least 25,000 retail customers to use renewable energy and energy conservation.

Energy Use Intensity (EUI): A metric – energy per square foot per year – that expresses a building's energy use as a function of its size or other characteristics.

evaluation: The performance of a wide range of assessment studies and activities aimed at determining the effects of a program (and/or portfolio) and understanding or documenting program performance, program or program-related markets and market operations, program-induced changes in energy efficiency markets, levels of demand or energy savings, or program cost-effectiveness. Market assessment, monitoring and evaluation, and verification are aspects of evaluation.

Evaluation, Measurement, and Verification (EM&V): Catch-all term for evaluation activities at the measure, project, program and/or portfolio level; can include impact, process, market and/or planning activities. EM&V is distinguishable from Measurement and Verification (M&V) defined later.

ex-ante savings estimate: Forecasted savings value used for program planning or savings estimates for a measure; Latin for "beforehand."

ex-post evaluated estimated savings: Savings estimates reported by an independent, third-party evaluator after the energy impact evaluation has been completed. If only the term "ex-post savings" is used, it will be assumed that it is referring to the ex-post evaluation estimate, the most common usage; from Latin for "from something done afterward."

external evaluators (AKA third party evaluators): Independent professional efficiency person or entity

retained to conduct EM&V activities. Consideration will be made for those who are Certified Measurement and Verification Professionals (CMVPs) through the Association of Energy Engineers (AEE) and the Efficiency Evaluation Organization (EVO).

free rider: A common term in the energy efficiency industry meaning a program participant who would have installed the efficient product or changed a behavior regardless of any program incentive or education received. Free riders can be total, partial, or deferred.

generation: The act or process of producing electricity from other forms of energy.

Green Motors Practices Group (GMPG): A nonprofit corporation governed by electric motor service center executives and advisors whose goal is the continual improvement of the electric motor repair industry.

gross savings: The change in energy consumption and/or demand that results from energy efficiency programs, codes and standards, and naturally occurring adoption which have a long-lasting savings effect, regardless of why they were enacted.

heating degree days: A measure of the amount of heat needed in a building over a fixed period of time, usually a year. Heating degree days per day are calculated by subtracting from a fixed temperature the average temperature over the day. Historically, the fixed temperature has been set at 65 degrees Fahrenheit, the outdoor temperature below which heat was typically needed. As an example, a day with an average temperature of 45 degrees Fahrenheit would have 20 heating degree days, assuming a base of 65 degrees Fahrenheit.

Heating Seasonal Performance Factor (HSPF): Defined as the ratio of heat output over the heating season to the amount of electricity used in air source or ductless heat pump equipment.

Heating, Ventilation, and Air Conditioning (HVAC): Sometimes referred to as climate control, the HVAC is particularly important in the design of medium to large industrial and office buildings where humidity and temperature must all be closely regulated whilst maintaining safe and healthy conditions within.

highly impacted community: designated by the Washington Department of Health, any census tract with an overall ranking of 9 or 10 on the Environmental Health Disparities map, or any census tract with tribal lands.

impact evaluation: Determination of the program-specific, directly or indirectly induced changes (e.g., energy and/or demand usage) attributable to an energy efficiency program.

implementer: Avista employees whose responsibilities are directly related to operations and administration of energy efficiency programs and activities, and who may have energy savings targets as part of their employee goals or incentives.

***incremental cost*:** The difference between the cost of baseline equipment or services and the cost of alternative energy-efficient equipment or services.

Integrated Resource Plan (IRP): An IRP is a comprehensive evaluation of future electric or natural gas resource plans. The IRP must evaluate the full range of resource alternatives to provide adequate and reliable service to a customer's needs at the lowest possible risk-adjusted system cost. These plans are filed with the state public utility commissions on a periodic basis.

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Integrated Resource Plan Technical Advisory Committee (IRP TAC): Advisory committee for the IRP process that includes internal and external participants.

International Performance Measurement and Verification Protocol (IPMVP): A guidance document with a framework and definitions describing the four M&V approaches; a product of the Energy Valuation Organization (www.evo-world.org).

Investor-Owned Utility (IOU): A utility that is organized under state law as a corporation to provide electric power service and earn a profit for its stockholders.

Kilowatt (kW): The electrical unit of power that equals 1,000 watts.

Kilowatt-hour (kWh): A basic unit of electrical energy that equals one kilowatt of power applied for one hour.

Kilo British Thermal Unit (kBtu): Btu, which stands for British thermal units, measures heat energy. Each Btu equals the amount of heat needed to raise one pound of water one degree Fahrenheit; the prefix kilo- stands for 1,000, which means that a kBtu equals 1,000 Btu.

Levelized Cost of Energy (LCOE): The present value of a resource's cost (including capital, financing, and operating costs) converted into a stream of equal annual payments. This stream of payments can be converted to a unit cost of energy by dividing them by the number of kilowatt-hours produced or saved by the resource in associated years. By levelizing costs, resources with different lifetimes and generating capabilities can be compared.

line losses: The amount of electricity lost or assumed lost when transmitting over transmission or distribution lines. This is the difference between the quantity of electricity generated and the quantity delivered at some point in the electric system.

Low-Income Home Energy Assistance Program (LIHEAP): Federal energy assistance program, available to qualifying households based on income, usually distributed by community action agencies or partnerships.

Low-Income Rate Assistance Program (LIRAP): LIRAP provides funding (collected from Avista's tariff rider) to CAP agencies for distribution to Avista customers who are least able to afford their utility bill.

market effect evaluation: An evaluation of the change in the structure or functioning of a market, or the behavior of participants in a market, that results from one or more program efforts. Typically, the resultant market or behavior change leads to an increase in the adoption of energy-efficient products, services, or practices.

measure (also Energy Efficiency Measure or "EEM"): Installation of a single piece of equipment, subsystem or system, or single modification of equipment, subsystem, system, or operation at an end-use energy consumer facility, for the purpose of reducing energy and/or demand (and, hence, energy and/or demand costs) at a comparable level of service.

measure life: See Effective Useful Life (EUL).

Measurement and Verification (M&V): A subset of program impact evaluation that is associated with the documentation of energy savings at individual sites or projects, using one or more methods that can involve

measurements, engineering calculations, statistical analyses, and/or computer simulation modeling. M&V approaches are defined in the International Performance Measurement and Verification Protocol (IPMVP available at www.evo-world.org).

Megawatt (MW): The electrical unit of power that equals one million watts or one thousand kilowatts.

Megawatt-hour (MWh): A basic unit of electrical energy that equals one megawatt of power applied for one hour.

Named Community: Represents areas within Avista's service territory that are considered to be a highly impacted community or vulnerable population.

net savings: The change in energy consumption and/or demand that is attributable to an energy efficiency program. This change in energy use and/or demand may include, implicitly or explicitly, consideration of factors such as free drivers, non-net participants (free riders), participant and non-participant spillover, and induced market effects. These factors may be considered in how a baseline is defined and/or in adjustments to gross savings values.

Non-Energy Benefit/Non-Energy Impact (NEB/NEI): The quantifiable non-energy impacts associated with program implementation or participation; also referred to as non-energy benefits (NEBs) or co-benefits. Examples of NEIs include water savings, non-energy consumables and other quantifiable effects. The value is most often positive, but may also be negative (e.g., the cost of additional maintenance associated with a sophisticated, energy-efficient control system).

Northwest Energy Efficiency Alliance (NEEA): A nonprofit organization that works to accelerate energy efficiency in the Pacific Northwest through the adoption of energy-efficient products, services, and practices.

Northwest Power and Conservation Council (NWPCC): An organization that develops and maintains both a regional power plan and a fish and wildlife program to balance the environment and energy needs of the Pacific Northwest.

Outside Air Temperature (OAT): Refers to the temperature of the air around an object, but unaffected by the object.

On-Bill Repayment (OBR): A financing option in which a utility or private lender supplies capital to a customer to fund energy efficiency, renewable energy, or other generation projects. It is repaid through regular payments on an existing utility bill.

portfolio: Collection of all programs conducted by an organization. In the case of Avista, portfolio includes electric and natural gas programs in all customer segments. Portfolio can also be used to refer to a collection of similar programs addressing the market. In this sense of the definition, Avista has an electric portfolio and a natural gas portfolio with programs addressing the various customer segments.

prescriptive: A prescriptive program is a standard offer for incentives for the installation of an energy efficiency measure. Prescriptive programs are generally applied when the measures are employed in relatively similar applications.

process evaluation: A systematic assessment of an energy efficiency program or program component for the purposes of documenting operations at the time of the examination, and identifying and recommending

improvements to increase the program's efficiency or effectiveness for acquiring energy resources while maintaining high levels of participant satisfaction.

program: An activity, strategy or course of action undertaken by an implementer. Each program is defined by a unique combination of program strategy, market segment, marketing approach and energy efficiency measure(s) included. Examples are a program to install energy-efficient lighting in commercial buildings and residential weatherization programs.

project: An activity or course of action involving one or multiple energy efficiency measures at a single facility or site.

Regional Technical Forum of the Northwest Power and Conservation Council (RTF): A technical advisory committee to the Northwest Power and Conservation Council established in 1999 to develop standards to verify and evaluate energy efficiency savings.

realization rate: Ratio of ex-ante reported savings to ex-post evaluated estimated savings. When realization rates are reported, they are labeled to indicate whether they refer to comparisons of (1) ex-ante gross reported savings to ex-post gross evaluated savings, or (2) ex-ante net reported savings to ex-post net evaluated savings.

reliability: When used in energy efficiency evaluation, the quality of a measurement process that would produce similar results on (a) repeated observations of the same condition or event, or (b) multiple observations of the same condition or event by different observers. Reliability refers to the likelihood that the observations can be replicated.

reported savings: Savings estimates reported by Avista for an annual (calendar) period. These savings will be based on best available information.

Request for Proposal (RFP): Business document that announces and provides details about a project, as well as solicits bids from potential contractors.

retrofit: To modify an existing generating plant, structure, or process. The modifications are done to improve energy efficiency, reduce environmental impacts, or to otherwise improve the facility.

rigor: The level of expected confidence and precision. The higher the level of rigor, the more confident one is that the results of the evaluation are both accurate and precise, i.e., reliable.

R-value or R-factor (resistance transfer factor): Measures how well a barrier, such as insulation, resists the conductive flow of heat.

Schedules 90 and 190: Rate schedules that show energy efficiency programs.

Schedules 91 and 191: Rate schedules that are used to fund energy efficiency programs.

sector(s): The economy is divided into four sectors for energy planning. These are the residential, commercial (e.g., retail stores, office and institutional buildings), industrial, and agriculture (e.g. dairy farms, irrigation) sectors.

Site-Specific (SS): A commercial/industrial program offering individualized calculations for incentives upon any electric or natural gas efficiency measure not incorporated into a prescriptive program.

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simple payback: The time required before savings from a particular investment offset costs, calculated by investment cost divided by value of savings (in dollars). For example, an investment costing $100 and resulting in a savings of $25 each year would be said to have a simple payback of four years. Simple paybacks do not account for future cost escalation, nor other investment opportunities.

spillover: Reductions in energy consumption and/or demand caused by the presence of an energy efficiency program, beyond the program-related gross savings of the participants and without direct financial or technical assistance from the program. There can be participant and/or non-participant spillover (sometimes referred to as "free drivers"). Participant spillover is the additional energy savings that occur as a result of the program's influence when a program participant independently installs incremental energy efficiency measures or applies energy-saving practices after having participated in the energy efficiency program. Non-participant spillover refers to energy savings that occur when a program non-participant installs energy efficiency measures or applies energy savings practices as a result of a program's influence.

Technical Reference Manual (TRM): An Avista-prepared resource document that contains Avista's (ex-ante) savings estimates, assumptions, sources for those assumptions, guidelines, and relevant supporting documentation for its natural gas and electricity energy efficiency prescriptive measures. This is populated and vetted by the RTF and third-party evaluators.

Total Resource Cost (TRC): A cost-effectiveness test that assesses the impacts of a portfolio of energy efficiency initiatives regardless of who pays the costs or who receives the benefits. The test compares the present value of costs of efficiency for all members of society (including all costs to participants and program administrators) compared to the present value of all quantifiable benefits, including avoided energy supply and demand costs and non-energy impacts.

transmission: The act or process of long-distance transport of electric energy, generally accomplished by elevating the electric current to high voltages. In the Pacific Northwest, Bonneville operates a majority of the high-voltage, long-distance transmission lines.

Uniform Energy Factor (UEF): A measurement of how efficiently a water heater utilizes its fuel.

Unit Energy Savings (UES): Defines the savings value for an energy efficiency measure.

U-value or U-factor: The measure of a material's ability to conduct heat, numerically equal to 1 divided by the R-value of the material. Used to measure the rate of heat transfer in windows. The lower the U-factor, the better the window insulates.

uncertainty: The range or interval of doubt surrounding a measured or calculated value within which the true value is expected to fall within some degree of confidence.

Utility Cost Test (UCT): One of the four standard practice tests commonly used to evaluate the cost-effectiveness of DSM programs. The UCT evaluates the cost-effectiveness based upon a program's ability to minimize overall utility costs. The primary benefit is the avoided cost of energy in comparison to the incentive and non-incentive utility costs.

Variable Frequency Drive (VFD): A type of motor drive used in electro-mechanical drive systems to control AC motor speed and torque by varying motor input frequency and voltage.

verification: An assessment that the program or project has been implemented per the program design. For example, the objectives of measure installation verification are to confirm (a) the installation rate, (b) that the installation meets reasonable quality standards, and (c) that the measures are operating correctly and have the potential to generate the predicted savings. Verification activities are generally conducted during on-site surveys of a sample of projects. Project site inspections, participant phone and mail surveys, and/or implementer and consumer documentation review are typical activities associated with verification. Verification may include one-time or multiple activities over the estimated life of the measures. It may include review of commissioning or retro-commissioning documentation. Verification can also include review and confirmation of evaluation methods used, samples drawn, and calculations used to estimate program savings. Project verification may be performed by the implementation team, but program verification is a function of the third party evaluator.

vulnerable population: Communities that experience a disproportionate cumulative risk from environmental burdens.

Washington Utilities and Transportation Commission (WUTC): A three-member Commission appointed by the governor and confirmed by the state senate, whose mission is to protect the people of Washington by ensuring that investor-owned utility and transportation services are safe, available, reliable, and fairly priced.

weather normalized: This is an adjustment that is made to actual energy usage, stream-flows, etc., which would have happened if "normal" weather conditions would have taken place.

Weighted Average Cost of Capital (WACC): A calculation of a firm's cost of capital in which each category of capital is proportionately weighted. All sources of capital, including common stock, preferred stock, bonds, and any other long-term debt, are included in a WACC calculation.

8,760: Total number of hours in a year.

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Appendix A – 2024-2025 Energy Efficiency Evaluation, Measurement, and Verification Work Plan

Note: The EM&V vendor for evaluation of program year 2026 has not been determined as of this writing. Avista will be issuing a Request for Proposal (RFP) in Q4, 2025 to select the independent third-party evaluator for the 2026-2027 biennium. Once the contract has been awarded, the EEAG will be informed of the selection. In the interim, the 2024-2025 EM&V Work Plan has been included for reference.

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Work Plan for Evaluation, Measurement and Verification (EM&V) of Avista's 2024 - 2025 Energy Efficiency Programs

Prepared for:
Avista Corporation

Delivered on:
August 29, 2024

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Technical Evaluation Plan

This Evaluation, Measurement, and Verification (EM&V) Work Plan details the methods by which ADM Associates, Inc. (ADM) will complete the impact and process evaluation of Avista Utility's (Avista) 2024-2025 Programs as-specified in ADM's response to the Request for Proposals (RFP) R-44922 for evaluating Avista Utility's ("Avista") 2024-2025 energy efficiency programs (residential, low-income, and non-residential) in Idaho and Washington.

1. Summary of Avista's Energy Efficiency Portfolio

Table 1-1 summarizes the programs offered to residential and low-income customers in the Avista service territory as well as ADM's impact and process evaluation tasks and impact methodology for each program. Table 1-2 and Table 1-3, portrays the same information for the programs offered to Avista's non-residential customers and the pilot programs offered within Avista's territory, respectively.

Table 1-1: Residential and Low-Income Impact Evaluation Activities by Program

Program	Database Review	Document Verif.	Survey Verif.	On-Site Verif.	Electric Impact Methodology	Gas Impact Methodology
Residential Appliance and Thermostat Program	✓	✓	✓		RTF UES	IPMVP Option C: Billing analysis with comparison group
Residential ENERGY STAR Manufactured Homes Program	✓	✓			RTF UES	Avista TRM
Residential Shell Program	✓	✓	✓		RTF UES	IPMVP Option C: Billing analysis with comparison group
Residential Fuel Efficiency Program	✓	✓	✓		RTF UES and Avista TRM	IPMVP Option C: Billing analysis with comparison group
Residential Midstream Program	✓	✓			RTF UES	IPMVP Option C: Billing analysis with comparison group
Residential Multifamily Weatherization – New Offerings Program	✓	✓			RTF UES and Avista TRM	IPMVP Option C: Billing analysis with comparison group
Residential On-Bill Repayment/Financing Program	✓	✓			IPMVP Option C: Billing analysis with comparison group	
Residential Always-On Behavioral Program	✓				IPMVP Option C: Billing analysis with RCT groups	
Residential Behavioral Program	✓				IPMVP Option C: Billing analysis with RCT groups	
Residential Home Energy Audit Program	✓				RTF UES/Avista TRM/ IPMVP Option C: Billing analysis with comparison group	
Residential Direct Install Insulation Program	✓	✓	TBD	TBD	TBD	TBD
Low-Income Program	✓	✓	✓		RTF UES/IPMVP Option C: Billing analysis with comparison group	
Named Community Investment Fund (NCIF) Program	✓	✓	TBD	TBD	TBD	TBD

Table 1-2: Non-residential Impact Evaluation Activities by Program

Program	Database Review	Document Verif.	Survey Verif.	On-Site Verif.	Electric Impact Methodology	Gas Impact Methodology
C&I Appliance and HVAC Controls Program	✓	✓	✓		RTF UES	RTF UES
C&I Site-Specific Program	✓	✓	✓	✓	IPMVP Options A, B, C, D as appropriate	
C&I Prescriptive Lighting Program	✓	✓	✓		Engineering algorithms with equipment inputs	N/A
C&I Small Business Direct Install Lighting Program	✓	✓	✓		Engineering algorithms with equipment inputs	N/A
C&I Prescriptive HVAC Variable Frequency Drive Program	✓	✓	✓		RTF UES	N/A
C&I Midstream Program	✓	✓			RTF UES, engineering algorithms with equipment inputs, CA eTRM and Avista Midstream TRM	IPMVP Option C: Billing analysis with comparison group
C&I Prescriptive Shell Program	✓	✓	✓		Avista TRM	
C&I Green Motors Program	✓	✓	✓		RTF UES	N/A
C&I Grocer Program	✓	✓	✓		RTF UES and Avista TRM	N/A
C&I Building Operator Certification Program	✓	✓			BOC Study[1]	N/A

[1] https://www.theboc.info/wp-content/uploads/2023/11/2023-BOC-Energy-Savings-FAQ-Final.pdf

Table 1-3: Pilot Impact Evaluation Activities by Program

Program	Database Review	Document Verif.	Survey Verif.	On-Site Verif.	Electric Impact Methodology	Gas Impact Methodology
Time of Use Pilot	✓				IPMVP Option C: Billing analysis with comparison group	N/A
Peak Time Rebates Pilot	✓				IPMVP Option C: Billing analysis with comparison group	N/A
Hybrid Heat Pump Pilot	✓	✓	✓		IPMVP Option C: Facility-level regression analysis with NTG adjustments	
Building Operator IQ Pilot	✓	✓			IPMVP Option C: Facility-level regression analysis with NTG adjustments, IPMVP options A, B or D as needed	
Compressed Air Pilot	✓	✓	TBD	TBD	TBD	TBD
Pay for Performance Pilot	✓	✓	✓	✓	IPMVP Option C: Facility-level regression analysis with NTG adjustments, IPMVP options A, B or D as needed	
Additional Pilots	TBD	TBD	TBD	TBD	TBD	TBD

2. Impact Evaluation Approach

ADM will perform an impact evaluation on each of the programs. ADM will use the following approaches to calculate energy impact defined by the International Performance Measurement and Verification Protocols (IPMVP) and the Uniform Methods Project (UMP):

- Simple verification (document-based, survey-based)
- Deemed savings
- Partially/Fully Measured Retrofit Isolation (IPMVP Options A & B)
- Whole building billing analysis (IPMVP Option C)
- Simulation modeling (IPMVP Option D)

ADM will complete and report the results of the above impact tasks for each of the electric impacts and the natural gas impacts for each state separately.

The M&V methodologies are program-specific and determined by previous Avista evaluation methodologies as well as the relative contribution of a given program to the overall energy efficiency impacts. ADM will review relevant information on infrastructure, framework, and guidelines set out for EM&V work in several guidebook documents that have been published over the past several years. These include the following:

- Northwest Regional Technical Forum (RTF)
- Technical reference manuals, such as the Avista TRM, AR TRM 9.2, PA TRM 2021 and the IL TRM 12.0
- National Renewable Energy Laboratory (NREL), United States Department of Energy (DOE) The Uniform Methods Project (UMP): Methods for Determining Energy Efficiency Savings for Specific Measures, April 2013[2]
- International Performance Measurement and Verification Protocol (IPMVP) maintained by the Efficiency Valuation Organization (EVO) with sponsorship by the U.S. Department of Energy (DOE)[3]

We will keep our data collection instruments, calculation spreadsheets, and monitored/survey data available at the request of Avista. Any component of the data collection or analysis will be made available to Avista and will remain available through prudence review and investigation as required by the Washington Utilities and Transportation Commission and the Idaho Public Utilities Commission, subsequent to the 2024-25 evaluation period. All communications (including data transfer) will be consistently performed with constant communication and data sharing protocols established in the kick-off meeting. This transparency will allow for independent review of ADM's efforts. We believe that self-contained, transparent, and auditable M&V data and analysis products can minimize the long-term

[2] Notably, The Uniform Methods Project (UMP) includes the following chapters authored by ADM. Chapter 9 (Metering Cross-Cutting Protocols) was authored by Dan Mort and Chapter 15 (Commercial New Construction Protocol) was Authored by Steven Keates.

[3] Core Concepts: International Measurement and Verification Protocol. EVO 100000 – 1:2016, October 2016.

regulatory burden and final acceptance of results as well as provide further clarity and benefits for all stakeholders involved.

Additionally, for all programs ADM will provide comprehensive documentation and transparency for all evaluation tasks throughout the evaluation cycle. This includes, but is not limited to, the thorough explanation of measure and program-level realization rates which are <90% or >110%. Where applicable, the explanation(s) will also provide quality recommendations for adjusting future claimed savings.

2.1 Impact Evaluation Approach

This section presents our general cross-cutting approach to accomplishing the scope of work outlined in the Request for Proposal (RFP) for impact evaluation of Avista's Portfolio listed in Table 1-1 through Table 1-3. The Evaluators start by presenting our general evaluation approach. This chapter is organized by general task due to the overlap across sectors and programs. Section 4, Section 5, and Section 6 describes the Evaluators' program-specific impact evaluation methods in further detail for the residential, non-residential, and pilot programs, respectively.

ADM outlines our approach to verifying, measuring, and reporting the energy efficiency portfolio impacts as well as cost-effectiveness and summarizing potential program and portfolio improvements. The primary objective of the impact evaluation is to determine residential, low-income, and non-residential ex-post verified net energy savings.

Our general approach for this evaluation considers the cyclical feedback loop among program design, implementation, and impact evaluation. Our activities during the evaluation will estimate and verify annual energy savings and identify whether a program is meeting its goals. These activities are aimed to provide guidance for continuous program improvement and increased cost effectiveness for the 2024 and 2025 program years. ADM will provide the following services and objectives as deliverables to Avista for this evaluation, as specified in the RFP:

- Independently verify, measure and document energy savings impacts from each of Avista's electric and natural gas energy efficiency Programs, or for Program categories representing consolidated small-scale offerings from January 1, 2024, through December 31, 2025;
- Develop a schedule for impact evaluations that ensures established programs receive evaluations at least every two (2) years. Identify new and/or "at risk" programs to be evaluated annually.
- For Washington Programs, calculate the cost effectiveness of the Portfolio and component Programs using the Total Resource Cost Test (TRC), Utility Cost Test (UCT), Participant Cost Test (PCT), Ratepayer Impact Measure Test (RIM), and, potentially, newly adopted jurisdictional specific tests (collectively, the "Services");
- Include in the evaluation any pilot programs ("Pilots") from which conservation savings have been realized. For each effort that Avista identifies as a Pilot, provide recommendations on appropriate evaluation methodologies;
- Analytically substantiate the measurement of those savings;
- Identify Program improvements, if any; and
- Identify possible future Programs.

In addition to the above services, we have identified the following deliverables to Avista for this evaluation:

- **Deliverable 1 – Evaluation Work Plan:** One (1) evaluation work plan for the 2024-2025 Programs, with a draft plan delivered within four weeks after project kick-off, including a presentation to Avista's Energy Efficiency Advisory Group ("The Advisory Group");
- **Deliverables 2a and 2b – Idaho and Washington Natural Gas Impact Evaluations:** Two (2) separate and independent impact evaluation reports, one for Idaho and one for Washington, of Avista's Residential, Commercial, and Industrial Natural Gas Impact Evaluations for each program year – with the Washington reports delivered on March 15, 2025 and 2026 and the Idaho reports on April 15, 2025 and 2026;
- **Deliverables 3a and 3b – Idaho and Washington Electric Impact Evaluations:** Two (2) separate and independent impact evaluation reports, one for Idaho and one for Washington, of Avista's Residential, Commercial, and Industrial Electric Impact Evaluation for each program year – with the Washington reports delivered on March 15, 2025 and 2026 and the Idaho reports on April 15, 2025 and 2026;
- **Deliverable 4 – Cost Effectiveness Analysis (*Washington Only*):** Two separate and independent (2) cost effectiveness report ("CE Report") for Washington Programs including written documents which support the CE Report, disaggregated into electric and natural gas components, one for each program year, delivered April 15, 2025, and April 15, 2026;
- **Deliverable 5 – Process Evaluation Report:** One (1) process evaluation of Avista's Residential, Commercial, and Industrial in Washington and Idaho including notable observations and recommendations, with a memorandum of process evaluation efforts completed to date delivered by March 15, 2026, and the full report delivered April 15, 2026;
- **Deliverable 6 – Meeting Participation:** Availability to meet and participate with advisory groups, subcommittees, and others, as needed. Meet with the Energy Efficiency Analytics team on a regular cadence to ensure issues are tracked and resolved expediently and to discuss changes or additions to the Programs and meet with Avista to develop accurate equations that represent Consultant's methodology for evaluating the Programs;
- **Deliverable 7 – DSM Prudence Review:** Availability for prudence review and investigation as required by the Washington Utilities and Transportation Commission and the Idaho Public Utilities Commission after the close of the 2024-2025 period. Provide comprehensive workpapers, supporting documentation and responses to production requests as needed by the respective Commissions;
- **Deliverable 8 – Time of Use Pilot Impact Evaluation:** At the conclusion of the first full year of the initial Time of Use pilot for Washington electric customers (June 1, 2024 through May 30, 2025), provide bill impact evaluation of the pilot participants and review Avista's load impact analysis for the pilot participants, delivered by October 1, 2025;
- **Deliverable 9 – Time of Use Pilot / Peak Time Rebate Design Recommendations:** At the conclusion of the 2025 program year, use Deliverable 8 conclusions to assist Avista in recommendations for Time of Use (TOU)/ Peak Time Rebate (PTR) program design/modifications in anticipation of full program rollout for the 2026-2027 biennium, delivered by April 1, 2026;

- An independent estimate of kWh and Therm savings for 2024 and 2025 through thorough and proper evaluation of program impacts with statistical ±10% statistical precision at 90% confidence for each state and fuel type;
- Presentation of evaluation findings to The Advisory Group, Spokane offices, or other regional locations, as required, along with additional stakeholders, as necessary;
- Updates to Avista's Technical Reference Manual (TRM), annually, based on Avista's evaluation findings and secondary information;
- All supporting workpapers for calculations, tables, graphs, and other documents as necessary;
- State-specific reports on any project where realization rate is expected to be less than 90% or greater than 110% as well as a complete listing of all projects where any material adjustments were made; and
- Summary of any deviations from historical methodology for calculating cost-effectiveness in the final report in addition to a presentation of deviations to the Advisory Group.

We approach evaluation with the frame of mind that the final report should not contain information that has not already been communicated with Avista. This is achieved through the following:

- **Transparency of Evaluation Effort.** In our evaluations, we will keep our data collection instruments, models, calculation spreadsheets, programming scripts, and monitored data/survey data available at the request of Avista. All components of the data collection or analysis will be made available in their native format with all formulas intact, informing Avista as to how the calculation of energy savings is performed and allowing for independent review of ADM's efforts.
- **Regular Updates on Evaluation Findings.** ADM will provide regular updating of all involved parties as to the findings of the impact and process evaluation efforts. This allows for real-time feedback regarding the performance of varying measures or participant classes, feeding into a process of continuous program improvement. This also allows Avista to conduct an independent review or quality check of ADM's analysis, if desired. ADM's analysis will be kept transparent throughout the evaluation effort.

This document contains the approach for the evaluation of Avista's 2024-2025 program years. It is ADM's intention to formalize this workplan in collaboration with Avista; This is a collaborative effort with Avista to ensure Idaho Public Utilities Commission (PUC) and Washington Utilities and Transportation Commission (WUTC) receives accurate and reliable program findings and that Avista receives meaningful insights to continue energy efficiency efforts and improve program results. ADM will provide comprehensive documentation and transparency for all evaluation tasks and will provide ongoing technical review and guidance throughout the evaluation cycle.

ADM will employ the following approach to complete impact evaluation activities for the programs. ADM defines five major approaches to determining net savings for Avista's programs:

- A *Deemed Savings* approach involves using stipulated savings for energy conservation measures for which savings values are well-known and documented. These prescriptive savings may also require an adjustment for certain measures, such as lighting measures in which site operating

hours may differ from RTF values. ADM will work with Avista to identify these instances and develop a method for calculating an adjusted value.

- A *Partially/Fully Measured Retrofit Isolation* approach. This refers to any program where savings must be calculated on a per-site basis using primary data collected on-site or facility bills for a unique, premise-level analysis (as opposed to the large-scale, whole-program analysis detailed under the "Billing Data Analysis" bullet). This includes the Site-Specific Program for which custom protocols may need to be applied. This approach aligns with the IPMVP Option A and B.
- A *Billing Analysis* approach involves estimating energy savings by applying a linear regression to measured participant energy consumption utility meter billing data. Billing analyses may also include billing data from nonparticipant customers. This approach does not require on-site data collection for model calibration. However, a sample of customers or sites may be selected and surveyed to confirm that the energy conservation measures were installed and are still operating. This approach aligns with the IPMVP Option C.
- A *Facility-Level Regression Analysis* approach involves estimating energy savings by applying a linear regression to a facility's pre-retrofit and post-retrofit interval meter data. This methodology includes defining a baseline for the facility, adjusting the baseline, and developing and refining a regression model to accurately predict energy consumption in the facility. The difference between projected energy consumption from the model and actual energy consumption equals the gross savings estimate. The methodology provided here references UMP Chapter 24 on Strategic Energy Management (SEM) Evaluation Protocol[4] and aligns with the IPMVP Option C.
- A *Simulation Model Analysis* approach involves a whole building simulation using the program REM/Rate and a User Defined Reference Home (UDRH) to compare the efficient home and the baseline home. The UDRH is designed as an exact replica of each program participating home in terms of size, structure, and climate zone. This approach aligns with the IPMVP Option D.

ADM will accomplish the following quantitative goals as part of the impact evaluation:

- Verify savings with 10% precision at the 90% confidence level by program year;
- Where appropriate, apply the RTF to verify measure impacts; and
- Where available data exists, conduct billing analysis with a suitable comparison group to estimate measure savings.

2.2 Database Review

This section describes ADM's general methodology for conducting database reviews for Avista's Residential and Non-Residential programs.

At the outset of the process evaluations, it will be important to review each program database to ensure that previous recommendations regarding developing a data dictionary and adequately tracking key data have been implemented. For this task, our team will also review the databases to ensure that they conform to industry standards.

[4] https://www.nrel.gov/docs/fy17osti/68316.pdf

Having conducted previous evaluations with Avista and with numerous other energy efficiency systems, we recognize that a well-designed tracking system is a key tool for accomplishing effective program delivery, monitoring, verification and evaluation. We are experienced with Avista's Cognos and iEnergy databases currently used and are well-informed regarding recent changes in program tracking systems. ADM consistently reviews each tracking system in order to provide early feedback on implementation efforts, provide continuous tracking of program performance, and provide critical information for verification and evaluation. ADM recognizes that failure to develop and maintain a sufficient tracking system can add significantly to the cost of implementation, monitoring, verification and evaluation; reduce confidence in results; and increase the variance in estimates of savings. Therefore, we make this a high priority in our iterative review of each program over the course of the program year.

The role of the tracking system becomes particularly important because this evaluation will be proceeding in real-time along with the program implementation. An advantage of a real-time evaluation is that it should allow the evaluation contractor to coordinate with the implementation contractor to ensure that appropriate pre-installation data collection and measurement are conducted to establish agreed-on baseline conditions for analyzing savings. An example of this is when ADM notified Avista that the transfer from Cognos to iEnergy database resulted in a mismatch of measure names and therefore system tracking connected to the Avista TRM and savings values applied to each measure. Consistent review and communication of findings led to a timely resolution for this prior to year-end deadlines.

Because of our previous M&V work for Avista, we are familiar with Avista's tracking system and changes occurring over time. We will work with Avista and implementers to identify any additional elements that should also be included to facilitate M&V of existing or proposed programs. Our review will be based on the requirements for reporting to WUTC; goals defined by CETA, specifically related to Named Communities; internal auditing requirements; program requirements; monitoring, verification, and evaluation requirements; and our long experience in evaluating residential and nonresidential energy efficiency programs.

ADM will review program materials – such as program theory and logic models to identify potential issues and key barriers to end-use behavior changes that could be influenced by efforts by each program. We will review the tracking and reporting system for duplicates, inconsistencies, missing information, and potential misinformation. We will perform sanity and logic checks to ensure data are consistent and meaningful. We will also perform test queries to ensure data are being populated consistently, accurately, and meaningfully. We will assess whether the data are sufficient for use in assessing program impacts, regulatory reporting, and other requirements. We will review reporting channels and procedures for ease of delivery of data and completeness and to determine if the reporting methodology is cost-effective, accessible, and easy to use.

Before conducting each impact analysis, ADM will conduct a database review for the program. ADM will complete document-based verification in order to verify detailed measure inputs, values, efficiency levels, and installation characteristics for a sample of participating households. This detailed review will assist with the development of verified savings. ADM will review the aggregate tracking data to verify each measure satisfies all program efficiency requirements.

ADM will also evaluate measure-level savings applications primarily by reviewing assigned measure unit energy savings ("UES") values in the tracking system to assure that they are appropriately applied using the Avista TRM. ADM will then aggregate and cross-check program and measure totals. ADM will

evaluate if the Avista TRM was applied correctly to the program tracking data by comparing Avista-provided project-level savings to the ADM-calculated project-level savings using the Avista TRM for each project. This will be reported as "adjusted savings" in the final reports.

ADM will clearly identify, explain, and substantiate any variations in the savings calculations we uncover for each program. We will integrate all findings into the final evaluation report with recommendations for updating values where applicable. In addition to reporting the total gross realization rates, we will also quantify the associated impact each adjustment had on the overall program savings.

ADM will work with Avista and implementer staff to incorporate recommended changes into the tracking system database. We focus on addressing issues of sufficiency, compatibility, and consistency that we detected during our review and on other problems that may be identified. We will also consider the administrative effort required by Avista and relative benefits for each additional recommended change.

2.3 Simple Verification Methods

ADM will verify a sample of participating households for detailed review of the installed measure documentation and development of verified savings. This includes developing samples to verify measures and equipment via two activities:

- Document-based verification
- Survey-based verification

Preliminary sample sizes for documentation-based review and survey-based verification are detailed in the sections below. ADM will work with Avista to adjust the sampling plan once program tracking data has been delivered and participation rates are finalized.

ADM will also verify tracking data by reviewing invoices and surveying a sample of participant customer households. We will coordinate as needed with Avista's process evaluation contractor in conducting participant surveys. The following sections describe ADM's general methodology for conducting document-based verification and survey-based verification.

2.3.1 Documentation-Based Verification

ADM will first screen each rebate household to ensure the customer who received a measure did not also receive another measure that disqualifies that customer from participating in either program, such as the ENERGY STAR Homes rebate in combination with an HVAC rebate. Tracking data will be reviewed to verify each measure satisfies all program efficiency requirements.

Documentation for this task will include rebate application forms, supporting customer or contractor invoices, household builder documents, AHRI certificate documents, and any other associated rebate documents specific to each program. These documents will include invoices, rebate applications, and additional materials required for accepting rebate applications for each program Avista offers to its customers. Further program-level details are summarized in Table 2-1, *Document-Based Verification Sample Design for Washington and Idaho Combined*.

For each program and measure sampled, ADM will verify quantities and efficiencies for rebated equipment according to the invoices and associated applications and documents. If ADM finds any deviations between the tracking data and application values, ADM will note and summarize these differences to Avista through periodic updates and the final report.

ADM will develop a sampling plan that aims to achieve a sampling precision of ±10% at 90% statistical confidence – or "90/10 precision" – for net realized savings estimates at the measure category level for all significant measures during document-based verification for each program in each population:

- Washington electric participant population
- Washington natural gas participant population
- Idaho electric participant population
- Idaho natural gas participant population

That is at each state and fuel type's Portfolio level, statistical precision and confidence will meet 90/10 precision at minimum. In a generalized form, simple random samples for a statistically infinite population are developed as follows:

$$n = \left(\frac{1.645 * cv}{rp}\right)^2$$

Where,

n = sample size

1.645 = *z* score reflecting 90% confidence for a two-tailed distribution

cv = Coefficient of Variation, defined as standard deviation / mean

rp = Required Precision, 10% for 90/10 sampling

Standard practice is to assume a CV of .50 for homogenous programs (such as residential programs). In this instance, the required sample for 90/10 is $(1.645 * .5 / .1)^2 = 68$. For programs with limited participation, this sample is adjusted as follows:

$$n_0 = \frac{n}{1 + \frac{n}{N}}$$

Where,

n_0 = Finite-population adjusted sample

n = Sample for a statistically infinite population

N = total population size

Thus, for a population of 400, the required sample to meet ±10% precision at 90% confidence is:

$n_0 = 68 / [1+ 68/400)] = 58.12$, rounding up to 59.

ADM will work with Avista to adjust the sampling plan before submitting a data request.

Based on the above considerations, ADM has estimated the following sample sizes for the above programs' document review (Table 2-1, *Document-Based Verification Sample Design for Washington*

and Idaho Combined). The representative participant sample will be adjusted for each of the programs in Washington and Idaho, by fuel type.

Table 2-1: Document-Based Verification Sample Design for Washington and Idaho Combined

Program	Washington				Idaho			
	Electric		Natural Gas		Electric		Natural Gas	
	Pop	90/10	Pop	90/10	Pop	90/10	Pop	90/10
Residential/Low-Income								
Residential Appliance and Thermostat Program	400	59	400	59	400	59	400	59
Residential ENERGY STAR Manufactured Homes Program	30	21	5	5	15	13	5	5
Residential Shell Program	300	56	1,700	66	150	47	400	59
Residential Fuel Efficiency Program					150	47		
Residential Midstream Program	400	59	400	59	400	59	400	59
Residential Multifamily Weatherization – New Offerings Program	250	54	400	59	75	36	130	45
Residential On-Bill Repayment/Financing Program	100	41	50	29	70	35	30	21
Residential Always-On Behavioral Program	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Residential Behavioral Program	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Residential Home Energy Audit Program	150	47			150	47		
Residential Direct Install Insulation Program	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Low-Income Program	1,400	65	1,600	66	350	57	400	59
Named Community Investment Fund (NCIF) Program	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Commercial & Industrial								
C&I Site-Specific Program	54	17	9	5	9	23	3	3
C&I Appliance and HVAC Controls Program	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
C&I Prescriptive Lighting Program	870	64			473	60		
C&I Small Business Direct Install Lighting Program	200	51			100	40		
C&I Prescriptive HVAC Variable Frequency Drive Program	2	2			4	4		
C&I Midstream Program	500	68	400	68	400	68	300	68
C&I Prescriptive Shell Program	6	6	1	1	1	1	1	1
C&I Green Motors Program	8	7			2	2		
C&I Grocer Program	9	8			4	4		
C&I Building Operator Certification Program	11	11	11	11	11	11	11	11

The values in the above represent our preliminary sample design. Sampling and verification of the Site-Specific Program differs from those above and is discussed below in section 5.2.2 Sampling and Precision. ADM will work with Avista to adjust the proposed sample sizes during the kickoff meeting and the formation of Avista's Electric and Natural Gas Residential, Low-Income, and Commercial and Industrial EM&V Plan for Idaho and Washington.

ADM will work with Avista to adjust these sample sizes once program tracking data has been delivered for the program year in evaluation. ADM understands that representation of participants in each state in Avista's service territory is critical. Therefore, ADM will ensure the samples for document review includes participants in both Washington and Idaho in addition to representation of each the electric and natural gas fuel types.

2.3.2 Survey-Based Verification

This section describes ADM's general methodology for conducting survey-based verification for Avista's Residential, Low-Income, Commercial, and Industrial programs. In addition to the document-based verification summarized above, ADM will also verify tracking data by surveying a sample of participant customer households.

A sample of participants will be surveyed to confirm that the measure was installed and is still currently operational and whether the measure was a new construction, early retirement, or replace-on-burnout, if applicable to the measure. If the units are found to be inoperative prior to replacement, ADM will re-classify the unit as replace-on-burnout. This will aid in providing more accurate estimation of annual savings by replacement type. Most importantly, this survey effort will help ADM develop in-service rates, or the percentage of rebates in which the measure is still currently operational and installed. This in-service rate will act as an adjustment to deemed savings estimates to reflect verified savings in the service territory. ADM will also ask the participant questions about additional details of the installed unit, such as sizing of water heater, model number, space heating equipment type, etc. The selected sample participants will be offered a $10 gift card incentive to participate in the verification survey.

ADM proposes the sample sizes for survey-based verification in Table 2-2. ADM will combine survey-based verification efforts with the survey-based process evaluation efforts in order to maximize the quality and quantity of data collected toward multiple deliverables while minimizing customer response fatigue. The findings from these activities will primarily serve the impact evaluation to:

- Verify measure was installed
- Verify measure is functional
- Gather pre-retrofit equipment information
- Gather retrofit equipment information
- Estimate annual hours of use

ADM has estimated the sample sizes shown in Table 2-2 for the survey-based verification. The representative participant sample will be adjusted for each of the programs in Washington and Idaho, by fuel type.

Table 2-2: Survey-Based Verification Sample Design for Washington and Idaho

Program	Washington						Idaho					
	Electric			Natural Gas			Electric			Natural Gas		
	Pop.	90/10	%	Pop.	90/10	%	Pop.	90/10	%	Pop.	90/10	%
Residential & Low-Income												
Residential Appliance and Thermostat Program	400	58	15%	400	58	15%	400	58	15%	400	58	15%
Residential ENERGY STAR Manufactured Homes Program	30	21	70%	5	5	100%	15	13	87%	5	5	100%
Residential Shell Program	300	56	19%	1,700	66	4%	150	47	31%	400	58	15%
Residential Fuel Efficiency Program							150	47	31%			
Residential Midstream Program[5]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Residential Multifamily Weatherization – New Offerings Program	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Residential On-Bill Repayment/Financing Program	100	41	41%	50	29	58%	70	35	50%	30	21	70%
Residential Always-On Behavioral Program	50,000	68	0%	50,000	68	0%						
Residential Behavioral Program	TBD	TBD	TBD	TBD	TBD	TBD						
Residential Home Energy Audit Program	150	47	31%				150	47	31%			
Residential Direct Install Insulation Program	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Low-Income Program	1,400	65	5%	1,600	65	4%	350	57	16%	400	58	15%
Named Community Investment Fund (NCIF) Program	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Commercial & Industrial												
C&I Appliance and HVAC Controls Program	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
C&I Site-Specific Program	54	17	32%	9	5	56%	9	23	36%	3	3	100%
C&I Prescriptive Lighting Program	870	63	7%				473	60	13%			
C&I Small Business Direct Install Lighting Program	200	51	26%				100	41	41%			
C&I Prescriptive HVAC Variable Frequency Drive Program	2	2	100%				4	4	100%			
C&I Midstream Program	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
C&I Prescriptive Shell Program	6	6	100%	1	1	100%	1	1	100%	1	1	100%
C&I Green Motors Program	8	8	100%				2	2	100%			
C&I Grocer Program	9	8	89%				4	4	100%			
C&I Building Operator Certification Program	11	11	100%	11	11	100%	11	11	100%	11	11	100%

[5] Surveys are not proposed for the Residential Midstream Program, as participation is invisible to the downstream Avista customer.

It likely will not be feasible to achieve 90/10 sample sizes for several programs, even by supplementing state samples with non-native participants due to unrealistically high required survey response rates. In this table, we have summed the estimated Washington and Idaho participant populations for each program. For the 90/10 sample, we have summed the completion counts *that would be required if we achieved a 90/10 sample for each state*, with two-thirds of each state's count coming from native participants.

For programs for which obtaining a 90/10 participant sample is not feasible, we propose a combination of online surveys, supplemented with an increased larger document verification sample. In the case of programs with very small participant populations, we may attempt a census of participants. ADM will develop the survey-based verification guide for review and comment by Avista staff prior to deploying these verification surveys.

To implement the impact surveys, ADM will use our in-house survey research center to support all survey-based data collection efforts. This group is comprised of full-time ADM staff and is dedicated solely to energy efficiency-related efforts. This allows our team to provide maximum transparency between program evaluation management and data collection efforts, which helps ADM provide a more accurate and detailed summary of findings to Avista program managers. In cases where the survey-based responses do not meet sampling target, ADM will use our in-house survey research center to reach out to customers via phone call. Alternatively, ADM will include in the email an option for customers to define a suitable time for ADM staff to survey via phone call. ADM will develop the web-based verification guide for review and comment by Avista staff prior to deploying these verification surveys. ADM will employ our in-house survey research center to support all survey-based data collection efforts. In cases where the web-based survey response does not meet sampling target, ADM will use our in-house survey research center to reach out to customers via phone call.

For each program, ADM will include program-specific questions. For example, the C&I Prescriptive HVAC Program verification surveys will likely include questions such as:

- Was this HVAC a new construction, or did it replace another HVAC?
- Was the previous HVAC functional?
- Is the newly installed HVAC still properly functioning?
- What is the efficiency and sizing of the newly installed HVAC?

Program-specific questions are provided under each program Section 4, Section 5, and Section 6 for the residential, non-residential, and pilot programs, respectively. These questions will help ADM verify that the measure was documented accurately and that data collection activities are progressing smoothly for the program. In addition, in the event that billing analysis is infeasible, this simple verification will help ADM more accurately estimate measure-level impacts using engineering algorithms.

2.4 On-Site Verification

In addition to document-based and survey-based verification, on-site data collection activities are planned for a subset of programs. On-site data collection activities are expected for the Site-Specific Program.

Site visits accomplish two major evaluation tasks. First, field staff verify that the energy efficiency measures of interest were indeed installed, that they were installed correctly, and that they still function properly. Second, staff collect data to analyze the energy impacts for the installed measures. We have well-developed and tested procedures in place for collecting the data necessary for detailed M&V of each measure. While on-site, we also obtain appropriate information to analyze the performance of the different types of energy systems at a facility. This includes collecting information on the quantity, efficiency, sizing, servicing, and scheduling for each measure.

Prior to conducting on-site visits, ADM will submit to Avista a list of sites to be visited, along with the site M&V plan for review before going on site. For any sites at which Avista wishes to accompany ADM, scheduling arrangements will be made by ADM staff so that an Avista representative can be present at the time of the visit.

Table 2-3 summarizes the estimated sample sizes for on-site verification for the Site-Specific Program, where on-site verification is anticipated.

Table 2-3: On-Site Verification Sample Design for Washington and Idaho Combined

Program	Washington	Idaho
Site-Specific Program	22	12

ADM will develop and prepare materials for each site selected for on-site verification. Further details on site-specific M&V plans are described below.

2.4.1 Site-Specific M&V Plans

In preparation for the site-level verification efforts, site-specific M&V plans will be developed for each of the sampled projects selected to receive a site-visit. Plans will be developed after a full review of project documentation and, if necessary, brief exploratory interviews with the program staff (or the applicant). Drafted site-specific M&V plans and a summary of the sample of projects will be provided to Avista for review. We will incorporate all Avista feedback received from this review into the final M&V plan prior to deployment of ADM field technicians. Each plan will contain the following information:

1. A description of site, project, and measure(s) being evaluated;
2. The expected M&V methodology describing its application[6] to the site;
3. Information to be collected to accomplish the expected M&V methodology;
4. Data to be collected to accomplish the expected M&V methodology; and
5. Expected data-collection equipment to be used by ADM staff.

ADM is familiar with and regularly employs several key references used to guide this process. The most common references are the International Performance Measurement and Verification Protocol (IPMVP), the Uniform Methods Project (UMP); and American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) Guideline 14. However, we also rely on our extensive experience to discern an appropriate rigor level for each site. For this evaluation we also expect to employ the Avista Technical Reference Manual (TRM) and Regional Technical Forum (RTF) to inform data collection needs.

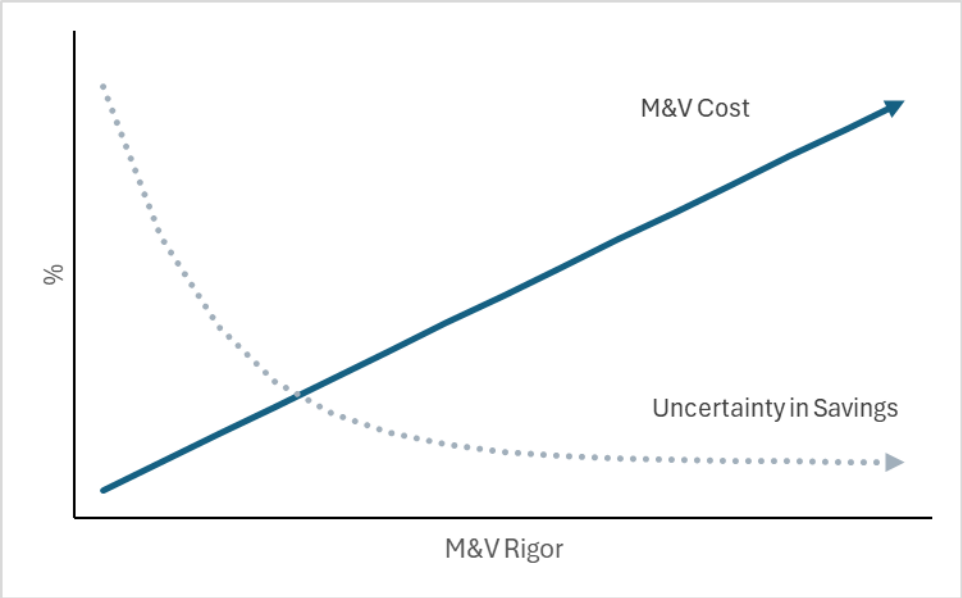
[6] Including contingencies and alternate approaches.

This leverages the thorough evaluation work already completed on such measures within the industry and allows the evaluation team to prioritize Avista customer experience. ADM has specific expertise in these matters, having completed the following efforts:

- Authored the UMP methods chapters for Commercial New Construction and Field Data Collection
- Developed RTF measure ENERGY STAR Air Purifier UES measure workbook;
- Reviewed all RTF UES measure workbooks for NWCC measure cost review efforts; and
- Utilized RTF UES measure workbook values, inputs, and assumptions for several impact evaluation efforts conducted in the Pacific Northwest.

Site-specific M&V Plans are tailored to both the unique measures evaluated, such as required level of rigor, and the unique facility, such as the feasibility of data collection and customer burden. ADM engineers are cognizant of the value of information principle and diminishing returns of additional value of information. As shown in Figure 2-1 the IPVMP philosophy of diminishing returns for M&V is instilled in ADM mentality. That is, ADM will compare the benefit of the additional information compared to the amount of effort, budget, and customer burden to determine if additional efforts are worthwhile.

Figure 2-1: Law of Diminishing Returns for M&V[7]



2.4.2 Measurement Verification, Monitoring and Measurements

Though most projects will have measure-level savings previously estimated through TRM or RTF values, there may be custom projects in the randomly selected sample that require on-site metering, such as facilities with uncommon operating hours, construction, or measures installed. ADM has experience with a wide variety of monitoring approaches applied to a spectrum of technologies and is well

[7] IPMVP M&V Guidelines: Measurement and Verification for Federal Energy Products. 2015. https://www.energy.gov/sites/prod/files/2016/01/f28/mv_guide_4_0.pdf

equipped with an extensive inventory of monitoring equipment available for use during this project. Our staff members have developed efficient and technically viable approaches for conducting primary monitoring and data retrieval. Having both the experience and proper tools, ADM provides cost effective and efficient field monitoring for this evaluation effort. In many cases, a low-level end-use monitoring effort can considerably improve engineering analysis estimates and modeling while reducing measurement errors, leading to improved estimates for future program savings.

If a site is selected for field monitoring, the field personnel will have all the personal protective equipment (PPE) required for safe and proper installation at the time of the visit. We will conduct measurement activities with minimal intrusion on the customer and facility operation. Our field personnel will also take photographs of a site and of its electrical and mechanical systems during the on-site visit, without infringing on customer or facility privacy. This form of documentation provides useful means of verifying equipment installation as well as resolving future potential contextual questions about the site.

2.5 Impact Evaluation Methods

ADM will employ the following approach to complete impact evaluation activities for the programs. ADM defines five major approaches to determining net savings for Avista's programs:

- Deemed Savings
- Partially/Fully Measured Retrofit Isolation (IPMVP Options A & B)
- Billing Analysis (IPMVP Option C)
- Facility-Level Regression Analysis (IPMVP Option C)
- Simulation Model Analysis (IPMVP Option D)

ADM notes that the Northwest RTF UES measures do not require NTG adjustments. In addition, billing analyses with counterfactual control groups, as proposed in our impact methodology, does not require a NTG adjustment, as the counterfactual represents the efficiency level at current market (i.e. the efficiency level the customer would have installed had they not participated in the program).

The facility-level regression analyses and simulation model analyses defined below indeed estimate gross energy savings, as they lack comparison groups, and therefore require NTG adjustments. For programs evaluated with these methods, ADM proposes to conduct in-depth interviews or participant surveys to estimate a NTG adjustment factor.

In the following sections, we summarize the general guidelines and activities ADM will follow to conduct each of the above analyses.

2.5.1 Deemed Savings

ADM will complete the validation for specific measures across each program using the RTF unit energy savings (UES) values, where applicable. Because ADM has experience with the Avista TRM, ADM understands that the Avista TRM references assigns average RTF UES for each measure. This is done in order to assign reasonably accurate ex-ante savings for each measure. For verified deemed savings, ADM will instead assign the appropriate RTF UES assigned to the measure specification, which is dependent on variables included but not limited to the following:

- Verify household type (SF, MF, MH, etc.)
- Verify space heating system type
- Verify cooling system type
- Verify water heating system type
- Verify heating and cooling zone
- Verify equipment sizing (tonnage, gallons)

Using this method, ADM will be able to accurately estimate deemed verified savings using region-based research conducted by the RTF. This enables the Evaluators and Avista to take advantage of the funding spent towards the RTF work in the region, access reviewed and approved UES values, and prioritize program learnings and adjustments based on credible estimates. The goal is to ensure that the proper measure unit savings are utilized in verified savings. ADM will document any cases where we recommend values differing from the specific unit energy savings workbooks used by Avista. If we find any projects that do not use the RTF values, we will complete additional investigation and review of measures with custom savings inputs.

ADM will review program application documents for a sample of incented measures to verify the tracking data accurately represents the original program documents. This sample will meet 90/10 precision goals. ADM will ensure the home installed measures that meet or exceed program efficiency standards.

ADM will then apply verification adjustments to these RTF values if deviations are found between tracking data and document-based verification, and if in-service rates deviate from 100% reported in survey responses. ADM will summarize measure-level verified savings impacts by extrapolating verified measure realization rates to the population of associated projects within each program.

2.5.2 Partially/Fully Measured Retrofit Isolation (IPMVP Options A & B)

For custom or otherwise non-deemed measures, ADM will carefully review the analyses and calculations that were used to develop stipulated savings values for the measures that are rebated. We evaluate the analysis for each measure according to the degree to which the savings calculations are supported and defensible and documentation is adequate. To facilitate our review of savings calculations, we use a checklist to record whether (1) the methodology used for the calculation was appropriate, (2) assumptions used were reasonable and appropriate, and (3) savings calculations were completed correctly.

The accuracy of a savings estimate developed through engineering calculations depends on the extent to which the analysis is based on correct assumptions regarding such factors as usage patterns and operating hours. We assess assumed and actual baseline conditions by reviewing program baseline assumptions, verifying adequate supporting documentation, and testing the validity of those assumptions via interviews with participants and the findings from primary verification efforts. In our review of the calculation procedures used for different types of measures, we focus on the main factors that determine energy use.

- Normally, the weakest part of any engineering calculation of savings relates to the characterization of the operating schedules of energy using equipment. In reviewing the energy

savings calculations, we determine whether the assumptions for usage patterns are within the range of reasonable hours for each building type and end-use application.

- For analyzing the calculations of energy savings and peak demand reductions associated with lighting measures, we focus on the three main factors that contribute to lighting energy use in a building: 1) lighting capacity, 2) the percentage of the capacity that is utilized, and 3) hours of use. That is, while lighting retrofits primarily reduce power densities (i.e., watts per square foot), account needs to be taken of the observed or typical utilization of that capacity.
- Similarly, there are factors whose effects on HVAC energy use are particularly important and that therefore are given special particular attention when we review the calculations for HVAC energy savings. Examples of such factors include thermostat set points and schedules, type of distribution system and control; ventilation rates, operating schedules for fans, lighting levels and schedules, particularly for office buildings, and equipment sizing.

Based on our evaluation of the calculations, we classify measures into one of three categories:

- Documentation is sufficient and original savings estimate is reasonable.
- Documentation is sufficient, but original savings estimate is not reasonable.
- Both documentation and original savings estimate are inadequate.

If a measure falls into one of the last two categories, we provide references that demonstrate observed deficiencies pertaining to the reasonableness of the given assumptions, the adequacy of the given documentation, and the appropriateness of the given methodology. Based on this work, we develop recommendations to Avista and program implementation staff regarding changes to stipulated savings values.

For custom measures, we develop a plan to sample and verify actual project savings and the engineering calculations used to calculate savings. Typically, we develop a process with program implementation staff through which the program implementer develops measurement & verification (M&V) plans that meet industry best standards for such projects and submits them to ADM engineering staff for review. We then revise the M&V approach to coordinate with the program implementer on on-site data collection or metering (as needed). This allows for the finalizing of savings prior to the issuing of a rebate check, allowing for custom incentives to be paid on verified savings, removing uncertainty surrounding what are often high-value projects. Custom projects are typically routed through the Site-Specific program. Evaluation details for this program and custom measures are descried further in section 5.1.

2.5.3 Billing Analysis (IPMVP Option C)

This section summarizes the general billing analysis methods ADM will employ for the evaluation of a subset of measures for each program.

For the purpose of this summary, a household is considered a treatment household if it has received a program incentive or has been defined in a treatment group, such as for the Residential Always-On Load Behavioral Program. Additionally, a household is considered a control household if the household has not received a program incentive or has been defined in a control group. To conduct a linear regression billing analysis for energy efficiency measures, ADM requires billing data for a control group to compare against treatment households. Control groups can be designed via randomized control trials (RCT) at the

outset of program design, or via quasi-experimental methods. For programs where RCT groups are defined, the evaluation team will compare the treatment group against the RCT-selected control group.

For programs where RCT design is not available, the evaluation team will request billing data for nonparticipant customers to serve as the control group. This method assumes Avista is able to provide consumption data for a group of similar non-participating customers in the service area. Further information on the selection of customers for a counterfactual control group is detailed in the "Comparison Group" section below, as well as potential risks and implications.

Using the constructed control group or the RCT assigned control group, ADM will fit a regression model to estimate weather-dependent daily consumption differences between treatment group households and control group households. ADM will include independent variables such as Heating Degree Days and Cooling Degree Days for weather controls, square footage, and other household characteristics where applicable to improve model confidence. We will tailor our regression model specifications to each program and measure. ADM will explore the following regression models:

- Fixed effect Difference-in-Difference (D-n-D) regression model (recommended in UMP protocols)
- Random effects post-program regression model (recommended in UMP protocols)

Further details on model specifications can be found below. It is important to note that because whole household consumption is used, the savings value includes the positive or negative effects of any non-measure changes made in the household. This option is used to determine the collective savings of all measures applied to the program-participating household by the energy meter. Therefore, ADM will attempt to isolate households that have installed only the measure in evaluation. For example, in evaluating the furnace measure in billing analyses, ADM will exclude households that have also installed an incented water heater in order to effectively isolate the effects of the furnace retrofit.

To evaluate the 2024 and 2025 program years, ADM will request billing data ranging from at least one year prior to measure intervention (i.e. date measure was installed, or date household was built) through the most recent date available from each household.

The following lists the data requirements for billing analysis:

- Monthly billing data for program participants (treatment)
- Monthly billing data for a group of non-program participants (control)
- Household-level data provided by Avista and public sources relevant to program requirements and targeted customers

In addition, ADM will gather the following datasets to complete each billing analysis:

- Historical NOAA weather data
- Typical Meteorological Year (TMY) weather data
- Publicly available household characteristics from county assessor data, if available

The following steps will be taken to prepare data:

- Gather billing data for homes that participated in the program

- Exclude participant homes that also participated in the other programs, if either program disqualifies the combination of any other rebate or participation
- Gather billing data for similar customers that did not participate in the program in evaluation
- Calendarize billing data
- Create a matched control group using non-participant billing and customer and/or household characteristic data
- Exclude homes missing sufficient billing data
- Exclude bills with consumption indicated to be invalid and/or outliers

ADM will report parameters necessary to portray model accuracy and significance such as coefficient p-values, adjusted r-squared values, and household-level and program-level kWh and Therm savings at the 90% confidence intervals for each state and fuel type. Program-year savings estimates at the monthly- and annual-level will also be reported for each state and fuel type.

ADM will summarize the measure-level impacts by extrapolating regression coefficients with TMY data to estimate typical measure savings based on participant household usage behaviors. The resulting regression measure-level savings estimates do not require any adjustments resulting from verification survey responses, as non-functioning equipment or equipment verified as not having been installed is already observed in the household consumption data.

One major caveat of this method is that we must be able to gather a sufficiently large sample of control households that are statistically similar to the treatment households. If the nonparticipant homes are statistically different from the participant homes in the pre-treatment period, this analytical approach will not provide meaningful results and ADM will therefore validate savings via RTF or Avista TRM engineering algorithms as well as additional literature review.

Billing analysis with a valid counterfactual group can provide reliable net impact estimates at the measure-level and program-level. However, the success of a billing analysis depends on the availability of several key factors:

- A sufficient number of customers have installed the measure to isolate measure-level savings;
- A sufficient number of similar nonparticipant customers can be identified and used towards propensity score matching to create a valid counterfactual group for the measure;
- Install dates for the measure display sufficient variability; and
- Historical billing data is available for at least one year prior to customer install dates.

This option is used to determine the collective savings of all measures applied to the program-participating household by the energy meter. It is important to note that because whole household consumption is used, the savings value includes the positive or negative effects of any non-measure changes made in the household.

ADM provides further detail on the implications of each of the components listed above.

2.5.3.1 Comparison Group

To estimate reliable net impacts through billing analysis, a similar counterfactual group must be selected. In programs where RCT groups are designed, such as for the Residential Always-on Load Behavioral Program, ADM will verify that these RCT treatment and control groups remain statistically valid in order to use in regression models. For billing analyses in which a RCT control group has not been previously defined, ADM will attempt to create a statistically similar control group using propensity score matching (PSM), a method that allows the evaluators to find the most similar nonparticipant customer households based on a range of independent variables. PSM allows the evaluators to find the most similar household based on the customers' billed consumption trends in the pre-period and verified with statistical difference testing. ADM has extensive experience conducting propensity score matching for residential program billing analyses of similar measures and is familiar with the implications and uncertainties involved in this type of analysis.

ADM proposes to construct a comparison group of nonparticipants who are similar to participants and reflect the counterfactual condition. ADM aims to achieve this by selecting customers from one of the two following options:

- Future program participants or
- Nonparticipants selected through propensity score matching (PSM)

For the prior case, ADM would isolate customers that participated later in the program year as the control group to compare against customers that participated earlier in the program year (the treatment group). ADM would then verify that the treatment and control groups display similar pre-period average daily consumption through t-testing and run a linear regression model to estimate the measure effect on consumption in the post-period.

In the latter case, ADM would use propensity-scoring matching (PSM) to match nonparticipants to similar participants using pre-period data, test the validity of the matches with t-testing, and run a linear regression to estimate the measure effect.

ADM will use available datasets to ensure the control households are similar to the treatment homes, using variables such household square footage, household heating type, household occupancy date, household zip code, and any other information available for the nonparticipant customers specific to the program. For example, to create a sufficient counterfactual group for the Low-Income Program, ADM will request flags for income eligibility across nonparticipant customers.

A propensity score is a metric that summarizes several dimensions of household characteristics into a single metric that can be used to group similar households. ADM will create a post-hoc control group by compiling billing data from a subset of nonparticipants in the Avista territory to compare against treatment households using quasi-experimental methods. This will allow ADM to select from a large group of similar households that have not installed an incented measure. With this information, ADM will attempt to create a statistically valid matched control group via seasonal pre-period usage. After matching, ADM will conduct a *t*-test for each month in the pre-period to help determine the success of PSM. ADM will also conduct a *t*-test for each month in the pre-period to help determine the validity of the previously defined RCT groups, if the program has defined these groups.

After creating a PSM control group, ADM will carry out linear regression modeling on the treatment and matched control group.

2.5.3.2 Fixed Effects Difference-in-Difference Regression Model

To calculate the impacts of heating season measures, ADM proposes to apply a linear fixed effects regression using participant and nonparticipant billing data with weather controls in the form of Heating Degree Days (HDD) and Cooling Degree Days (CDD).

For measures that are active during the heating season only, such as the air source heat pump or furnace, ADM will include heating degree days in the model specification. For measures that are active during the heating season and cooling season, such as water heaters and thermostats.

In addition, ADM will test and select the optimal temperature base for heating degree days and cooling degree days based on model r-squared values. ADM will select a value between 60- and 80-degrees Fahrenheit that displays the optimal model r-squared value. The selected base temperature therefore maximizes the total variation the model is able to explain.

The following equation displays the model specification to estimate the average daily savings due to the measure.

Equation 2-1: Fixed Effects Difference-in-Difference (D-n-D) Model Specification

$$\begin{aligned} ADC_{it} = \alpha_0 &+ \beta_1(Post)_{it} + \beta_2(Post \times Treatment)_{it} + \beta_3(HDD)_{it} + \beta_4(CDD)_{it} \\ &+ \beta_5(Post \times HDD)_{it} + \beta_6(Post \times CDD)_{it} + \beta_7(Post \times HDD \times Treatment)_{it} \\ &+ \beta_8(Post \times CDD \times Treatment)_{it} + \beta_9(Customer\ Dummy)_i + \varepsilon_{it} \end{aligned}$$

Where,

ADC_{it} = Estimated average daily consumption (dependent variable) in home *i* during period *t*

$Post_{it}$ = A dummy variable indicating pre- or post-period designation during period *t* at home *i*

$Treatment_i$ = A dummy variable indicating treatment status of home *i*

HDD_{it} = Average Heating Degree Days (base with optimal Degrees Fahrenheit) during period *t* at home *i*

CDD_{it} = Average Cooling Degree Days (base with optimal Degrees Fahrenheit) during period *t* at home *i*

$Customer\ Dummy_i$= A dummy variable indicating customer-specific identifier at home *i*

ε_{it} = Customer-level random error

α_0= The model intercept for home *i*

β_{1-9} = Coefficients determined via regression

The Average Daily Consumption (ADC) is calculated as the total monthly billed usage divided by the duration of the bill month. β_2 represents the average change in daily baseload in the post-period between the treatment and control group and β_5 and β_6 represent the change in weather-related daily

consumption in the post-period between the groups. Typical monthly and annual savings will then be estimated by extrapolating the β_2, β_7, and β_8 coefficients with Typical Meteorological Year (TMY) HDD and CDD data or actual weather displayed in the program year, gathered from NOAA.

2.5.3.3 Random Effects Post-Program Regression Model

ADM will also explore the post-program regression model with random effects to estimate net program savings. The post-program regression (PPR) model combines both cross-sectional and time series data in a panel dataset. This model uses only the post-program data, with lagged energy use for the same calendar month of the pre-program period acting as a control for any small systematic differences between the treatment and control customers; in particular, energy use in calendar month *t* of the post-program period is framed as a function of both the participant variable and energy use in the same calendar month of the pre-program period. The underlying logic is that systematic differences between treatment and control customers will be reflected in the differences in their past energy use, which is highly correlated with their current energy use. These interaction terms allow pre-program usage to have a different effect on post-program usage in each calendar month.

The model specification is as follows:

Equation 2-2 Post-Program Regression (PPR) Model Specification

$$ADC_{it} = \alpha_0 + \beta_1(Treatment)_i + \beta_2\,(PreUsage)_i + \beta_3\,(PreUsageSummer)_i + \beta_4(PreUsageWinter)_i + \beta_5(Month)_t + \beta_6(Month \times PreUsage)_{it} + \beta_7(Month \times PreUsageSummer_)_{it} + \beta_8(Month \times PreUsageWinter)_{it} + \varepsilon_{it}$$

Where,

i = the *i*th household

t = the first, second, third, etc. month of the post-treatment period

ADC_{it} = Average daily usage for reading *t* for household *i* during the post-treatment period

$Treatment_i$ = Dummy variable indicating whether household *i* was in the treatment or control group

$Month_t$ = Dummy variable indicating month-year of month *t*

$PreUsage_i$ = Average daily usage across household *i*'s available pre-treatment billing reads

$PreUsageSummer_i$ = Average daily usage in the summer months across household *i*'s available pre-treatment billing reads

$PreUsageWinter_i$ = Average daily usage in the winter months across household *i*'s available pre-treatment billing reads

ε_{it} = Customer-level random error

α_0= The model intercept for home *i*

β_{1-8} = Coefficients determined via regression

The coefficient β_1 represents the average change in consumption between the pre-period and post-period for the treatment group.

In this specification, savings are calculated by:

Equation 2-3 Monthly Savings Estimate

$$Savings = \sum Treatment\ Coeff \times Number\ of\ recipients\ in\ month\ i \times Number\ of\ days\ in\ month\ i$$

ADM will summarize measure-level savings using the equation above.

2.5.4 Facility-Level Regression Analysis (IPMVP Option C)

This section summarizes the facility-level regression analysis methods ADM will employ for the evaluation of a subset of programs in the portfolio. The methodology provided here references UMP Chapter 24 on Strategic Energy Management (SEM) Evaluation Protocol[8].

For the purposes of this summary, a facility may comprise a single building with a single meter or multiple buildings at the same time with multiple meters. Additionally, the evaluation period is when energy savings from retrofits will be estimated, and the baseline period is when energy consumption measurements are taken to establish a baseline for the facility's energy consumption. The objective of this evaluation activity is to estimate changes in a facility's energy consumption due to the program. In order to complete this analysis, it is important to have the following datapoints for each facility:

- Hourly or 15-minute interval meter data of the past 24 or 36 months for each facility
- Facility square footage
- Facility occupancy
- Detailed information on facility type
- Schedule of operations
- Facility shutdowns or closures
- Efficiency measures installed
- Changes in facility or building operations or production unrelated to program, but affecting energy consumption

In some cases, submetering may be feasible with the implementation of an ECM. This information will give the evaluators sufficient understanding of energy consumption at the facility to construct a valid energy consumption model tailored to the specific facility being evaluated. It is also important that the expected energy savings are sufficiently large to be detected with a statistical analysis of the available data.

The EnergyStar Portfolio Manager information will be reviewed to explore consumption trends and variation in benchmarking over time. We will also perform a documentation review each quarter of the

[8] https://www.nrel.gov/docs/fy17osti/68316.pdf

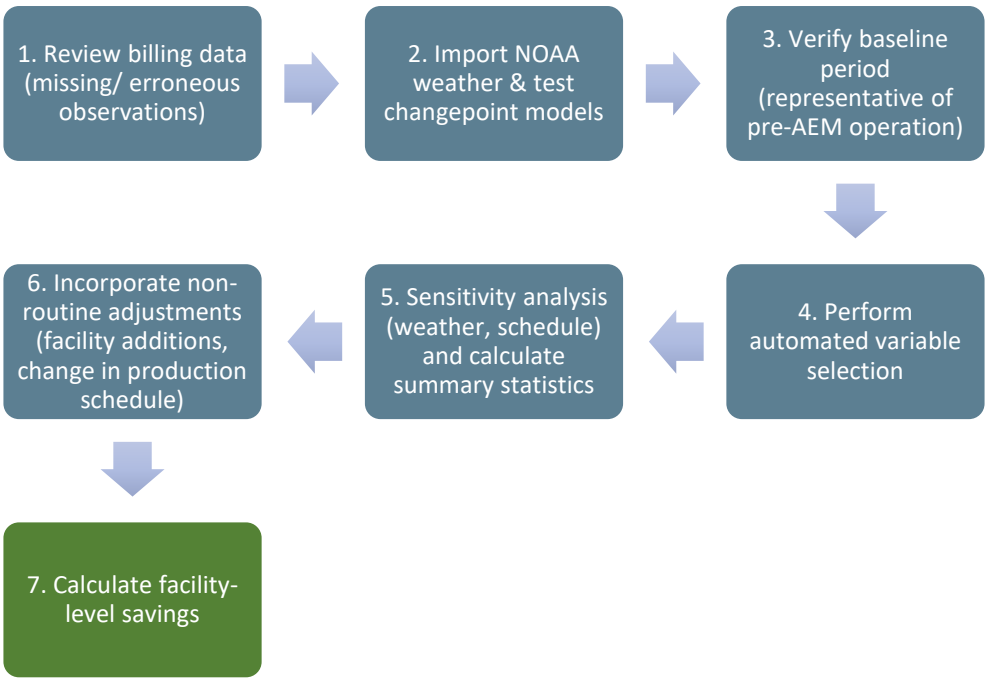
application form, measure tracker, occupancy tracker, and any other information available. Routine status update calls will mitigate any long-term risks from a lack of information.

The model specifications for the facility-level regression will be dependent on the facility to minimize observed standard errors. Therefore, there are no regression model specifications listed in this section. However, the analysis will be a multivariate linear regression model, with weather-dependent (Heating and Cooling Degree Days) and site-specific variables, such as square footage and building type, as inputs. We will also identify, estimate, report, and verify non-routine events monthly and apply non-routine adjustments as necessary on an annual basis. The M&V plan will be developed by all key members of our team and will be updated with feedback from Avista and relevant stipulations from the IPMVP Application Guide on advanced M&V strategies.

ADM will use consumption data in the baseline period (the 12 months immediately prior to project participation) and in the performance period (program intervention) in a linear regression model with specifications tailored to each building to predict monthly energy usage if no measures were installed. If additional baseline meter data is available, we may request consumption data as far back as 36 months. Specific models for each facility will be selected based on the highest observed R-squared value as well as the root mean squared error's coefficient of variation. High frequency data such as hourly or daily data is encouraged for this type of evaluation because it increases the probability of detecting energy savings and provides greater insights about the program effects.

ADM summarizes the steps completed towards this facility-level analysis:

Figure 2-2. Facility-Level SEM Analysis Process Flow



The statistical packaging software R will be used to conduct our analyses. An R shiny application provides a browser-based user interface easily operable by all users simultaneously. Although a similar tool has been developed, a custom version will be generated for this scope-of-work to incorporate the requirements in the M&V Guidelines. The automated regression tool (ART) will incorporate the

regression analysis, visual representation, uncertainty analysis, offline and online change point detection, and NRA's. Use of a shiny interface allows for secure access through a web browser to an internal server. Access to the shiny application can be granted to stakeholders as necessary for collaboration.

To complete the analysis, the following data is necessary:

- Building data from Avista including gross sf, leased sf, and space use type;
- A list of planned installed measures and their expected energy savings, costs, and timelines in the initial project application;
- Continuous monthly utility billing data in baseline period through performance period for all participants;
- National Oceanic and Atmospheric Administration (NOAA) weather data measured at the nearest weather stations; and
- Onsite generation, submeter, and building automation system (BAS) data.

Building data to be collected includes building space type, gross square footage, leased square footage percent per building space type, occupancy schedule, details of planned energy efficiency measures, and details of current HVAC, HVAC controls, lighting, lighting controls, server loads, and other building equipment. We may request additional information to increase the accuracy of the analysis. For example, building base temperatures for each space type, along with scheduled thermostat settings is valuable information in order to accurately estimate HDDs and CDDs.

Routine adjustments will be made to the model using the provided billing data and as site variable inputs change. Each year, for new construction buildings, we will use observed energy use data to change the shape of the baseline curve for the following year. We will also adjust the energy model for any changes in occupancy, operating hours, space use type, data centers, and cold years, as specified in the M&V Guidelines.

Through collaboration and data reviews, potential non-routine events (NREs) will be identified to integrate the necessary adjustments before calculating avoided energy use. NREs are events that change a building's energy use that were not accounted for in the baseline model, such as, changes in space use type, change in operating hours, fuel switching, on-site energy generation, occupancy changes, etc.

ADM will specify the regression model for the facility's energy consumption to accurately predict the facility's adjusted baseline. A model designed with this goal is able to yield an accurate estimate of facility energy savings and help the evaluator identify relationships in energy consumption data not evident through engineering analysis. ADM will accomplish this by selecting independent variables that portray important details about the facility's operation and which provide a level of detail about energy consumed at the facility. ADM will include HDD and CDD independent variables in addition to information on facility temperature setpoints, and we will explore a range of HDD and CDD base temperatures to select a base temperature that yields the best model fit. ADM will test the model fit by observing several factors, such as model residuals to investigate any auto-correlated errors, model *R*-squared coefficients, and predictive accuracy by comparing predicted energy consumption against metered energy consumption. ADM will include in the evaluation report the standard errors and confidence intervals to indicate the savings uncertainty at the facility-level and program-level.

ADM will explore the following regression-based methods for estimating facility savings:

E. Forecast models
F. Pre-post models
G. Normal operating conditions models
H. Backcast models
I. Panel models

Each of the models listed above comply with IPMVP Option C, as each uses regression to adjust the baseline for differences in facility operating conditions between baseline and reporting periods.

The results from this analysis are facility-level, gross verified energy savings. ADM understands that Avista reports net energy savings in Washington and Idaho. Therefore, an additional component of this evaluation method is to adjust facility-level gross savings with a NTG adjustment. For programs which are evaluated with this method, ADM will also interview building managers to gather information on awareness of the program, whether energy efficiency measures would have been installed in the absence of the program, or alternative improvements in the absence of the program.

2.5.5 Simulation Modeling (IPMVP Option D)

ADM provides the following method as a supplemental option for estimating verified net savings for the ENERGY STAR Manufactured Homes Program, or new potential new construction pilots. This method involves a whole building simulation (IPMVP Option D) in addition to a billing analysis with a counterfactual control group.

The simulation analysis results in gross savings estimates whereas a billing analysis with a control group results in net savings estimates. Therefore, ADM proposes the option of a simulation analysis with a net-to-gross (NTG) savings adjustment or a billing analysis with a counterfactual control group.

This approach involves the comparison of participating homes with a User Defined Reference Home (UDRH). The methodology detailed in this section is supported by the IPMVP Option D as a whole building simulation using calibrations. ADM will use the simulation models to compare a sample of participating homes with a User Defined Reference Home (UDRH), an agreed upon set of efficiency standards built to represent the baseline residential home in the region. The UDRH is defined in more detail in the following subsection.

ADM will use the program REM/Rate to complete whole building simulation modeling efforts. The UDRH feature in REM/Rate allows energy consumption to be calculated using energy efficiency input values for both the efficient home and the baseline home. The UDRH will be designed as an exact replica of each program participating home in terms of size, structure, and climate zone. However, instead of using the actual HERS-rated efficiency values, we use the energy codes defined in the UDRH. ADM will gather energy characteristics for the efficient, rated home by requesting HERS datafiles from the certified HERS-raters or by gathering information from the HERS certificates required by the program and provided by Avista.

To calculate the gross savings for a given home, first, the as-built home is verified using building characteristics found in supporting documentation. Once the efficient home is modeled, the energy model calculates the unadjusted gross savings by subtracting the energy use of the as-built home from

the energy use of its UDRH baseline home. This method provides a reliable and supported means of verifying gross residential new construction home savings.

Energy savings will be calculated per-home with the following calculation:

Equation 2-4: Whole Building Model Energy Savings

$$Energy\ Savings = Consumption_{UDRH} - Consumption_{ENERGY\ STAR}$$

Where,

$Consumption_{UDRH}$ = Simulated energy consumption values from REMRate for a household under the UDRH efficient code standards

$Consumption_{ENERGY\ STAR}$ = Simulated energy consumption from REM/Rate for a household built referencing the HERS certification values

ADM defines the UDRH used to evaluate simulated savings in the following section.

User Defined Reference Home (UDRH)

The UDRH represents a home built to meet the state of Idaho's and Washington's current minimum energy efficiency code requirements. Idaho uses the residential 2015 International Energy Conservation Code (IECC) with amendments[9] for newly constructed residential homes until January 1, 2021. Idaho's current building code references the residential 2018 IECC with Idaho amendments. ADM will use the residential 2018 IECC with Idaho-specific amendments efficiency values to create the UDRH when evaluating homes built in Idaho after January 1, 2021. This comparison will provide an accurate simulation of a newly constructed minimum efficient code residential home to compare against efficiency, program-participating homes. For homes built in Avista's territory in Washington state lines, ADM will create a UDRH based on Washington residential building codes, which are modeled after International Residential Code (IRC) 2018, which came into effect on February 1, 2021. If this IECC or IRC code for Idaho or Washington is updated before or during either the 2024 or 2025 program years, ADM will update the UDRH as necessary to meet residential building codes in each state.

Realization rates from the home-level analyses can be used to provide strategic guidance for program improvement. We will examine realization rates for commonalities among home builders or HERS raters and inform Avista if any program partner demonstrates a statistically significant increased likelihood of association with low realization rates. We will then review the home results in further detail to identify a root-cause (errors in model input, construction practice, equipment sizing, etc.)

2.6 Net-To-Gross and General Spillover Analysis

ADM proposes to conduct NTG analysis for programs in which impact evaluation methods result in gross energy savings, such as the Washington State Buildings Early Adopter Incentives Pilot, and the BEIQ Pilot. For this task, we will interview a sample of facility managers to assess free ridership and spillover. ADM will work with Avista to develop a sampling plan which achieves 90/10 precision for free ridership and spillover estimates.

[9] https://www.energycodes.gov/adoption/states/idaho

As this task involves spillover assessment and ADM staff have developed an innovative approach to spillover assessment, we have opted to discuss the optional NTG task in this section. We first describe our approach to assessing free-ridership and spillover specifically for the option task. We then discuss more generally the innovative approach to spillover assessment.

2.6.1 Free Ridership and Spillover Assessment

Our proposed free ridership approach is consistent with other self-report approaches. We will ask building managers questions to assess the likelihood that they would have reduced energy consumption or installed energy efficient measures absent the program interventions. In this case, interventions would not be limited to the program incentives, but to program outreach and any other assistance the program offers. If a building manager indicated improvements would not have been implemented to the same level without program assistance, we would ask questions to identify the likelihood that the building manager would have included any energy efficiency measures and, if so, what those measures would have been.

For each facility and measure, we will estimate a free ridership probability based on the average of three scores: a *program components score*; a *program influence score*; and a *no-program score*. Each score has a value ranging from 0 (no free ridership) to 1 (maximum free ridership).

The program components score is based on how much the building manager's decisions to implement energy efficiency improvements was influenced by: 1) technical assistance or information from program staff; 2) technical assistance or information from program implementers; 3) the program incentives; and 4) program informational materials. The maximum rating from the four components, converted to a score from 0 (corresponding to a rating of 1) to 1 (corresponding to a rating of 5), represents the program components score.

The program influence score is based on respondents' rating of how likely (on a scale from 1 to 5) it is they would have built any of the efficient homes if the rebate and information had not been provided by the program. It is assigned by converting the rating into a score from 0 (corresponding to a rating of 5) to 1 (corresponding to a rating of 0).

Finally, the no-program score is based on responses to a series of questions about the energy efficiency measures that the facility would have likely installed that meet energy prescription efficiency standards without the program.

The free ridership score is calculated as:

1 – Average (Program Components Score, Program Influence Score, No Program Score)

We also will ask questions to assess spillover. We will quantify a series of questions into a score representing the maximum level of spillover that the nonparticipating buildings from participating building managers represent. Then, to factor in the program influence on the decision to implement energy efficiency improvements on participating buildings, we will adjust the maximum spillover value by 1-FR, where FR represents the free ridership score program.

2.7 Cost-Effectiveness Tests

ADM will calculate each program's cost-effectiveness, avoided energy costs, and implementation costs. ADM will use our ADM-developed cost-effectiveness tool to provide cost-effectiveness assessments for the Residential, Low-Income, Commercial, and Industrial Portfolios by program, fuel type, program year, and measure, for each state.

As specified in this solicitation, ADM will determine the economic performance with the following cost-effectiveness tests:

- Total Resource Cost (TRC) test;
- Utility Cost Test (UCT);
- Participant Cost Test (PCT);
- Rate Impact Measure (RIM) test; and
- Resource Valuation Test (RVT).

ADM has extensive experience conducting and summarizing cost-effectiveness for residential and non-residential programs for utility commission reporting across the country as well as summarizing impact evaluation findings that could be useful to improve program cost-effectiveness, such as adjustments to program requirements, program tracking, and program implementation.

2.8 Non-Energy Benefits

ADM will use the RTF and Avista's non-energy benefits evaluation report results to quantify non-energy benefits (NEBs) for residential measures with established RTF values where available. Measures with quantified NEBs include residential insulation, high efficiency windows, air source heat pumps, and ductless heat pumps. ADM understands the RTF provides NEB values for electric measures, but not natural gas measures.

In addition to the residential NEBs, ADM proposes to apply the end-use non-energy benefit and health and human safety non-energy benefit to the Low-Income Program. ADM understands that the two major non-energy benefits referenced above are uniquely applicable to the Low-Income Program. ADM will apply those benefits to the program impacts as well as additional non-energy benefits associated with individual measures included in the program.

In the case NEBs are also quantified in Avista's separate process evaluation, ADM will incorporate these NEBs to the impact evaluation. ADM will also explore potential non-energy impacts (NEIs) and NEBs such as the following, for each program:

1. GHG reduction
2. Reduced maintenance costs for customers
3. Water conservation
4. Job creation

ADM will work with Avista staff during the kick-off meeting to identify a listing of NEIs and NEBs that are of interest for each program. Additionally, ADM recognizes there may be additional health and safety benefits for programs that target Named Community efforts. ADM will work with Avista to prioritize the identification of such additional NEIs and NEBs for these programs as they are designed and rolled out.

Given the differences across these programs, we expect that the NEBs quantified (or qualified) for each will vary accordingly.

3. Process Evaluation Approach

ADM will conduct a thorough process evaluation to identify program strengths as well as areas for potential program improvement. As detailed below, the process evaluation will, at a minimum, address all the objectives identified in the RFP and cover all elements of a successful program, including design, staffing, marketing, implementation, delivery, and customer response. An important part of this evaluation will be to identify market barriers that impede the program's reach into all parts of Avista's residential and non-residential markets.

The following subsections present overviews of our approach to process evaluation, followed by information on how we identify and answer important research questions, our data collection approaches, interview and survey implementation, and the timing and cadence of process evaluation activities.

3.1 Process Evaluation Overview

Our approach to process evaluation for the Avista portfolio will address the overall effectiveness of program activities in overcoming barriers and will provide strategic guidance to assist program improvement. Data collection activities will provide information on the effectiveness of program processes and procedures, including how well the program works with key stakeholders to optimize program operations. To this end, ADM will:

- Review program documentation and interview program and implementer staff to understand program goals, rules, and processes - including any coordination with delivery of gas utility programs - as well as to reveal any issues or concerns to be investigated through other process evaluation data collection;
- Interview applicable market actors about their experiences with the program to shed light on the effectiveness of program processes, the communication between Avista and its implementers, marketing activities, customer decision-making, and participation barriers;
- Survey program participants about their experiences, including satisfaction with the program, and their decision-making process; and
- Survey nonparticipants to reveal the level of program awareness and identify barriers to participation.

From the information obtained from the process evaluation, ADM will identify what the programs are doing well and what factors may be preventing the programs from achieving their goals or doing so more cost-effectively. This will help Avista and its implementers better understand the impact evaluation results and make related management decisions.

ADM will use process evaluation best practices, which include:

- Allocating process evaluation resources based on each program's contribution to overall energy savings; evidence of evaluation need (e.g., failure to meet savings goals or unsolicited feedback from customers or trade allies); changes in program design or implementation; and the recency with which programs had a detailed process evaluation.

- Designing all data collection instruments to address specific research questions, ensuring that all needed information is collected, and none is collected that will not or cannot be used.
- Presenting the process evaluations results clearly and efficiently, identifying how each interview or survey finding addresses a specific research question. Avista will not have to sort through lengthy descriptions of every survey response trying to figure out the meaning of the results.
- Providing meaningful high-level conclusions, which will form the basis for clear, actionable recommendations for process improvements where identified.

As specified by Avista, we will conduct a separate process evaluation for Washington and Idaho Programs. Each evaluation will cover all programs. We recognize Avista's desire for each process evaluation to be as comprehensive and meaningful as feasible. To that end, we will ensure that the process evaluation for each program is informed by multiple sources: staff and implementers, trade allies, program participants, and nonparticipating customers.

Where possible, we will seek to achieve the standard level of 90% confidence of 10% precision (90/10) – separately for Washington and Idaho – for participant surveys. We note, however, Avista's recognition that such a level of confidence and precision is not always feasible, particularly in programs with relatively small participant populations. In the case of market actors, such as contractors, retailers, and distributors, the choice of data collection approach will be driven by the size of the relevant market actor population and the nature of the data to be collected.

Table 3-1 summarizes our data collection approaches for each program. We will revise this as needed after we obtain greater detail about program participation and trade ally involvement during the project initiation period. We discuss sample size and confidence/precision issues in more detail in Section 3.3, *Data Collection Approaches*, below.

Table 3-1: Summary of Process Evaluation Sources, by Program

<table>
<tr><th>Programs</th><th>Document & Data Review</th><th>Staff / Implementers</th><th>Trade Allies</th><th>Participants</th><th>Non-participants</th></tr>
<tr><td colspan="6">Residential and Low-Income</td></tr>
<tr><td>Residential Appliance and Thermostat Program</td><td rowspan="13">Review all program documentation, (e.g., marketing plans and materials, implementation plans, applications) and project files.</td><td rowspan="13">Individual or group interviews with program and implementer staff of each program</td><td rowspan="6">Omnibus online survey and/or phone interviews</td><td rowspan="11">Program-specific multi-mode surveys, targeting 90/10 confidence/ precision per state</td><td rowspan="13">Cross-cutting multi-mode survey, with 90/10 confidence/ precision (n = 68) in each state</td></tr>
<tr><td>Residential Shell Program</td></tr>
<tr><td>Residential Fuel Efficiency Program</td></tr>
<tr><td>Residential On-Bill Repayment/Financing Program</td></tr>
<tr><td>Residential Always-On Behavioral Program</td></tr>
<tr><td>Residential Behavioral Program</td></tr>
<tr><td>Residential Home Energy Audit Program</td></tr>
<tr><td>Residential Direct Install Insulation Program</td></tr>
<tr><td>Low-Income</td><td>CAP interviews</td></tr>
<tr><td>Named Community Investment Fund (NCIF) Program</td><td>CAP interviews/ other organization interviews/ participant interviews</td></tr>
<tr><td>Residential ENERGY STAR Manufactured Homes</td><td>Retailer interviews</td></tr>
<tr><td>Residential Multifamily Weatherization – New Offerings Program</td><td>Property manager interviews</td><td rowspan="2">N/A</td></tr>
<tr><td>Residential Midstream Program</td><td>Distributor interviews</td></tr>
<tr><td colspan="6">Commercial & Industrial</td></tr>
<tr><td>C&I Appliance and HVAC Controls Program</td><td rowspan="12">Review all program documentation, (e.g., marketing plans and materials, implementation plans, applications) and project files.</td><td rowspan="12">Individual or group interviews with program and implementer staff of each program</td><td rowspan="12">Omnibus online survey and/or phone interviews</td><td rowspan="11">Program-specific multi-mode surveys, targeting 90/10 per state</td><td rowspan="12">Cross-cutting multi-mode survey, with 90/10 confidence/ precision (n = 68) in each state</td></tr>
<tr><td>C&I Site-Specific Program</td></tr>
<tr><td>C&I Prescriptive Lighting Program</td></tr>
<tr><td>C&I Small Business Direct Install Lighting Program</td></tr>
<tr><td>C&I Prescriptive HVAC Variable Frequency Drive Program</td></tr>
<tr><td>C&I Prescriptive Shell Program</td></tr>
<tr><td>C&I Green Motors Program</td></tr>
<tr><td>C&I Grocer Program</td></tr>
<tr><td>C&I Building Operator Certification Program</td></tr>
<tr><td>C&I Midstream Program</td><td>N/A</td></tr>
</table>

3.2 Identifying and Answering the Important Process Questions

ADM will use the various information sources – program documentation review, staff and implementer interviews, applicable market actor interviews, and customer surveys – to provide convergent information to address the identified research questions. We will make maximally effective use of each source by identifying which sources will provide the most applicable information to each question, as shown in Table 3-2. For example, while program and implementer staff interviews will likely touch on most or all research questions, we will rely more heavily on feedback from market actors, participants, and nonparticipants to assess customer service and market barriers.

Market actors and program participants will provide important input into most questions relating to program implementation, but they likely will not be major sources of information regarding management tools or cost management. Our assessment of nonparticipants' awareness of the program offerings and reasons for nonparticipation will provide important information relating to program marketing, participation information, rebates and incentives, and customer service as well as participation barriers.

Table 3-2: Data Sources to Answer Process Evaluation Research Questions

Process Evaluation Research Question	Document and Data	Staff	Market Actors	Participants	Nonparticipants
Are programs run per design and efficiently/effectively?	✓	✓	✓	✓	
Is staffing/organization sufficient and appropriate?		✓			
Is customer service of high quality, timely, and effective?			✓	✓	✓
Are marketing plans implemented per design and effective?	✓	✓	✓	✓	✓
Are quality assurance procedures appropriate and effective?	✓	✓	✓	✓	
Are management and implementation tools appropriate and effective?	✓	✓			
Are implementation contractors running programs effectively?		✓	✓	✓	
Are program materials effective and complete?	✓	✓	✓	✓	✓
Are costs managed properly and efficiently?	✓	✓			
Are contractors effectively capturing appropriate opportunities and ensuring comprehensive services?		✓	✓	✓	
Are rebates/incentives appropriate for meeting program goals?		✓	✓	✓	✓
What are the market barriers that impede program reach?			✓	✓	✓

The key to delivering a truly valuable process evaluation is refining and specifying the research questions by reviewing previous evaluation findings and thoughtfully interviewing program and implementer staff. For example, our review of prior evaluation reports identified the following issues that we would expect to investigate in our process evaluation:

- **Contractors are an important source of program awareness among program participants, while word of mouth and bill inserts are the most common among program nonparticipants. Recently, contractors as a source of awareness of residential programs have decreased, while word of mouth has increased.** The relationship between source of awareness and participation status has at least two interpretations: 1) that nonparticipants are less likely than participants to

have done recent work with a contactor and so have had less opportunity to learn from a contractor about the program; and 2) that the contractors that nonparticipants have worked with are less likely to tell their customers about the program. Both of these interpretations have potential implications for the program. The second interpretation points to greater opportunity for the program to increase participation, by increasing outreach to contractors to increase program referrals when working with customers that have contacted them for home improvement projects. However, the first interpretation may also have implications for increasing program participation if contractors can sell more improvement work by making more program referrals. Investigating which of these interpretations is more accurate by asking customers about their experience with contractors could help point the program to the correct outreach strategies. The decrease in the degree to which contractors have served as a program awareness source underscores the importance of investigating this issue and identifying reasons for the decrease.

- **The process evaluation of the 2019 Idaho low-income program pointed to high turnover by weatherization contractors.** This could affect the success of the program not only by reducing the availability of contractors to complete weatherization projects, but also potentially by decreasing the quality of weatherization treatments if many are performed by inexperienced contractors. Investigating the causes of the high turnover rate, and the impacts of turnover on project completion and quality, could provide the program with information that it could use to reduce turnovers and mitigate the impacts.

Another aspect of identifying and answering the important questions is understanding what is and is not meaningful in evaluation results. In preparing reports, ADM seeks to prioritize the dissemination of information that can lead to material and beneficial changes or insight for Avista's program managers and stakeholder groups.

3.3 Data Collection Approaches: Core Programs

The following provides details on the process evaluation data collection approaches we will use.

3.3.1 Document and Data Review

We will review available program documents, including program manuals, program logic models, contractor training materials, marketing materials and plans, and application forms to better understand how the program operates and to inform the evaluation design. The review also serves as process evaluation input, by helping us identify opportunities for program improvement, such as potentially overlooked marketing channels or tactics, or opportunities to streamline or expand application forms to collect needed data.

Reviewing Avista's program logic models will help ensure our understanding of each program's objectives and how the program's activities are expected to achieve those objectives. The logic model review will be a process evaluation end in itself – we will provide feedback on how well the model explains and describes the program theory – but it also will guide data collection and interpretation. In turn, our data collection activities may provide feedback on how a given model should be revised to better reflect the realities for that program.

We also will review project tracking data, which is a valuable resource for understanding how the program is performing and the market response. A review of the data system can also verify that the data are sufficient and complete enough to support program management and evaluation.

3.3.2 Program and Implementer Interviews

We will conduct in-depth interviews (IDIs) with program management staff to fill out our understanding of program design, goals, processes, and marketing strategies; to assess communication and coordination between Avista and its implementers; to get Avista's input on its implementer performance; to gain insight into quality control and assurance processes; to identify challenges that the programs have encountered and how those challenges have been addressed; and to clarify evaluation goals and research questions. Senior evaluation team members will conduct the IDIs using semi-structured interview guides (see Section 3.4, *Instrument Development*, below).

3.3.3 Participant In-depth Interviews for Named Community Programs

We will conduct in-depth interviews (IDIs) with select program participants to fill out our understanding of participant customer journey, benefits of the program, and helpful communication methods. This method of data collection will be prioritized for programs providing offerings to Named Communities. Because these programs are new offerings from Avista and are targeted towards customers in Named Communities with the goal of resolving their unique barriers to program participation and unique energy needs, ADM will develop a unique participant interview guide for this target demographic that focuses on energy burden, program satisfaction, program communication methods, and additional energy needs. Senior evaluation team members will conduct the IDIs using semi-structured interview guides (see Section 3.4, *Instrument Development*, below).

3.3.4 Market Actor, Participant, and Nonparticipant Surveys

We will conduct either telephone or web surveys with market actors, program participants, and nonparticipants. We anticipate conducting surveys as telephone, web, or mixed-phone/web surveys. We typically will conduct web surveys with email invitations, but we also use mail or postcard invitations to take web surveys. We have used the latter when email addresses were not available or, in some cases, as an adjunct to the email invitations.

The selection of survey type will depend on the nature of the target audience, the anticipated challenges in reaching customers by various methods, and the nature of the information to be collected. Decreasing response rates to residential phone surveys over the past several years have made web surveys a more cost-effective approach for residential target audiences. Response to web surveys also have declined in recent years; thus, we will consider and recommend other modes as appropriate.

We still obtain good response rates to phone surveys of most nonresidential target groups, including market actors. Further, phone surveys are valuable when discussing more technical issues that may require clarification or when contacting larger customers, when the contact identified in project records is not necessarily the best respondent for an organization. Thus, we will consider phone surveys, as appropriate, with these groups.

3.3.4.1 Market Actors

In the case of market actors, such as contractors, retailers, and distributors, the choice of data collection approach will be driven by the size of the relevant market actor population and the nature of the data to be collected. However, as noted in Table 3-1, above, we anticipate a combination of online surveys and phone interviews.

3.3.4.2 Participants

As Table 3-3 shows, achieving 90/10 confidence/precision separately for each state and fuel type would not be feasible, as it would require achieving survey completions with more than one-third of the participant population. Anticipating this, Avista has indicated that participant samples for each state may include residents of the other state so long at most of the sample comes from the native state. The ADM team will make use of the above allowance when needed but will take measures to ensure that each sample includes the minimum number of non-native customers.

Table 3-3: Estimated Participant Population[1], Sample Size, and Respondent Goals by Program Separated by State

Program[2]	Washington						Idaho					
	Electric			Natural Gas			Electric			Natural Gas		
	Pop.	90/10	%	Pop.	90/10	%	Pop.	90/10	%	Pop.	90/10	%
Residential/Low-Income												
Residential Appliance and Thermostat Program	400	58	15%	400	58	15%	400	58	15%	400	58	15%
Residential ENERGY STAR Manufactured Homes Program	30	21	70%	5	5	100%	15	13	87%	5	5	100%
Residential Shell Program	300	56	19%	1,700	66	4%	150	47	31%	400	58	15%
Residential Fuel Efficiency Program							150	47	31%			
Residential Midstream Program	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Residential Multifamily Weatherization – New Offerings Program	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Residential On-Bill Repayment/Financing Program	100	41	41%	50	29	58%	70	35	50%	30	21	70%
Residential Always-On Behavioral Program	50,000	68	0%	50,000	68	0%						
Residential Behavioral Program	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Residential Home Energy Audit Program	150	47	31%				150	47	31%			
Residential Direct Install Insulation Program	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Low-Income Program	1,400	65	5%	1,600	65	4%	350	57	16%	400	58	15%
Named Community Investment Fund (NCIF) Program	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Commercial & Industrial												
C&I Appliance and HVAC Controls Program	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
C&I Site-Specific Program	54	17	32%	9	5	56%	9	23	36%	3	3	100%
C&I Prescriptive Lighting Program	870	63	7%				473	60	13%			
C&I Small Business Direct Install Lighting Program	200	51	26%				100	41	41%			
C&I Prescriptive HVAC Variable Frequency Drive Program	2	2	100%				4	4	100%			
C&I Midstream Program	500	68	14%	400	68	17%	400	68	17%	300	68	23%
C&I Prescriptive Shell Program	6	6	100%	1	1	100%	1	1	100%	1	1	100%
C&I Green Motors Program	8	8	100%				2	2	100%			
C&I Grocer Program	9	8	89%				4	4	100%			
C&I Building Operator Certification Program	11	11	100%	11	11		11	11	100%	11	11	100%

[1] Participant populations were estimated from the 2024 Annual Conservation Plan, making some assumptions about the mean number of measure units per participant and assuming 80% of participation would be in Washington and 20% in Idaho. ADM will, of course, use the most up-to-date data on actual participation available to establish sample sizes.

ADM will make use of the above allowance when needed but will take measures to ensure that each sample includes the minimum number of non-native customers. Thus, for example, according to Table 2-1, achieving 90/10 for electric customers in the ENERGY STAR Manufactured Homes would require obtaining 21 survey completions for Washington (70% of the population) and 12 for Idaho (80% of the population). Assuming we complete the survey with 4 (33%) of the estimated 12 Idaho customers, we would "borrow" 8 of the Washington survey respondents to complete the Idaho sample.

We will work with Avista to establish an approach that ensures that, in such cases, we use the non-native respondents that best represent the native state. Possible approaches include selecting those who live closest to the state border or to draw a non-native subsample that is demographically closest to the native state sample.

Notwithstanding the above, it remains the case that it likely will not be feasible to achieve 90/10 sample sizes for several programs, even by supplementing state samples with non-native participants, as Table 3-4 illustrates. In this table, we have summed the estimated Washington and Idaho participant populations for each program. For the 90/10 sample, we have summed the completion counts *that would be required if we achieved a 90/10 sample for each state*, with two-thirds of each state's count coming from native participants. For example, according to Table 3-3, above, achieving 90/10 samples with electric customers for the Residential On-Bill Repayment Program would require 41 survey completions for Washington and 35 for Idaho. If two-thirds of each sample were native customers, that would require responses from 28 Washington customers and 13 Idaho customers, for a total of 41 responses.

For programs for which obtaining a 90/10 participant sample is not feasible, we propose a combination of online surveys, supplemented with in-depth interviews with selected participants. The latter may include those who did not respond to the online survey and/or those who indicated any dissatisfaction in the online survey. In the case of programs with very small participant populations, we may attempt a census of participants.

In developing any sample, we will ask Avista for a list of customers that had been selected for another survey within the previous year, if available, to scrub the sample frame of such customers. When sample development overlaps for two or more surveys, we will allocate the overlapping customers to one or the other sample to ensure that no customer is recruited for more than one survey (or, in the case of influential, "must-have" customers, that they are included in all important survey efforts in a manner that minimizes survey and EM&V burden to the customer).

Table 3-4: Estimated Combined Washington and Idaho Participant Population, Sample Size, and Required Survey Completion Rates for All Programs – Assuming Two-Thirds of Each State's 90/10 Sample are Native to that State

Program	Washington and Idaho Combined					
	Electric			Natural Gas		
	Pop.	Sample	%	Pop.	Sample	%
Residential Appliance and Thermostat Program	800	63	8%	800	63	8%
Residential ENERGY STAR Manufactured Homes Program	45	28	62%	10	9	90%
Residential Shell Program	450	59	13%	2,100	66	3%
Residential Fuel Efficiency Program				150	47	31%
Residential Midstream Program	N/A	N/A	N/A	N/A	N/A	N/A
Residential Multifamily Weatherization – New Offerings Program	N/A	N/A	N/A	N/A	N/A	N/A
Residential On-Bill Repayment/Financing Program	170	49	29%	80	37	46%
Residential Always-On Behavioral Program	50,000	68	0%	50,000	68	0%
Residential Behavioral Program	TBD	TBD	TBD	TBD	TBD	TBD
Residential Home Energy Audit Program	300	56	19%			
Residential Direct Install Insulation Program	TBD	TBD	TBD	TBD	TBD	TBD
Low-Income Program	1,750	66	4%	2,000	66	3%
Named Community Investment Fund (NCIF) Program	TBD	TBD	TBD	TBD	TBD	TBD
C&I Appliance and HVAC Controls Program	TBD	TBD	TBD	TBD	TBD	TBD
C&I Site-Specific Program	63	40	63%	12	8	67%
C&I Prescriptive Lighting Program	1,343	65	5%			
C&I Small Business Direct Install Lighting Program	300	56	19%			
C&I Prescriptive HVAC Variable Frequency Drive Program	6	6	100%			
C&I Midstream Program	N/A	N/A	N/A	N/A	N/A	N/A
C&I Prescriptive Shell Program	7	7	100%	2	2	100%
C&I Green Motors Program	10	9	90%			
C&I Grocer Program	13	11	85%			
C&I Building Operator Certification Program	22	17	77%	22	17	77%

3.3.4.3 Nonparticipants

We will conduct separate cross-cutting nonparticipant surveys of nonresidential and residential customers in both Washington and Idaho, targeting 90/10 confidence/precision for each survey. As with participant surveys, we anticipate a mix of online and phone surveys, possibly including mailed recruitments to take the online survey. For work with Energy Trust of Oregon, we found that a letter recruitment with a link to an online survey was an effective adjunct to other recruitment methods.

3.4 Interview and Survey Implementation

ADM will conduct all interviews and surveys using in-house resources. Our senior staff have broad and deep experience interviewing program and implementer staff, and ADM carries out dozens of phone, web, and mail surveys each year. ADM's in-house dedicated call center is staffed with a full-time manager and both English- and Spanish-speaking professionals. As-needed, ADM has completed surveys in additional languages including Mandarin and Vietnamese. Since 2015, our call center has handled an average of about 180 surveys a year with market actors, program participants, and nonparticipants, with about 12,000 survey completions overall.

3.4.1 Instrument Development

We will develop all interview guides and survey instruments to address research questions identified in the RFP, during project initiation, or in staff and implementer interviews and with a mind to the analyses to be performed. The evaluation plan will document the research questions specific to each data source, which will guide the process for developing each instrument. This will ensure that the research questions for each instrument will already have been vetted and discussed with Avista.

We will provide a crosswalk between the vetted research questions and each interview or survey item when we submit the draft instruments to Avista. This will ensure that there is no question or confusion about the purpose of any given item. Providing Avista staff with a clear understanding of the purpose of each item in the instrument will enable them to provide focused feedback on those items. We will revise each item as needed based on the feedback received.

3.4.2 Survey Programming and Testing

We will program all surveys, both phone and web, using an industry-standard survey platform, Qualtrics. The platform is widely used by professional survey research and evaluation firms and supports web, telephone, and dual-mode survey administration. It offers sophisticated programming features for developing user-friendly interfaces and offers a range of options for response validation and display logic. It also provides controls for preventing duplicate or ineligible submissions and allows the option of completing surveys in multiple sessions. It provides the ability to allow respondents to select the survey language as well as the ability to embed screener questions in email invitations.

We will test each survey to ensure that all questions and responses are included and worded correctly, and all input and display logic works correctly. The program lead will assess the look and feel of the survey (size of font, amount of white space, location of page breaks, and so forth) and will provide suggestions for improvement, if needed.

Once each survey is programmed, we will carry out a soft launch of a small subsample (if the program population is sufficiently large) as a second check to ensure the survey programming is correct as well as to determine whether any questions are not well understood or should be revised for any other reason.

ADM will also work with Avista program managers and call center to integrate co-branded or branded materials to improve the credibility and trustworthiness of the surveys in the perspective of Avista's customers.

3.4.3 Survey Recruitment

We will prepare telephone and email recruitment scripts. These materials will include several well-known elements, such as personalizing the message, stating the intended use of the responses and the importance of everyone's response, making a personal appeal, and so forth. They will provide the name of an ADM evaluation staff contract to answer questions about the survey. If Avista so desires, they also will provide an Avista contact to provide *bona fides* or answer questions. Email recruitments also will provide a call-in number for customers who would like to complete the survey by phone.

We also will include proven-effective language in the recruitment scripts that ADM's staff developed for use in survey recruitment, based on language used in public radio pledge drives. The key to the "pledge

drive" language is asking the recipient if he or she "can be one of the people who help of achieve our goal" number of responses. This language has been shown to increase response rates to online surveys above and beyond what is accomplished through the elements described above.[10] We hypothesize that it does so because it frames the request in the context of group or collective action, thus inhibiting thoughts that undermine self-efficacy (e.g., "what difference can my actions make?"). In this sense, it may be related to the concept of "collective efficacy."[11]

In recruiting for both phone and email surveys, we will follow additional protocols to attempt to maximize response rates and reduce customer burden. We will carry out multiple recruitment attempts but will space them to provide adequate opportunity to respond to each one before sending another. We have found that making more than three phone attempts yields quickly diminishing returns but that multiple email recruitment efforts, when spaced adequately and when using the pledge drive language, can generate continued responses with only a moderate decrease with each effort. We also have found that switching recruitment modes (e.g., from email to phone to post card) can reduce response decrement or even generate an increase in response.[12]

When feasible, we will send advance email or mailed notice of telephone surveys to customers. These will explain the purpose of the survey and address frequently asked questions. As with email recruitments for web surveys, the notification will include contact information to obtain additional information about the survey or participate by telephone.

We will use survey completion incentives when needed to increase response rates. Typically, a small incentive of $10 to $15 is effective at increasing response rates among residential customers, with increases in response rates offsetting incentive costs. When surveying market actors, a larger incentive of $50 to $100 often is needed.

Before beginning any survey recruitment, we will follow Avista's guidance in notifying Avista's call center about data collection activities.

3.4.4 Conducting Telephone Surveys

The call center manager, working with evaluation staff, will provide call center staff thorough project-specific training for each survey. This will cover the basics of the program that the survey addresses, the group that the survey targets, and the purpose and use of the survey and of each question. Our callers are experienced in surveying about a wide range of energy efficiency program types and with an equally wide range of target audiences. Nevertheless, we take every new survey as an opportunity to review and reinforce their understanding of these programs and audiences. Training will include a question-and-answer session as well as practice surveys.

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[10] J. Loomis, E. Focella, A. Weaver, and **R. Bliss** 2019. "Increasing Response Rates to Web Surveys: No Tote Bag Required." Informing Innovation: Research and Evaluation in a Changing Energy Landscape, Denver, CO: International Energy Program Evaluation Conference, August 2019.

[11] A. Bandura. 2000. "Exercise of Human Agency Through Collective Efficacy." Current Directions in Psychological Science, June 2000.

[12] Bliss, R. and D. Rubado. 2020. "Increasing Program Participation in Underserved Groups: The Value of a Nuanced Understanding of Demographics, Awareness, and Attitudes." Behavior, Energy & Climate Change Virtual Conference. December 7-9, 2020.

During the survey fielding, the call center manager will monitor callers to ensure quality and provide feedback to callers. For each survey, the call center manager will reiterate a standing directive to the callers to provide feedback on the survey instruments, including any challenges they have understanding or being able to ask the questions and any challenges respondents have in answering them. The call center manager immediately provides this information to the evaluation survey lead, who can then determine whether to reword a question or provide additional clarification to the caller.

3.4.5 Mailed Letters for Communicating with Hard-to-Reach Customers

As an additional option, ADM proposes to send mailed letters to customers who do not have valid emails connected to their accounts for the process evaluation survey. This will ensure that we are offering customers all available methods for communication, which increase our ability to reach Named Community participants, hard-to-reach participants, and participants that don't have the ability to use online methods for completing the survey. The mailed letters will be developed and distributed by the ADM lead evaluation researcher. The letters will include a recruitment message noting the survey completion incentive offer. ADM will utilize Anchor Pointe, a small, women-owned business, to print, package, and send out letters to the customers without valid email addresses.

3.5 Process Evaluation of Pilot or New Programs

Process evaluations are particularly important for new programs. Early feedback can lead to critical course corrections that generate smoother delivery, greater participation, and higher customer satisfaction. This section outlines our anticipated program-specific process evaluation approaches for the pilot programs.

3.5.1 Residential Home Energy Audit Program

To support the nascent Home Energy Audit Program, ADM proposes three process tasks:

- *Program Manger Interviews*. At the outset of the evaluation, as well as the close of the 2024 and 2025 program years, we schedule an in-depth interview with Avista's program manager to discuss the state of the program, successes, struggles, and next steps.
- *Auditor Interviews (n=4).* Assuming Avista has enlisted auditors, our team will interview a number of auditors to get their take on the early performance of the program and what the program could improve to educate customers more effectively in addition to encouraging greater participation in other Avista programs.
- *Participant Surveys (n=30).* If sufficient audits have occurred, ADM will survey a randomly selected sample of participants (across both states and fuels) to solicit their feedback on the audit itself, their interactions with the auditors, likelihood of participation in other programs, and information about any additional energy savings habits or behavioral changes they have made because of the audit.

3.5.2 Time-of-Use Pilot Program

The TOU Pilot Program will have its own separate process evaluation completed. However, ADM will include the data collected from the TOU Pilot in the overall biennial process evaluation report. For further details of pilot evaluation methods, refer to Section 6.

3.5.3 Peak Time Rebate Pilot Program

The PTR Pilot Program will have its own separate process evaluation completed. However, ADM will include the data collected from the TOU Pilot in the overall biennial process evaluation report. For further details of pilot evaluation methods, refer to Section 6.

3.5.4 Named Community Investment Fund Program

ADM proposes to conduct the following activities in the process evaluation of this program to understand the impact of the program and identify program successes and learnings:

- *Program Manger Interviews.* To start, ADM will complete an in-depth interview with Avista's program manager to discuss the launch of the NCIF Program, its early successes, early struggles, and next steps. We will work with Avista to determine the best timing for this initial interview, as well as at least two follow-up interviews during the program's two-year evaluation period.
- *CAP Agency and Other Organizations Interviews (n=TBD).* Out team will interview a number of CAP agencies and nonprofit organizations associated with the implementation of this program to get their take on the early performance of the program and what the program could improve to educate customers more effectively, encourage deeper retrofits, and encourage greater participation in other Avista programs.
- *Database Review.* Database reviews play an important role in process evaluations, especially for pilots, as it is essential to ensure the pilot is collecting the requisite information to track participation, enable accurate reporting, and facilitate viable future evaluations. To this end, ADM will review the data collected by Avista and provide feedback as appropriate.
- *Participant Surveys (n=TBD).* A few months after the pilot is launched, ADM will undertake a web survey with a random sample of participating customers. The survey will focus on: 1) how the customer heard about the program, 2) what efficiency improvements they made, and 3) their experience going through program to receive home improvements.

3.5.5 Hybrid Heat Pump Pilot Program

ADM proposes the following process evaluation tasks for the Hybrid Heat Pump Pilot Program:

- *Program Manger Interviews.* To start, ADM will complete an in-depth interview with Avista's program manager to discuss the launch of the lending pilot, its early successes, early struggles, and next steps. We will work with Avista to determine the best timing for this initial interview, as well as at least two follow-up interviews during the pilot's two-year delivery.
- *Database Review.* Database reviews play an important role in process evaluations, especially for pilots, as it is essential to ensure the pilot is collecting the requisite information to track participation, enable accurate reporting, and facilitate viable future evaluations. To this end, ADM will review the data collected by Avista and provide feedback as appropriate.
- *Literature Review.* It is worthwhile to review available information about similar efforts in the region and nationally to identify any lessons learned that may benefit Avista.
- *Participant Surveys (n=TBD).* A few months after the pilot is launched, ADM will undertake a web survey with a random sample of participating customers. The survey will focus on: 1) how the customer heard about the pilot, 2) what efficiency improvements they made using the loaned

tools, and 3) their experience going through the tool lending process, including how Avista could improve the experience and offer.

3.5.6 Compressed Air Pilot

ADM proposes the following process evaluation tasks for the Compressed Air Pilot Program:

- *Program Manger Interviews.* To start, ADM will complete an in-depth interview with Avista's program manager to discuss the launch of the lending pilot, its early successes, early struggles, and next steps. We will work with Avista to determine the best timing for this initial interview, as well as at least two follow-up interviews during the pilot's two-year delivery.
- *Database Review.* Database reviews play an important role in process evaluations, especially for pilots, as it is essential to ensure the pilot is collecting the requisite information to track participation, enable accurate reporting, and facilitate viable future evaluations. To this end, ADM will review the data collected by Avista and provide feedback as appropriate.
- *Literature Review.* It is worthwhile to review available information about similar efforts in the region and nationally to identify any lessons learned that may benefit Avista.
- *Participant Surveys (n=TBD).* A few months after the pilot is launched, ADM will undertake a web survey with a random sample of participating customers. The survey will focus on: 1) how the customer heard about the pilot, 2) what efficiency improvements they made using the loaned tools, and 3) their experience going through the tool lending process, including how Avista could improve the experience and offer.

3.5.7 Pay for Performance Pilot

- *Program Manger Interviews.* To start, ADM will complete an in-depth interview with Avista's program manager to discuss the launch of the Pay for Performance Program, its early successes, early struggles, and next steps. We will work with Avista to determine the best timing for this initial interview, as well as at least two follow-up interviews during the program's two-year evaluation period.
- *Facility Manager Interviews (n=TBD).* Out team will interview a number of CAP agencies and nonprofit organizations associated with the implementation of this program to get their take on the early performance of the program and what the program could improve to educate customers more effectively, encourage deeper retrofits, and encourage greater participation in other Avista programs.
- *Database Review.* Database reviews play an important role in process evaluations, especially for pilots, as it is essential to ensure the pilot is collecting the requisite information to track participation, enable accurate reporting, and facilitate viable future evaluations. To this end, ADM will review the data collected by Avista and provide feedback as appropriate.
- *Participant In-depth Interviews (n=TBD).* A few months after the pilot is launched, ADM will undertake a web survey with a random sample of participating customers. The survey will focus on: 1) how the customer heard about the program, 2) what efficiency improvements they made to their facility, and 3) their experience going through program to receive facility improvements.

3.6 Timing and Cadence of Process Evaluation Activities

During the development of the portfolio-level M&V plan, process evaluation schedules for WA and ID will ensure that existing, stable programs receive evaluations at least every two (2) years and new and/or “at risk" programs will be identified and evaluated annually. This approach allows for efficient allocation of evaluation resources.

The review of program documentation will occur first, as it – together with discussions during project initiation – will provide an understanding of the programs, form the basis for our draft evaluation plan, and will inform all later data collection. We will request all applicable program documentation during the project initiation period.

Early in the 2024 program year, we will conduct in-depth interviews (IDIs) with program staff to ensure we fully understand the program rules and processes and staff’s expectations for and concerns about the programs and the evaluation. This will help us to identify research questions to address through market actor and customer (participant and nonparticipant) interviews and surveys. We will then check in with program staff late in the 2024 program year or early in the 2025 program year to find out whether anything has changed, to gain a sense of how the programs are progressing, and to identify any new issues or concerns. This will allow us to devise appropriate questions for the other interviews and surveys. It also will ensure that our later data collection addresses any issues or concerns of interest to program and implementer staff. Finally, it will allow us to clarify any questions regarding our proposed sampling plans.

Market actor interviews and customer surveys will follow the staff and implementer IDIs. We will begin preparing guides for these interviews and surveys, as well as the sample plans, after completing the first staff interviews, but we will complete them only after completing the second round of staff interviews to ensure that they are complete and accurate.

As a final data collection activity, we will check in with staff and/or implementer contacts toward the end of the 2025 program year to assess progress and identify any issues that arose during that year that should be addressed in the report.

ADM will submit all data collection materials, sample plans, and other contact materials (e.g., mail or email recruitment scripts) to Avista for review before beginning evaluation activities. We will establish the review protocol with Avista during project initiation. Our goal is to establish the approach that makes the most sense for Avista staff – whether to provide all instruments and sample plans in a bundle or to establish a schedule that prioritizes certain instruments and plans for submittal. The latter may reduce the burden on Avista staff and allow for a more efficient review process. We will address all comments and revise instruments as needed.

3.7 Meeting Participation

ADM commits to meeting and participating with advisory groups, subcommittees, the Advisory Group, the Energy Efficiency Analytics team and others as needed, in addition to presenting annual results at Avista’s convenience. ADM understands that Avista holds, at minimum, (four) in-person Advisory Group meetings per year. In addition, various other meetings may be arranged if needed. ADM also commits to participating in these meetings to present evaluation methodologies, results, and any other need presented in the meetings.

3.8 DSM Prudence Review

ADM commits to remaining available for prudence review and investigation as required by the Washington Utilities and Transportation Commission and the Idaho Public Utilities Commission, subsequent to the 2024-2026 evaluation period. ADM will provide comprehensive workpapers, supporting documentation, and responses to production requests as needed by the respective Commissions.

3.9 Proposed Changes to the SOW or Alternative Means to Accomplish Project Objectives

ADM understands that the solicitation SOW states the Consultant shall verify quantity and quality of installations and apply RTF's UES to determine ex post savings in cases where the RTF has existing unit energy savings. ADM proposes the following changes to the SOW:

- Conduct billing analyses with comparison group via propensity score matching for a subset of measures
- Conduct facility-level regression analysis for a subset of programs
- Apply NTG adjustments as necessary
- Verify measure install and quality of install via web-based survey and/or site visits

ADM proposes to use a combination of RTF UES values, billing analysis, and simulation modeling to calculate ex post savings in the Residential and Non-Residential Electric and Natural Gas Portfolio. Billing analyses are proposed for some measures to remain comparable in methodology to previous Avista portfolio evaluations. In addition, billing analyses with comparison groups provide a reliable method to estimate net measure impacts because the comparison group reflects market-level adoption, which we can assume would be the behaviors the participant customers would have adopted had they not participated in the program.

ADM has experience conducting residential and non-residential billing analyses for a wide variety of measures, in addition to conducting propensity score matching to create a comparison group. Comparison groups are suggested to estimate reliable measure-level savings in the post-period and are important when large-scale environmental factors affect residential energy consumption, such as COVID19 shelter-in-place orders. Similarly, for the commercial and industrial sector ADM has found it necessary to employ greater use of Non-Routine Adjustments (NRAs), with notable recent examples including adjusting for disrupted throughput levels in industrial facilities attributable to supply chain disruptions.

3.10 Innovative Techniques

ADM summarizes the following innovative techniques we propose to employ during the evaluation of the Avista Portfolio:

- Innovative spillover assessment for other programs
- "Pledge Drive" language to increase survey response rates
- Savings group analysis

ADM is confident these innovative techniques can be employed to provide more accurate adjustments and verification to impact analyses as well as providing insight into potential program and portfolio improvements.

3.11 Innovative Spillover Assessment for Other Program Types

ADM understands that the proposed project does not require development of a net-to-gross ratio for most programs, as all savings assessments that are based on existing Regional Technical Forum (RTF) unit energy savings (UES) values account for market baselines and billing analyses produce net savings. However, Avista wishes to know what kinds of spillover its other programs are generating for planning or other purposes. While traditional spillover approaches typically document very little savings, ADM staff have developed and implemented an innovative spillover approach that has been shown to identify much higher spillover rates than standard approaches, in both residential and nonresidential programs. Thus, while we are not now proposing an optional spillover assessment of the type described above, we describe it here for Avista's consideration for later use.

ADM believes that standard spillover approaches are designed based on incorrect assumptions that can only lead to under-estimates of spillover. Specifically, the traditional approach asks customers about purchases of un-incented energy efficient equipment and then asks them to rate the program's influence on their purchase. This approach makes two false assumptions: 1) that customers will necessarily know whether a given purchase was energy efficient; and 2) that customers will know how much the program influenced their purchase. The second assumption is false because program influence often is not direct or observable to the customer, even when the customer is aware of program involvement.[13] In the case of midstream or point of purchase discounts, the discount may easily go unnoticed or not be remembered. In the case of contractor-driven purchases (e.g., HVAC systems), research has shown that customers frequently cite their contractor's recommendation as the primary reason for the decision to purchase a more efficient version of some equipment type.[14]

The evidence suggests that most program influence is indirect, via the distributors and either retailers or contractors who work with the customers. That is, the program influences these various market actors through outreach and training, and those actors influence the customers through recommendations. Further, in downstream programs, distributors may influence contractors. The indirect program influence can thus be represented as the product of the influence each actor has on the next actor in the influence chain.

ADM's proposed Process Evaluation Advisor (while with a previous employer subcontracting to ADM) developed this approach in 2015 for a nonresidential lighting program, identifying spillover savings that were significantly higher than typical approaches. ADM's Process Evaluation Advisor also applied this

[13] Bliss, R., N. Sage, and D. Diebel. 2017. "Not all Spillover Is the Same – So Don't Treat It That Way!" *Making Ambitious Reductions Real: Accurate and Actionable Evaluation*, Baltimore, MD: International Energy Program Evaluation Conference, August 2017.

[14] Folks, J., and Bliss, R. "Frog Princes and Free-Ridership: Contractor Influence in Residential Programs." 2016. Behavior, Energy & Climate Change Conference, Baltimore, MD. October 20.

"indirect" spillover assessment approach to a residential contractor-driven heat pump program.[15] Quantifying the program's influence on heat pump recommendations to the contractors' clients and the influence of those recommendations on client decisions and applying the product to the saved kWh from un-incented heat pump sales again revealed much higher levels of spillover than typical approaches provide.

3.11.1 Historical Data Collection Procedure

ADM provides small incentives for customers to complete surveys on energy efficient measures they have purchased in the program year. Survey data provides estimates for In-Service Rates (ISR) and Hours of Use (HOU) for rebated measures, and baseline conditions for lighting and space and water heating measures. ADM will ensure proper survey sample size to achieve 90% precision with a 10% confidence level for the survey-based verification efforts wherever possible.

Customer surveys include an option for in-person verification of survey responses for the lighting portion of the program. ADM field technicians visit customers who opted-in to field visits and provide visual verification of program tracking information and the lighting, appliance, and space and water heating equipment installation locations reported by customers.

3.12 Savings Group Analysis

ADM proposes to conduct a savings group analysis for a subset of measures evaluated through billing analysis. A savings group analysis identifies participating customers that may not display saved energy through the installation of the measure. Learning more about the portion of customers that are "negative" or "neutral" savers may inform strategies for adjusting target populations or measure offerings in the future. ADM proposes to conduct this analysis to explore potential issues and opportunities to increase cost-effectiveness and maximize program savings. This methodology is especially useful for pilots to gather insights that may affect how the program continues to be implemented.

The analysis will use billing data and/or AMI data to develop a multi-level model to estimate individual savings using both the participant and nonparticipant information to control for exogeneous factors that may affect energy savings or consumption within a household over time.

ADM will characterize the distribution of individual participants' energy savings to develop energy savings groups, followed by using clustering algorithms to identify predictive characteristics of those energy savings groups. ADM will work with Avista to identify additional data availability, such as AMI data, to enhance this analysis. As summarized above, the results of this analysis may provide useful insight into program improvements, and therefore, ADM proposes to explore such opportunities to aid Avista's program or pilot implementation and improve portfolio cost-effectiveness.

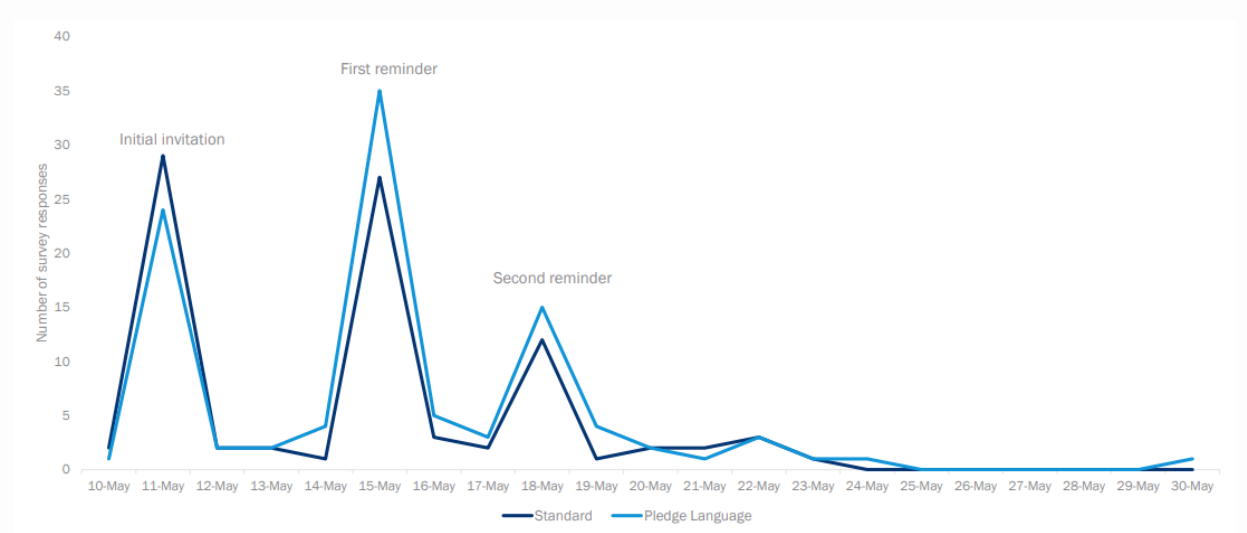
[15] Bliss, R. and M. McClaren. 2018. "Avoiding Being (Too Much of) A Victim of Your Own Success: Mitigating Free-ridership Losses Through Better Spillover Assessment." *International Energy Policy and Programme Evaluation Conference*, Vienna, Austria, August 2018.

3.13 "Pledge Drive" Language to Increase Survey Response Rate

One of the ADM's innovative developments is the use of "pledge drive" language in survey recruitments to online surveys. The key to the "pledge drive" language, based on language used in public radio pledge drives, is asking the recipient if he or she "can be one of the people who help of achieve our goal" number of responses. This language has been shown to increase response rates to online surveys above and beyond what is accomplished through other approaches.[16] We hypothesize that it does so because it frames the request in the context of group or collective action, thus inhibiting thoughts that undermine self-efficacy (e.g., "what difference can my actions make?"). In this sense, it may be related to the concept of "collective efficacy."[17]

A current ADM staff member developed this approach in 2015 for a survey that ADM was conducting at that time. Its success engendered multiple additional uses, one that incorporated it into a randomized trial, in which it was shown to increase response rate significantly (Figure *3-1*).

Figure 3-1: Test of Pledge Drive Language[18]



ADM will use the pledge drive language in all survey recruitments for the proposed project.

[16] J. Loomis, E. Focella, A. Weaver, and R. Bliss 2019. "How to Increase Response Rates to Web Surveys: No Tote Bag Required." Proceedings of the 2019 International Energy Program Evaluation Conference. Denver, Colorado: International Energy Program and Policy Evaluation Conference.

[17] A. Bandura. 2000. "Exercise of Human Agency Through Collective Efficacy." Current Directions in Psychological Science, June 2000.

[18] Loomis et al 2019, op. cit.

4. Residential Program-Level EM&V Approaches

The following sections detail ADM's program-specific impact methods, process methods, and sampling plans for each of the programs in Avista's Residential Portfolio, as summarized by the 2024 Washington Electric and Natural Gas Annual Conservation Plan. ADM will work with Avista to adjust program-specific impact and sampling plans as additional information is received about program participation, program restrictions, measure offerings, and available data.

4.1 Timing and Cadence of Impact Evaluation Activities

ADM plans to conduct an impact analysis for each program based on "high risk" or "low risk" programs; that is, for programs in which evaluated savings may vary from program year to program year, ADM will conduct an evaluation each year in the 2024-2025 evaluation period. However, for programs which display stable savings from year to year and have had no implementation changes over the biannual period, ADM will conduct an impact evaluation once in the two year period. The following tables summarize the cadence ADM will evaluate each program.

Table 4-1: Residential and Low-Income Impact Evaluation Cadence by Program

Program	Database Review
Residential Appliance and Thermostat Program	Biannually
Residential ENERGY STAR Manufactured Homes Program	Biannually
Residential Shell Program	Biannually
Residential Fuel Efficiency Program	Biannually
Residential Midstream Program	Annually
Residential Multifamily Weatherization – New Offerings Program	Annually
Residential On-Bill Repayment/Financing Program	Biannually
Residential Always-On Behavioral Program	Annually
Residential Behavioral Program	Annually
Residential Home Energy Audit Program	Biannually
Residential Direct Install Insulation Program	Biannually
Low-Income Program	Biannually
Named Community Investment Fund (NCIF) Program	Biannually

Table 4-2: Non-residential Impact Evaluation Cadence by Program

Program	Database Review
C&I Appliance and HVAC Controls Program	Biannually
C&I Site-Specific Program	Annually
C&I Prescriptive Lighting Program	Biannually
C&I Small Business Direct Install Lighting Program	Biannually
C&I Prescriptive HVAC Variable Frequency Drive Program	Biannually
C&I Midstream Program	Annually
C&I Prescriptive Shell Program	Biannually
C&I Green Motors Program	Biannually
C&I Grocer Program	Biannually
C&I Building Operator Certification Program	Annually

Table 4-3: Pilot Impact Evaluation Cadence by Program

Program	Database Review
Time of Use Pilot	Annually
Peak Time Rebates Pilot	Annually
Hybrid Heat Pump Pilot	Annually
Building Operator IQ Pilot	Annually
Compressed Air Pilot	Annually
Pay for Performance Pilot	Annually
Additional Pilots	Annually

ADM will work with Avista to modify the planned impact evaluation cadence throughout the 2024 to 2025 biannual period for new programs or pilots, or if programs have undergone substantial changes.

4.2 Residential Appliance and Thermostat Program

The Residential Appliance and Thermostat Program helps promote residential customers to use high efficiency appliances, smart thermostats, and line voltage thermostats. This program offers incentives for the purchase and use of high-efficiency ENERGY STAR-certified clothes washers, vented clothes dryers, refrigerators, freezers, connected thermostats, and line voltage thermostats for multifamily applications. Customers receive incentives after installation and after submitting a completed rebate form. Table 4-4 summarizes the anticipated measures offered under this program along with the proposed impact evaluation method for each measure, separated by fuel type.

Table 4-4: Residential Appliance and Thermostat Program Measures

Measure	Impact Analysis Methodology
E ENERGY STAR standard size refrigerator and refrigerator-freezer - bottom-mounted freezer - ESME	RTF UES, ResRefrigeratorsAndFreezers_v5_1
E ENERGY STAR standard size freezer - upright - ESME	RTF UES, ResRefrigeratorsAndFreezers_v5_1
E ENERGY STAR washer	RTF UES, ResClothesWasher_v7_2
E ENERGY STAR dryer	RTF UES, ResClothesDryers_v4_2
E Smart thermostat - DIY	RTF UES, ResConnectedTstats_v1.3/Billing Analysis
E Smart thermostat – contractor-installed	RTF UES, ResConnectedTstats_v1.3/Billing Analysis
E Line voltage communicating thermostat	RTF UES, ResElectronicLineVoltageTstats_v4_2
E Line voltage thermostat	RTF UES, ResElectronicLineVoltageTstats_v4_2
G Smart thermostat - DIY	RTF UES, ResConnectedTstats_v1.3/Billing Analysis
G Smart thermostat – contractor-installed	RTF UES, ResConnectedTstats_v1.3/Billing Analysis

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Residential Appliance and Thermostat Program in the section below.

4.2.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Residential Appliance and Thermostat Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)
- Survey-based verification for a random subset of customers (Section 2.3.2)

Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Residential Appliance and Thermostat Program. Table 2-2 in Section 2.3.2 summarizes the sample sizes for the survey-based verification activity for the Residential Appliance and Thermostat Program.

During document-based verification, if any deviations between the tracking data and application values are found, ADM will communicate these differences to Avista through periodic updates and summarize deviations the final report.

During survey-based verification, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure and documentation of prior equipment. ADM will include questions such as:

- Is the newly installed ENERGY STAR washer still properly functioning?
- Is the newly installed ENERGY STAR washer front-loading?
- What type of equipment heats the water in your home?
- Does your new refrigerator also have a freezer?
- Is your new refrigerator standard size (≥ 7.75 cubic feet) or compact (< 7.75 cubic feet)?

These questions will help ADM verify that the measure was collected and documented accurately and will allow ADM to calculate measure-level savings more accurately.

4.2.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data including customer identifiers, address, and date of rebate
- Rebate application forms and applicable invoices
- Monthly billed consumption data for participating and non-participating customers

4.2.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodologies to estimate verified net energy savings in the Residential Appliance and Thermostat Program:

- Deemed savings using RTF UES values
- Billing Analysis with counterfactual group (IPMVP Option C)

Measure-level impact evaluation methodologies for this program are specified in Table 4-4, separated by fuel type.

For measures in which an RTF-approved measure has been specified and considered active, ADM proposes to measure net savings using UES values in each RTF workbook for that. ADM will also apply adjustments to these RTF values if deviations are found between invoices and tracking data or if in-service rates deviate from 100% in verification surveys. This methodology is summarized in further detail in Section 2.5.1.

For measures in which an RTF-approved, active measure has not been specified, ADM proposes to measure verified net savings by conducting a billing analysis using with a counterfactual group selected via propensity score matching. The methodology used to select the quasi-experimental counterfactual group and the methodology for linear regression billing analysis are summarized in further detail in the "Billing Analysis (IPMVP Option C)" section. ADM will isolate each unique measure and verify each participant included in the analysis did not also participate in other programs; therefore, ADM will be able to isolate the measure effects using the household's billed consumption data.

Although ADM proposes to estimate smart thermostats with electric heating via the RTF UES values, ADM recognizes that the RTF workbook for Connected Thermostats in the residential sector assumes that 90% of the smart thermostats are DIY-installed, while 10% are contractor-installed. However, Avista's projected number of units smart thermostat with electric heating in 2024 portrays 75% of smart thermostats are DIY-installed. Because a larger portion of smart thermostats are installed via contractors, there may be an opportunity to claim additional savings for this measure. To evaluate whether the RTF UES values are appropriate to estimate verified savings for the electric smart thermostats, ADM proposes to explore a billing analysis via regression modeling for each the DIY and contractor-installed electric smart thermostats.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

4.2.4 Timing and Cadence

This program is considered "low risk" and therefore will be evaluated once in the 2024-2025 evaluation period.

4.2.5 Technical Comments

ADM provides no technical comments for this program's evaluation.

4.3 Residential ENERGY STAR Manufactured Homes Program

The Energy Star Manufactured Homes Program provides rebates for homes within Avista's service territory that attain an ENERGY STAR certification. This program is administered by a Northwest Energy Efficiency Alliance (NEEA) regional program and incentivizes the ENERGY STAR ECO-rated new manufactured homes and ENERGY STAR with NEEM+ certified homes.

Previously the program provided incentives for one building certification: the ENERGY STAR ECO-rated new manufactured homes. However, beginning in 2024, the prescriptive program started recognizing additional efficiency distinction between homes, including those branded as ENERGY STAR and ENERGY STAR with NEEM+. The NEEM+ certification criteria include additional efficiency measures such as programmable thermostats, improved windows, building wrap, and window flashing. The new incentive levels are intended to motivate customers to choose the highest efficiency manufactured home available.

Table 4-5 summarizes the anticipated measures offered under this program along with the proposed impact evaluation method for each measure, separated by fuel type.

Table 4-5: ENERGY STAR Manufactured Homes Program Measures

Measure	Impact Analysis Methodology
G ENERGY STAR Manufactured Home	Billing Analysis or Avista TRM
G ENERGY STAR with NEEM+ Manufactured Home	Billing Analysis or Avista TRM
E ENERGY STAR Manufactured Home	RTF UES, ResMHNewHomesandHVAC_v4_2
E ENERGY STAR with NEEM+ Manufactured Home	RTF UES, ResMHNewHomesandHVAC_v4_2

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the ENERGY STAR Manufactured Homes Program in the section below.

4.3.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the ENERGY STAR Manufactured Homes Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the ENERGY STAR Manufactured Homes Program.

During document-based verification, if any deviations between the tracking data and application values are found, ADM will communicate these differences to Avista through periodic updates and summarize deviations in the final report.

The verification of heating and cooling type will allow ADM to calculate measure-level savings more accurately based on RTF measure specifications. This simple verification will help ADM more accurately estimate measure-level impacts for the other measures using engineering algorithms.

Survey-based verification is not proposed for this measure, as rebates are primarily submitted by builders.

4.3.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of rebate
- Rebate application forms and certifications
- A sample of REM/Rate project files from HERS raters and documentation on installed equipment, if available
- Monthly billed consumption data for participating households and similar, non-participating households
- Program builder contact information

4.3.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodologies to estimate verified net energy savings in the ENERGY STAR Manufactured Homes Program:

- Deemed savings using RTF UES values or Avista TRM values

Measure-level impact evaluation methodologies for this program are specified in Table 4-5, separated by fuel type.

For measures in which an RTF-approved measure has been specified and considered active, ADM proposes to measure net savings using UES values in each RTF workbook for that. For measures in which an RTF-approved, active measure has not been specified, ADM proposes to measure verified net savings by applying Avista TRM values.

Due to the size of the program and the savings achieved through the program relative to the residential portfolio, this evaluation method is proposed to make use of the evaluation budget accordingly. The level of rigor proposed for the evaluation of this program aligns with the savings resulting from the program. ADM offers to also explore a billing analysis for each measure, at Avista's request.

ADM will review the methods employed by the Avista TRM to verify the UES value is appropriate to define savings. ADM will also apply adjustments to these RTF values if deviations are found between invoices and tracking data or if in-service rates deviate from 100% in verification surveys. This methodology is summarized in further detail in Section 2.5.1.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

4.3.4 Timing and Cadence

This program is considered "low risk" and therefore will be evaluated once in the 2024-2025 evaluation period.

4.3.5 Technical Comments

It is likely that the HERS household files will not be available, as was the case for the program historically. In the case that HER household files become available, ADM offers to evaluate each of the rebated ENERGY STAR homes via simulation modeling with a user-defined reference home relative to the state's building codes. Methodology for this analysis is described in further detail in the "Simulation Modeling (IPMVP Option D)" section. In addition, if this methodology is used, ADM will apply a NTG adjustment to the gross energy savings resulting from the simulation model analysis. The NTG adjustment will be gathered via the methods described under the Section 2.6.

4.4 Residential Shell Program

The Residential Shell Program provides incentives to customers for improving the integrity of the home's envelope with upgrades to windows, storm windows, and doors. Rebates are issued after the measure has been installed. Participating homes must have electric or natural gas heating and itemized invoices including measure details such as insulation levels, window values, and square footage. Previously, the program required minimum usage as a prerequisite for participation. However, in 2024, Avista eliminated this prerequisite. Additionally, self-install options for windows and storm windows will also continue. Both eligibility changes remove barriers to customer participation. Table 4-6 summarizes the anticipated measures offered under this program along with the proposed impact evaluation method for each measure, separated by fuel type.

Table 4-6: Residential Shell Program Measures

Measure	Impact Analysis Methodology
G Windows single pane <0.29 U-value	Billing Analysis
G Windows dual pane <0.29 U-value	Billing Analysis
G Storm windows (ENERGY STAR-rated)	Billing Analysis
G Wall insulation	Billing Analysis
G Floor insulation - DIY	Billing Analysis
G Attic insulation - DIY	Billing Analysis
G Insulated door R2.5-R5 HZ2 zonal	Billing Analysis
E Windows	RTF UES, ResSFWx_v4_4
E ENERGY STAR Certified Storm Windows	RTF UES, ResSFWx_v4_4
E Wall Insulation	RTF UES, ResSFWx_v4_4
E Floor Insulation	RTF UES, ResSFWx_v4_4
E Attic Insulation	RTF UES, ResSFWx_v4_4
E ENERGY STAR-Rated Doors	Billing Analysis

ADM understands that Avista recently implemented a tiered efficiency approach for window incentives. ADM will provide any necessary adjustments to the evaluation plan once a tiered approach is in effect. ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Residential Shell Program in the section below.

4.4.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Residential Shell Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)
- Survey-based verification for a random subset of customers (Section 2.3.2)

Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Residential Shell Program. Table 2-2 Section 2.3.2 summarizes the sample sizes for the survey-based verification activity for the Residential Shell Program.

During document-based verification, if any deviations between the tracking data and application values are found, ADM will communicate these differences to Avista through periodic updates and summarize deviations in the final report.

During survey-based verification, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure and documentation of prior equipment. ADM will include questions such as:

- When did the weatherization measures get installed?
- What type of fuel is used to heat your home?
- Does your home have central air conditioning, window, or neither?
- How long did the contractors take to complete the work?

The verification of heating and cooling type will allow ADM to calculate measure-level savings more accurately based on RTF measure specifications. In addition, in the event that billing analysis is

infeasible, this simple verification will help ADM more accurately estimate measure-level impacts for the other measures using engineering algorithms.

4.4.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of rebate
- Rebate application forms and applicable invoices
- Monthly billed consumption data for participating and non-participating customers

4.4.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodologies to estimate verified net energy savings in the Residential Shell Program:

- Deemed savings using RTF UES values
- Billing Analysis with counterfactual group (IPMVP Option C)

Measure-level impact evaluation methodologies for this program are specified in Table 4-6, separated by fuel type.

For measures in which an RTF-approved measure has been specified and considered active, ADM proposes to measure net savings using UES values in each RTF workbook for that measure. ADM will also apply adjustments to these RTF values if deviations are found between invoices and tracking data or if in-service rates deviate from 100% in verification surveys. This methodology is summarized in further detail in Section 2.5.1.

For measures in which an RTF-approved, active measure has not been specified, ADM proposes to measure verified net savings by conducting a billing analysis using with a counterfactual group selected via propensity score matching. The methodology used to select the quasi-experimental counterfactual group and the methodology for linear regression billing analysis are summarized in further detail in the "Billing Analysis (IPMVP Option C)" section. ADM will isolate each unique measure and verify each participant included in the analysis did not also participate in other programs; therefore, ADM will be able to isolate the measure effects using the household's billed consumption data. For example, to evaluate the ENERGY STAR doors measure, ADM will select only customers that have installed the ENERGY STAR door measure and have not installed any additional program measures during the same program year. ADM will include heating season and cooling season controls to estimate the relationship between energy consumption and weather during the pre- and post-periods, for electric or gas, as applicable to the shell measures offered in this program.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

4.4.4 Timing and Cadence

This program is considered "low risk" and therefore will be evaluated once in the 2024-2025 evaluation period.

4.4.5 Technical Comments

In the event that the required data is not available or sufficient to conduct a billing regression analysis, ADM will review and apply Avista TRM methods along with verified tracking data to estimate net program savings.

4.5 Residential Fuel Efficiency Program

The Fuel Efficiency Program encourages customers to consider converting their resistive electric space and water heating equipment to natural gas. This program is offered to residential customers in the Idaho service territory. Customers must use Avista electricity for electric straight-resistance heating or water heating in order to qualify for the rebate, which is verified by evaluating their energy use. The home's electric baseboard or furnace heat consumption must indicate at least 8,000 kWh during the previous heating season. Customers receive incentives after installation and after submitting a completed rebate form. Table 4-7 summarizes the measures offered under this program.

Table 4-7: Fuel Efficiency Program Measures

Measure	Impact Analysis Methodology
E Electric central ducted forced air furnace to air source heat pump (9.0 HFSP or greater) conversion	Billing Analysis / Avista TRM
E Electric to natural gas furnace conversion	Billing Analysis / Avista TRM
E Electric to natural gas furnace & water heat conversion	Billing Analysis / Avista TRM

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Fuel Efficiency Program in the section below.

4.5.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Fuel Efficiency Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)
- Survey-based verification for a random subset of customers (Section 2.3.2)

Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Residential Shell Program. Table 2-2 Section 2.3.2 summarizes the sample sizes for the survey-based verification activity for the Residential Shell Program.

During document-based verification, if any deviations between the tracking data and application values are found, ADM will communicate these differences to Avista through periodic updates and summarize deviations in the final report.

During survey-based verification, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure and documentation of prior equipment. ADM will include questions such as:

- Was this water heater a new construction, or did it replace another water heater?
- Was the previous water heater functional?
- Is the newly installed water heater still properly functioning?

- What is the efficiency and sizing of the newly installed water heater?

These questions will help ADM verify that the measure was documented accurately and that data collection activities are progressing smoothly for the program. In addition, in the event that billing analysis is infeasible, this simple verification will help ADM more accurately estimate measure-level impacts using engineering algorithms.

4.5.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Participant contact information for web and phone-based survey verification
- Filled rebate application forms and applicable invoices
- Monthly billed consumption data for participating customers
- Monthly billed consumption data for non-participating customers

In addition, ADM will gather the following datasets to complete the analysis:

- Historical NOAA weather data
- Typical Meteorological Year weather data
- Publicly available household characteristics from county assessor data, if available

4.5.3 Impact Analysis

ADM will utilize the following impact evaluation methodologies to estimate verified net energy savings in the Fuel Efficiency Program:

- Deemed savings using RTF UES or Avista TRM values
- Billing Analysis with counterfactual group (IPMVP Option C)

For measures in which an RTF-approved measure has been specified and considered active, ADM will measure net savings using UES values in the appropriate RTF workbook for that measure. ADM will also apply adjustments to these values if deviations are found between invoices and tracking data or if in-service rates deviate from 100% in verification surveys. For measures in which an RTF-approved measure has not been specified or approved, ADM will apply the Avista TRM UES values to the types and quantities of each measure, after applying adjustments from verification surveys, if found. This methodology is summarized in further detail in Section 2.5.1.

ADM will also explore measurement of verified net savings by conducting a billing analysis with a counterfactual group selected via propensity score matching. The methodology used to select the quasi-experimental counterfactual group and the methodology for linear regression billing analysis are summarized in further detail in the “Billing Analysis (IPMVP Option C)” section. This method will be explored for each measure in the Fuel Efficiency Program in order to verify if the Avista TRM savings values are appropriate, or if adjustment may be required to more accurately quantify observed savings.

In order to estimate the daily impacts of each measure, ADM will isolate the customers that received an isolated measure. For example, to evaluate the air source heat pump measure, ADM will select only

customers that have retrofitted their air source heat pump and have not installed any additional program measures during the same program year; therefore, ADM will be able to isolate the measure effects using the household's billed consumption data.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

4.5.4 Timing and Cadence

This program is considered "low risk" and therefore will be evaluated once in the 2024-2025 evaluation period.

4.5.5 Technical Comments

In the event that the required data is not available or sufficient to conduct a billing regression analysis, ADM will review RTF values and Avista TRM methods along with verified tracking data to estimate net program savings.

4.6 Residential Midstream Program

The Midstream Program was launched in 2023 and includes measures that were previously part of several other programs. Avista transitioned all residential and commercial HVAC and water heating and food service measures to the Midstream Program in 2023. For the purposes of this work plan, ADM presents the methodology to evaluate the residential measures in the Midstream Program in this section. The methodology to evaluate the commercial measures in the Midstream Program are presented in Section 5.6.

The transition to a midstream structure removes common barriers to participation, such as a lack of customer awareness of rebate programs; participation barriers such as language and technology knowledge; and distributors' tendency to stock low-cost, low-efficiency units due to the high cost of energy-efficient equipment.

The Midstream Program now leverages distributors' recognized influence over contractors and specific equipment sales and work with distributors to help contractors to submit claims for Avista customers. Claims are paid to contractors promptly and additional savings are garnered burdening customers to fill out complex rebate forms. Therefore, access is more equitable for Avista's customers.

ADM has experience with a wide variety of midstream programs promoting a range of (primarily commercial) measures, including motor products, advanced lighting controls, and reduced wattage fluorescent lamps. We can draw on our experience designing, preparing, and evaluating midstream programs to help Avista develop a separate midstream program or route measures offered through an existing program through distributors.

Table 4-8 summarizes the anticipated measures offered under this program along with the proposed impact evaluation method for each measure, separated by fuel type.

Table 4-8: Midstream Program Residential Measures

Measure	Impact Analysis Methodology
E Electric heat pump water heater (0.94 EF or higher)	RTF UES, ResHPWH_v5_3
E Air source heat pump	RTF UES, ResSF&MHExistingHVAC_v5_1
E Ductless heat pump (with existing FAF)	RTF UES, ResDHPonFAF_v3_1
E Ductless heat pump (displace zonal)	RTF UES, ResDHPforZonal_v5_1
Residential <5.4 ton Air-Cooled HP	Billing Analysis
G Natural gas water heater <= 55 gallons (0.65 EF or higher)	RTF UES, ResGasWH_v3_2/Billing Analysis
G Natural gas tankless water heater (0.82 EF or higher)	RTF UES, ResGasWH_v3_2/Billing Analysis
G Natural gas furnace 95% (single stage)	RTF UES, ResESGasFurnaces_v2_1/Billing Analysis
G Natural gas boiler (96% AFUE)	Billing Analysis
G High-efficiency wall furnace (90% AFUE)	Billing Analysis
G Natural gas furnace 95% (multi-stage)	RTF UES, ResESGasFurnaces_v2_1/Billing Analysis
E Electric central ducted forced air furnace to air source heat pump (9.0 HFSP or greater) conversion	Billing Analysis / Avista TRM
E Electric to natural gas furnace conversion	Billing Analysis / Avista TRM
E Electric to natural gas furnace & water heat conversion	Billing Analysis / Avista TRM

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Midstream Program in the section below.

4.6.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Midstream Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Residential Midstream Program. ADM will not conduct survey verification for this program. Instead, ADM will interview distributors and trade allies that participate in the program.

4.6.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms, applicable invoices, and equipment certificates if available
- Monthly billed consumption data for participating customers and for similar, non-participating customers

4.6.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodologies to estimate verified net energy savings in the Midstream Program:

- Deemed savings using RTF UES values
- Billing Analysis with counterfactual group (IPMVP Option C)

Measure-level impact evaluation methodologies for this program are specified in Table 4-8, separated by fuel type.

For measures in which an RTF-approved measure has been specified and considered active, ADM proposes to measure net savings using UES values in each RTF workbook for that measure.

For measures in which an RTF-approved, active measure has not been specified, ADM proposes to measure verified net savings by conducting a billing analysis with a counterfactual group selected via propensity score matching. The methodology used to select the quasi-experimental counterfactual group and the methodology for linear regression billing analysis are summarized in further detail in the "Billing Analysis (IPMVP Option C)" section. ADM will isolate each unique measure and verify each participant included in the analysis did not also participate in other programs; therefore, ADM will be able to isolate the measure effects using the household's billed consumption data.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

4.6.4 Timing and Cadence

This program is considered "high risk" and therefore will be evaluated each year in the 2024-2025 evaluation period.

4.6.5 Technical Comments

In the event that the required data is not available or sufficient to conduct a billing regression analysis, ADM will review and apply Avista TRM methods along with verified tracking data to estimate net program savings. ADM will also work with Avista and program implementers to ensure the expected energy savings per unit are reasonable and align with evaluation methods.

4.7 Residential Multifamily Weatherization Program – New Offerings

Avista decided to retire the Multifamily Direct Install Program (MFDI) Program Avista in its current form and focus on developing new multifamily opportunities, called the Residential Multifamily Weatherization Program – New Offerings. Avista is in the process of developing multifamily program offerings that include strategic energy management, fulfillment of any remaining direct install opportunities, and multifamily weatherization offerings. ADM assumes the program will continue to serve hard-to-reach customer segment as well as Avista's low- and limited-income population. Although ADM has limited information of the new version of this program, Table 4-9 summarizes the anticipated measures offered under this program along with the proposed impact evaluation method for each measure, assuming the continuation of direct install measures, and adding weatherization measures, summarized and separated by fuel type.

Table 4-9: Multifamily Weatherization Program – New Offerings Measures

Measure	Impact Analysis Methodology
Faucet aerators[19]	No energy savings
Showerheads[20]	No energy savings
Screw-in LEDs	RTF UES, ResLighting_v9_4
Smart power strips	Avista TRM
Vending misers in common areas	Avista TRM
Lighting (common area)	RTF UES, ResLighting_v9_4
Attic insulation	RTF UES, ResMFWeatherization_v6_1
Wall insulation	RTF UES, ResMFWeatherization_v6_1
Floor insulation	RTF UES, ResMFWeatherization_v6_1
Window replacement	RTF UES, ResMFWeatherization_v6_1
Window efficiency upgrade	RTF UES, ResMFWeatherization_v6_1
Storm windows	RTF UES, ResMFWeatherization_v6_1
Door replacement	RTF UES, ResMFWeatherization_v6_1

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Residential Multifamily Weatherization Program – New Offerings in the section below.

4.7.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Residential Multifamily Weatherization Program – New Offerings:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Residential Multifamily Weatherization Program – New Offerings. Table 2-2 Section 2.3.2 summarizes the sample sizes for the survey-based verification activity for the Residential Multifamily Weatherization Program – New Offerings.

During document-based verification, if any deviations between the tracking data and application values are found, ADM will communicate these differences to Avista through periodic updates and summarize deviations in the final report.

This program does not track participating customer contact information; therefore, surveys will not be deployed for the Multifamily Weatherization Program participants.

4.7.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of rebate
- Rebate application forms and applicable invoices

[19] The Regional Technical Forum has deactivated the showerhead measure workbook due to low or negligible energy savings for faucet aerators

[20] The Regional Technical Forum has deactivated the showerhead measure workbook due to low or negligible energy savings for showerheads

4.7.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodology to estimate verified net energy savings in the Multifamily Weatherization Program – New Offerings:

- Deemed savings using RTF UES values or Avista TRM values

Measure-level impact evaluation methodologies for this program are specified in Table 4-9, separated by fuel type.

Given the measure mix and inherent difficulties reliably modeling common areas in multifamily buildings (typically due to uncertainty mapping to the relevant accounts and/or the wide variety of energy uses associated with those accounts, ADM proposes to measure savings for the program using deemed savings.

For measures in which an RTF-approved measure has been specified and considered active, ADM proposes to measure net savings using UES values in each RTF workbook for that measure. For measures in which an RTF-approved, active measure has not been specified, ADM proposes to measure verified net savings using the values in Avista's TRM. ADM will review Avista TRM UES data sources to ensure they are applicable to the measure. ADM assumes that we will be able to use the RTF multifamily weatherization UES workbook for the new offerings of weatherization measures.

The RTF had deactivated the faucet aerator measure during the May 2021 RTF meeting due to insufficient data. The RTF had also deactivated the smart power strip measure during the November 2021 RTF meeting. Therefore, these measures will be evaluated with no energy savings. In addition, the vending misers in common areas has historically shown insufficient participation for an isolated billing analysis. Therefore, ADM proposes to employ Avista TRM to evaluate this measure.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

4.7.4 Timing and Cadence

This program is considered "low risk" and therefore will be evaluated once in the 2024-2025 evaluation period.

4.7.5 Technical Comments

In the case that the Avista TRM does not represent the most applicable UES value for the rebated measure, ADM will review third-party TRM algorithms to estimate verified net energy savings.

In addition, as noted above, billing analyses in multifamily settings are more prone to issues than single family detached homes or even dedicated commercial facilities. However, if Avista is interested in pursuing a billing analysis, ADM will make this change during the planning process.

4.8 Residential On-Bill Repayment/Financing Program

The On-Bill Repayment/Financing Program provides on-bill repayment/financing programs for residential and small business customers. Avista's on-bill repayment (OBR)/financing program returned as an offering after a half decade hiatus. In 2023 Avista started offering customers access to OBR

through its partner the Puget Sound Cooperative Credit Union (PSCCU). OBR, through PSCCU, offers lower rate loans for energy-efficient projects to homeowners and business owners that can be more easily tracked and paid back through their monthly utility bill. OBR is not intended for customers who qualify for Avista's Low-Income Weatherization program and that can therefore be served directly through the partnering community action agencies.

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the On-Bill Repayment/Financing Program in the section below.

4.8.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the On-Bill Repayment/Financing Program:

- Database review for program-level data fields (Section 2.2)

The database review will include all available On-Bill Repayment/Financing Program tracking data. ADM does not propose any sampled document-based verification or sampled survey-based verification activities for the evaluation of this program, as impact evaluation savings will be measured in the measure's native program.

4.8.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program marketing materials, program tracking database, and a list of customers participating in the program along with associated measures with repayment plans

4.8.3 Impact Analysis

Avista does not claim energy savings for OBR, as the savings associated with any measure installed using OBR financial support will be claimed through the relevant and native Avista program. In the event that Avista revises the program to start claiming savings for these financed measures, ADM will discuss with Avista and develop an OBR-specific impact analysis plan.

ADM's efforts will instead be focused on gathering and estimating program uplift, or additional participation in other programs due to the financing option provided by ADM. This will be identified in participant surveys, which will ask participants whether the financing option impacted their decision to purchase the rebated equipment.

4.8.4 Timing and Cadence

This program is considered "low risk" and therefore will be evaluated once in the 2024-2025 evaluation period.

4.8.5 Technical Comments

ADM provides no technical comments for this program's evaluation.

4.9 Residential Always-On Load Behavioral Program

The Residential Always-On Load Behavioral Program encourages residential households to reduce energy usage contributing to the "always-on" load. This "always-on" load, or "idle" load is the portion of daily household energy usage consumed from household devices that have been turned off or are in standby mode, but still drawing power.

The Residential Always-On Load Behavioral Program makes use of territory-wide AMI deployment by integrating AMI data with machine learning algorithms to identify the always-on load in each household. Avista has identified the top third of residential customers with always-on load and has created three potential groups: two treatment arms and one control group.

ADM understands that Avista may want to test different behavioral responses to personalized information, private costs, and economic incentives to determine a method most likely to generate the highest reduction in always-on load. ADM would work with Avista to develop A-B test groups for messaging, comparing more personalized information against generalized outreach and messaging. Subsequent to this analysis, ADM can then target "high savers" with survey efforts intended to capture demographic data that may be used as an underlying predictor of responsiveness to the program messaging.

This program was implemented by the third quarter of 2023 and targeted the top third (nearly 75,000 customers) of residential always-on loads. The program has identified two treatment groups and one control group, with a target reduction of 5 percent a month relative to each treatment customer's baseline. The groups are assigned as follows:

- **Group A:** Customer received emails from Avista monthly with their Always On progress (see email templates for more detail).
- **Group B:** Customer received emails from Avista monthly with their Always On progress as well as a $5 bill credit if they reduced their always on usage that month in comparison to their calculated baseline amount.
- **Group C:** The customer did not receive emails or communication regarding the program – this group reflects the control group.

Table 4-10 summarizes the anticipated cohorts treated under this program.

Table 4-10: Residential Always-On Load Behavioral Program Summary

Cohort	Households
Group A (Treatment 1)	25,000
Group B (Treatment 2)	25,000
Group C (Control Group)	25,000
Total	**75,000**

ADM will employ IPMVP-recommended standards for estimating verified net savings for this behavioral program. This includes validating each cohort's control group remain a statistically significant match after accounting for attrition, conducting separate linear regression for each cohort including variables for weather normalization, extrapolating model estimates using typical meteorological year (TMY) weather data, removing double counted savings claimed in other residential programs, and summing each cohort's validated savings to estimate total program energy savings.

Behavioral programs typically display 1-3% annual household energy savings. Behavioral programs also often display persistence savings due to behavioral energy consumption changes that extend further than the length of program treatment.

This behavioral program is highly unique in that messaging targets always-on load and uses high interval meter data to provide personalized tips. ADM will explore avenues for identifying further savings opportunities for targeted expansion of the program, as well as relative benefit of always-on load messaging compared to typical messaging in behavioral programs.

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Residential Always-On Load Behavioral Program in the sections below.

4.9.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Residential Always-on Load Behavioral Program:

- Database review for program-level data fields (Section 2.2)

ADM does not propose any sampled document-based verification or sampled survey-based verification activities for the evaluation of this program.

4.9.2 Required Data

ADM requires the following data to complete the analysis for this program:

- For each treatment and control customer, identifiers for treatment or control assignment and cohort assignment, unique customer identifiers, household zip code, and date of intervention
- Tracking data from Avista downstream programs for the previous three to five program years
- A sample of communication materials sent to customers
- Monthly billed consumption data for treatment and control customers
- AMI meter data for treatment and control customers

4.9.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodology to estimate verified net energy savings for each cohort in the Residential Always-On Load Behavioral Program:

- Billing analysis with RCT group (IPMVP Option C)

For this program, ADM proposes to measure verified net savings by conducting a billing analysis detailed in the “Billing Analysis (IPMVP Option C)” section with the program’s defined RCT groups. In the case the RCT groups have not been selected, ADM proposes to assist program implementors with random assignment of eligible households in the top third of residential always-on loads in the service territory.

ADM understands that in 2023, Avista increased the number of participants in the program to approximately 110,000 residential electric customers. ADM has extensive experience assisting behavioral pilot implementors with selecting these groups using the methods described in the Uniform

Methods Project (UMP) by the National Renewable Energy Laboratory[21] to ensure groups are valid, remain scalable in the future, and align with Avista energy efficiency goals.

For this behavioral program, ADM describes the billing analysis in further detail, as this methodology differs from measure-level or census-level billing analyses. The UMP considers Randomized Control Trials (RCT) the golden standard for evaluating behavioral energy efficiency programs. The most important benefit of an RCT is that the experiment results in an unbiased estimate of the program's causal impact. Because the Residential Always-On Load Behavioral Program employs a RCT design, ADM is able to conduct an impact evaluation with reliable and robust verified net energy savings estimates. The UMP recommends RCT groups as it distributes households evenly and randomly into treatment and control groups. Therefore, the pre- and post-period remain comparable over time, allowing the evaluator to control for outside factors that may also contribute to energy usage differences. Such outside factors include large-scale socioeconomic or meteorological changes, such as COVID-19 shelter in place orders or hurricanes. Through random assignment designed at the outset of the program, the effects of these large-scale socioeconomic factors are equally represented within each group, affecting each group's average household consumption equally.

Using the RCT groups designated within this program, ADM will compare treatment consumption with control consumption for each cohort in the program using AMI meter data or monthly billed consumption data. We will explore the following types of linear fixed effects regression (LFER) models during the evaluation of this program: Difference in Difference (D-in-D) and Post-Program Regression (PPR). Each model specification is detailed in the "Billing Analysis (IPMVP Option C)" section. ADM will include heating season and cooling season controls to estimate the relationship between energy consumption and weather during the pre- and post-periods, for each fuel type. ADM will finalize model specifications in collaboration with Avista during the kick-off meeting and subsequent program-specific meetings.

As previously mentioned, it is ideal to have a randomized control trial (RCT) to gather the most reliable and robust results. However, some RCTs may become no longer viable due to changes in implementation or natural attrition. ADM will test the validity of each RCT by completing t-tests for the average daily usage of each of the pre-period months between the remaining treatment group and remaining control. If the pre-period average daily usage rejects the null hypothesis at the 90% confidence interval for any of the 12 pre-period months, the RCT is considered invalid. In the case a cohort no longer passes equivalency testing, ADM proposes a method for producing post-hoc control groups via quasi-experimental methods, further described in the "Comparison Group" section. Using this quasi-experimental control group, ADM will continue impact analysis and explore the regression models mentioned above.

After regression models have been finalized, ADM will estimate and remove double count savings found in other Avista residential energy efficiency programs from the customers in both the treatment group and control groups. The double count savings removal is further described below.

The Residential Always-On Load Behavioral Program communications may also increase the customer's propensity to participate in other energy efficiency programs. This additional participation is known as

[21] https://www.nrel.gov/docs/fy21osti/77435.pdf

uplift. The communication sent to customers includes information about how to save energy, which may lead to customers' adopting more energy efficient upgrades for their home. When a household participates in an efficiency program because of this encouragement, the utility might count their savings twice: once in the regression-based estimate of behavioral program savings and again in the estimate of savings for the other energy efficiency program. Although uplift rarely displays a statistically significant difference between the treatment and control groups, the UMP recommends removing uplift from each group at the household level.

ADM will estimate savings from program uplift and subtract them from the efficiency program portfolio savings. To achieve this, ADM will gather information on the total net kWh saved in other residential programs. We will calculate the double count savings on a per-household level for each treatment group. We will subtract the double counted savings, whether positive or negative, from the wave's gross savings estimates from the regression analysis to get total verified savings. For downstream programs, other program tracking data and verified per-measure energy savings is sufficient to complete the removal of double counted savings.

ADM will summarize the cohort-level impacts by extrapolating regression coefficients with TMY data or actual weather data. ADM will present savings estimates in three formats for the program year:

- Daily and annual energy savings per home
- Annual percent savings per home
- Program-level energy (kWh) savings

ADM will summarize program-level savings by extrapolating verified household net energy savings to the number of unique treatment households participating in the program, separated and reported by state and fuel type.

4.9.4 Timing and Cadence

This program is considered "high risk" and therefore will be evaluated each year in the 2024-2025 evaluation period.

4.9.5 Technical Comments

In addition to the proposed methodology described above, ADM will also explore a single linear regression aggregating both cohorts, with an identifier differentiating treatment group 1 from treatment group 2 in order to identify the incremental savings effect gained by offering the incentive to the second treatment group. In addition, ADM will evaluate persisted savings derived from the program treatment using the impact methodology described above, as is industry best practice.

As mentioned previously, this behavioral program is highly unique. In order to better understand the unique strengths of this program's implementation methods, ADM will explore monthly billing data and AMI meter data to better characterize the various changes resulting from these unique, customized communications, such as investigating households that display higher than average household energy reductions in each cohort and similarities in household characteristics. Further details for the methodology of this group analysis are summarized in "Innovative Techniques" in Section 3.10, under "Savings Group Analysis". Information about these groups of customers, combined with customer

feedback about the always-on communications, will help Avista identify further opportunities for targeted expansion of the program with the goal of generating the highest reduction in always-on usage.

4.10 Residential Behavioral Program

Avista plans to launch a residential behavioral program in late 2024 or early 2024. ADM prepares to evaluate this program with the same methods as the Residential Always-On Program.

Unlike the Residential Always-On Load Behavioral Program, the Residential Behavioral program will not make use of territory-wide AMI deployment by integrating AMI data with machine learning algorithms to identify the always-on load in each household. Instead of focusing on always-on load energy savings, messaging will be deployed based on effective space heating, water heating, and lighting tips.

ADM will employ IPMVP-recommended standards for estimating verified net savings for this behavioral program. This includes validating each cohort's control group remain a statistically significant match after accounting for attrition, conducting separate linear regression for each cohort including variables for weather normalization, extrapolating model estimates using typical meteorological year (TMY) weather data, removing double counted savings claimed in other residential programs, and summing each cohort's validated savings to estimate total program energy savings.

Behavioral programs typically display 1-3% annual household energy savings. Behavioral programs also often display persistence savings due to behavioral energy consumption changes that extend further than the length of program treatment.

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Residential Behavioral Program in the sections below.

4.10.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Residential Behavioral Program:

- Database review for program-level data fields (Section 2.2)

ADM does not propose any sampled document-based verification or sampled survey-based verification activities for the evaluation of this program.

4.10.2 Required Data

ADM requires the following data to complete the analysis for this program:

- For each treatment and control customer, identifiers for treatment or control assignment and cohort assignment, unique customer identifiers, household zip code, and date of intervention
- Tracking data from Avista downstream programs for the previous three to five program years
- A sample of communication materials sent to customers
- Monthly billed consumption data for treatment and control customers
- AMI meter data for treatment and control customers

4.10.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodology to estimate verified net energy savings for each cohort in the Residential Load Behavioral Program:

- Billing analysis with RCT group (IPMVP Option C)

For this program, ADM proposes to measure verified net savings by conducting a billing analysis detailed in the "Billing Analysis (IPMVP Option C)" section with the program's defined RCT groups. In the case the RCT groups have not been selected, ADM proposes to assist program implementors with random assignment of eligible households in the top third of residential energy usage in the service territory.

For further information on billing analysis methods for the behavioral program, please reference Section 4.9.3 from the Residential Always-On Behavioral Program methods.

4.10.4 Timing and Cadence

This program is considered "high risk" and therefore will be evaluated each year in the 2024-2025 evaluation period.

4.10.5 Technical Comments

In order to better understand the unique strengths of this program's implementation methods, ADM will explore monthly billing data and AMI meter data to better characterize the various changes resulting from these communications, such as investigating households that display higher than average household energy reductions in each cohort and similarities in household characteristics. Further details for the methodology of this group analysis are summarized in "Innovative Techniques" in Section 3.10, under "Savings Group Analysis".

4.11 Residential Home Energy Audit Program

The Residential Home Energy Audit Program is designed to educate and generate interest in efficiency in general and, more specifically, in Avista's portfolio of residential energy efficiency and renewable-energy programs. ADM summarizes the proposed program-specific impact analysis activities and requirements for the Residential Home Energy Audit Program in the section below.

4.11.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Residential Home Energy Audit Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)
- Survey-based verification for a random subset of customers (Section 2.3.2)

Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Residential Home Energy Audit Program.

During document-based verification, if any deviations between the tracking data and application values are found, ADM will communicate these differences to Avista through periodic updates and summarize deviations in the final report.

During survey-based verification, ADM will randomly select a subset of participant customers to survey for simple verification that a home energy audit was conducted, that the participant remembers the results of the home energy audit, and that the participant still has the direct install measures installed and functioning.

4.11.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, contact information, and date of assessment
- Rebate application forms and applicable invoices (when relevant)
- Monthly billed consumption data for participating customers and for similar, non-participating customers

4.11.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodologies to estimate verified net energy savings in the Residential Home Energy Audit Program:

- Deemed savings using RTF UES values
- Billing Analysis with counterfactual group (IPMVP Option C)

This program provides direct install measures to customers. The Avista auditor may also provide recommendations for improvements that may be rebated through Avista's programs. In addition, the Avista auditor may also provide recommendations for home improvements that Avista does not currently incent for. Therefore, in order to capture this combination of effects, ADM will codnuct a billing analysis with a counterfactual group selected via propensity score matching. The methodology used to select the quasi-experimental counterfactual group and the methodology for linear regression billing analysis are summarized in further detail in the "Billing Analysis (IPMVP Option C)" section.

The measures rebated by the customer through other Avista channels will be removed from the average household billing analysis results, in order to remove double counting effects.

Additionally, for measures in which an RTF-approved measure has been specified and considered active, ADM proposes to measure net savings using UES values in each RTF workbook for that measure.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

4.11.4 Timing and Cadence

This program is considered "low risk" and therefore will be evaluated once in the 2024-2025 evaluation period.

4.11.5 Technical Comments

ADM provides no technical comments for this program's evaluation.

4.12 Residential Direct Install Insulation Program

Avista plans to launch the Residential Direct Install Insulation Program during the 2024-2025 biannual period. ADM assumes the measures provided in this program will mimic the residential shell measures and differ in only implementation and incentives. ADM will work with Avista program managers to update our assumptions and impact evaluation methods for additional measures not included in the tables below. Table 4-11 summarizes the anticipated measures offered under this program along with the proposed impact evaluation method for each measure, assuming the continuation of direct install measures, and adding weatherization measures, summarized and separated by fuel type.

Table 4-11: Residential Direct Install Insulation Program Offering Measures

Measure	Impact Analysis Methodology
Faucet aerators[22]	No energy savings
Showerheads[23]	No energy savings
Screw-in LEDs	RTF UES, ResLighting_v9_4
Smart power strips	Avista TRM
Vending misers in common areas	Avista TRM
Lighting (common area)	RTF UES, ResLighting_v9_4
Attic insulation	RTF UES, ResMFWeatherization_v6_1
Wall insulation	RTF UES, ResMFWeatherization_v6_1
Floor insulation	RTF UES, ResMFWeatherization_v6_1
Window replacement	RTF UES, ResMFWeatherization_v6_1
Window efficiency upgrade	RTF UES, ResMFWeatherization_v6_1
Storm windows	RTF UES, ResMFWeatherization_v6_1
Door replacement	RTF UES, ResMFWeatherization_v6_1

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the program in the section below.

4.12.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Residential Direct Install Insulation Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)
- Survey-based verification for a random subset of customers (Section 2.3.2)

[22] The Regional Technical Forum has deactivated the showerhead measure workbook due to low or negligible energy savings for faucet aerators

[23] The Regional Technical Forum has deactivated the showerhead measure workbook due to low or negligible energy savings for showerheads

Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Residential Direct Install Insulation Program. Table 2-2 Section 2.3.2 summarizes the sample sizes for the survey-based verification activity for the Residential Direct Install Insulation Program.

During document-based verification, if any deviations between the tracking data and application values are found, ADM will communicate these differences to Avista through periodic updates and summarize deviations the final report.

During survey-based verification, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure and documentation of prior equipment. ADM will include questions such as:

- Is the newly installed direct install measures still properly functioning?
- What type of equipment heats the space in your home?

These questions will help ADM verify that the measure was collected and documented accurately and will allow ADM to calculate measure-level savings more accurately.

4.12.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of rebate
- Rebate application forms and applicable invoices
- Monthly billed consumption data for treatment and control customers

4.12.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodology to estimate verified net energy savings in the Residential Direct Install Insulation Program:

- Deemed savings using RTF UES values or Avista TRM values

Measure-level impact evaluation methodologies for this program are specified in Table 4-11, separated by fuel type.

Given the measure mix and inherent difficulties reliably modeling common areas in multifamily buildings (typically due to uncertainty mapping to the relevant accounts and/or the wide variety of energy uses associated with those accounts, ADM proposes to measure savings for the program using deemed savings.

For measures in which an RTF-approved measure has been specified and considered active, ADM proposes to measure net savings using UES values in each RTF workbook for that measure. For measures in which an RTF-approved, active measure has not been specified, ADM proposes to measure verified net savings using the values in Avista's TRM. ADM will review Avista TRM UES data sources to ensure they are applicable to the measure. ADM assumes that we will be able to use the RTF multifamily weatherization UES workbook for the new offerings of weatherization measures.

The RTF had deactivated the faucet aerator measure during the May 2021 RTF meeting due to insufficient data. The RTF had also deactivated the smart power strip measure during the November

2021 RTF meeting. Therefore, these measures will be evaluated with no energy savings. In addition, the vending misers in common areas has historically shown insufficient participation for an isolated billing analysis. Therefore, ADM proposes to employ Avista TRM to evaluate this measure.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

4.12.4 Timing and Cadence

This program is considered "low risk" and therefore will be evaluated once in the 2024-2025 evaluation period.

4.12.5 Technical Comments

In the case that the Avista TRM does not represent the most applicable UES value for the rebated measure, ADM will review third-party TRM algorithms to estimate verified net energy savings.

In addition, as noted above, billing analyses in multifamily settings are more prone to issues than single family detached homes or even dedicated commercial facilities. However, if Avista is interested in pursuing a billing analysis, ADM will make this change during the planning process.

4.13 Low-Income Program

The Low-Income Program delivers energy efficiency measures to low-income residential customers in its Washington service territory in partnership with five network Community Action Agencies ("Agencies") and one tribal weatherization organization. In-house or contract crews install approved program measures in income-qualified households. In addition, the Agencies have access to other monetary resources which allow them to weatherize a home or install additional energy efficiency measures.

Table 4-12: Low-Income Program Measures

Measure	Impact Analysis Methodology
G Air infiltration	Census Billing Analysis
G ENERGY STAR-rated doors	
G Windows	
G High-efficiency natural gas furnace	
G Water heater	
G Attic insulation	
G Duct insulation	
G Floor insulation	
G Wall insulation	
G Duct sealing	
G Tankless water heater	
G High-efficiency boiler	
E Air infiltration	
E ENERGY STAR-Rated Doors	
E ENERGY STAR-Rated Refrigerator	
E Windows	
E Air Source Heat Pump	
E Attic insulation	

Measure	Impact Analysis Methodology
E Duct insulation	
E Floor insulation	
E Wall insulation	
E Duct sealing	
E Ductless Heat Pump (single head) (w FAF)	
E Ductless Heat Pump (single head) (displace zonal)	
E Tiers 2-3 HPWH	
E Conversion to Air Source Heat Pump	
E HHS	
E Outreach LEDs	
E Ductless Heat Pump (multi head) (w FAF)	
E Ductless Heat Pump (multi head) (displace zonal)	

Avista provides CAP agencies with the following approved measure list, which are reimbursed in full by Avista. Avista also provides a rebate list of additional energy saving measures the CAP agencies are able to utilize which are partially reimbursed. Table 4-12 summarizes the anticipated measures offered under this program along with the proposed impact evaluation method for each measure, separated by fuel type.

4.13.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Low-Income Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Low-Income Program.

During document-based verification, if any deviations between the tracking data and application values are found, ADM will communicate these differences to Avista through periodic updates and summarize deviations in the final report.

Survey-based verification is not proposed for this program, as the evaluation method proposed does not necessitate adjustments to savings estimates.

4.13.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of rebate
- Program materials
- Rebate application forms and applicable invoices
- Monthly billed consumption data for participating and similar non-participating customers
- Identifiers for low- to moderate-income households in both participant and nonparticipant customers in the Avista service territory
- Stakeholder contact information

We understand that Avista will be working with a variety of sources to acquire the requested data. To facilitate this, our team is flexible on the exact format of the data and encourages Avista to provide requested data incrementally rather than wait for a complete set.

4.13.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodology to estimate verified net energy savings in the Low-Income Program, as described in Table 4-12:

- Census billing analysis with counterfactual group (IPMVP Option C)

For this program, ADM proposes to measure verified net savings by conducting a census billing analysis using a counterfactual group selected via propensity score matching. The methodology used to select the quasi-experimental counterfactual group and the methodology for linear regression billing analysis are summarized in further detail in the "Billing Analysis (IPMVP Option C)" section. ADM will not isolate each unique measure but instead verify average participant household energy savings for both electric and natural gas. ADM will verify each participant included in the analysis did not also participate in other programs; therefore, ADM will be able to isolate the Low-Income Program participation effects using the household's billed consumption data. ADM will include heating season and cooling season controls to estimate the relationship between energy consumption and weather during the pre- and post-periods, for electric and gas.

For this program, our approach to creating a quasi-experimental control group utilizes "future" participants from the same program (i.e., those that received measures in 2025 for the 2024 analysis period, and those that received measures in 2024 for the 2025 analysis period) to account for the impact of various macroeconomic factors and other influences on pre- and post-program energy consumption that are unrelated to the installation of program measures. These include economic effects, the movement of people in and out of dwelling units, fluctuations in per-unit energy costs, or, for example, shelter-in-place orders for COVID19. To identify the most relevant customers for the control group, we will use the quasi-experimental matched control group method. This method is further defined in the "Comparison Group" section.

ADM will summarize program-level savings by extrapolating verified household net energy savings to the number of unique participating households, separated and reported by state and fuel type.

4.13.4 Timing and Cadence

This program is considered "low risk" and therefore will be evaluated once in the 2024-2025 evaluation period.

4.13.5 Technical Comments

ADM's previous impact evaluation of the Low-Income Program had insufficient isolated participation to complete a measure-level billing analysis for this program. In addition, a census billing analysis resulted in unreliable savings estimates. It is likely that participation in 2024 and 2025 may also be limited and may cause billing analyses to be unfeasible. ADM is hopeful that participation will increase as residential customers become more comfortable with on-site contractor visits. However, in the event that the

required data is not available or sufficient to conduct a billing regression analysis, ADM will review RTF UES values and Avista TRM methods along with verified tracking data to estimate net program savings.

4.14 Named Community Investment Fund (NCIF) Program

ADM understands that Avista plans to make $2 million available annually for new energy efficiency projects in Named Communities for each of the last two years of the initial CEIP four-year period. This body of funding will be used specifically to address obstacles to participation in efficiency programs for members of Named Communities. This program will be called the Named Community Investment Fund (NCIF) Program. Avista currently expects program goals will focus on reducing energy burdens; increasing engagement in company programs, health, and safety benefits; and enhancing customer reliability. In addition to working with the CAP Agencies included in the Low-Income Program, this program also incorporates non-profit organizations as well.

Avista plans to offer a mix of rebates and fully funded measures. However, this mix may change, as Avista further engages with its advisory groups and customers to maximize program benefits.

Table 4-13 summarizes the anticipated programs offered under this program along with the proposed impact evaluation method for each program. As additional information becomes available for the programs Avista designs for the Named Communities, ADM will discuss with Avista to revise impact evaluation methods to best meet the program's annual objectives.

Table 4-13: Anticipated Named Community Investment Fund Program Impact Methods

Anticipated Program	Anticipated Measures	Impact Analysis Methodology
Community Identified Projects	Educational/	RTF UES / Billing Analysis /
Multifamily Building Upgrades in Named Communities	Weatherization measures (windows, attic insulation, floor insulation, wall insulation, ENERGY STAR doors), line voltage thermostats, heat pumps, water heaters, and direct install measures	RTF UES / Billing Analysis
Weatherization, Health and Safety for Manufactured and Mobile Homes	Weatherization measures (windows, attic insulation, floor insulation, wall insulation, ENERGY STAR doors) and safety measures	RTF UES / Billing Analysis
Single-Family Weatherization	Weatherization measures (windows, attic insulation, floor insulation, wall insulation, ENERGY STAR doors)	RTF UES / Billing Analysis
Incentives for Business and Organizations Serving Named Communities	Site-specific incentives and distributed energy projects	RTF UES / Billing Analysis
Connected Communities	Educational	TBD
Avista / Spokane Tribe of Indians Energy Partnership	Load and grid optimization	Billing Analysis with AMI data

ADM understands that a portion of the NCIF projects will require more complex evaluation due to the mix of measures and efficiency of the measures installed in the households. ADM will review the available data and propose a suitable impact evaluation methodology for these projects; however, ADM

anticipates that billing analysis may be required for a subset of these projects. ADM will work with Avista to update these plans once the program is rolled out and tracking data is available for review.

4.14.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the anticipated NCIF Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)
- Survey-based verification for a random subset of customers (Section 2.3.2)
- In-depth interviews for a random subset of customers (Section 3.3.3)

Similar to the other residential program offerings, ADM anticipates that the above activities will be helpful for evaluating the NCIF Program efforts. Once the programs are established and participation trends are gathered, ADM will work with Avista to provide a sampling plan for document verification and survey and interview goals.

During document-based verification, if any deviations between the tracking data and application values are found, ADM will communicate these differences to Avista through periodic updates and summarize deviations in the final report.

During survey-based verification, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure and documentation of prior equipment. More importantly, ADM will gather additional questions during the process evaluation to understand energy burden for the customers in Named Communities, and whether participation in the program has assisted in providing additional comfort and noticeably lower energy bills. Although energy burden in terms of monetary costs is relevant and important, it is also important to gather whether customers need to limit their spending on other essential items, such as food or medications, in order to pay for energy to maintain a healthy home. For this reason, ADM will include questions such as:

- How much of your monthly income do you spend on energy bills?
- Do you or your family members limit spending on necessities, such as groceries or medications, in order to pay for your home's energy bills?

Questions such as these will identify the energy burden present in participating homes, as well as identify circumstances in which the home does not display typical energy burden, but rather, it is only the case because they have to prioritize one essential item over another (energy over food, or energy over medication). These details will help ADM assess the impact that this NCIF program has on the community. In addition, ADM will ask questions that gather insight on perception of the utility before and after having participated in Avista's programs.

4.14.2 Required Data

ADM anticipates we will require the following data to complete the analysis for these programs:

- Program tracking data, including customer identifiers, address, and date of rebate
- Rebate application forms and applicable invoices

- Monthly billed consumption data for participating and non-participating customers

4.14.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodologies to estimate verified net energy savings in the anticipated NCIF Program:

- Deemed savings using RTF UES values
- Billing Analysis with counterfactual group (IPMVP Option C)

ADM will work with Avista to revise impact analysis methods once further information regarding the measures and project mix that are incentivized. For measures in which an RTF-approved measure has been specified and considered active, ADM proposes to measure net savings using UES values in each RTF workbook for that measure. ADM will also apply adjustments to these RTF values if deviations are found between invoices and tracking data or if in-service rates deviate from 100% in verification surveys. This methodology is summarized in further detail in Section 2.5.1. ADM anticipates we may conduct some on-site measurement for some facilities in order to model actual facility usage more accurately.

For measures in which an RTF-approved, active measure has not been specified, ADM proposes to measure verified net savings by conducting a billing analysis using with a counterfactual group selected via propensity score matching. The methodology used to select the quasi-experimental counterfactual group and the methodology for linear regression billing analysis are summarized in further detail in the "Billing Analysis (IPMVP Option C)" section. ADM will isolate each unique measure and verify each participant included in the analysis did not also participate in other programs; therefore, ADM will be able to isolate the measure effects using the household's billed consumption data.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

4.14.4 Timing and Cadence

This program is considered "high risk" because it is a newer program, and therefore will be evaluated each year in the 2024-2025 evaluation period.

4.14.5 Technical Comments

In the event that the required data is not available or sufficient to conduct a billing regression analysis, ADM will review and apply Avista TRM methods along with verified tracking data to estimate net program savings.

5. Non-residential Program-Level EM&V Approaches

The following subsections detail ADM's program-specific impact methods, process methods, and sampling plans for each of the programs in Avista's Non-Residential Portfolio, as summarized by the 2024 Washington Annual Conservation Plan. ADM will work with Avista to adjust program-specific impact and sampling plans as additional information is received about program participation, program restrictions, measure offerings, and available data.

5.1 C&I Appliance and Thermostat Program

The C&I Appliance and Thermostat Program helps promote nonresidential customers to use high efficiency appliances, such as ENERGY STAR clothes washers, and smart thermostats. Customers receive incentives after installation and after submitting a completed rebate form. Table 5-1 summarizes the anticipated measures offered under this program along with the proposed impact evaluation method for each measure, separated by fuel type.

Table 5-1: C&I Appliance and Thermostat Program Measures

Measure	Impact Analysis Methodology
E ENERGY STAR washer	RTF UES, ComClothesWashers_v7_1
E Smart thermostat	RTF UES, ComConnectedThermostats_v2
G Smart thermostat	RTF UES, ComConnectedThermostats_v2

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the C&I Appliance and Thermostat Program in the section below.

5.1.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the C&I Appliance and Thermostat Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Residential Appliance and Thermostat Program. Table 2-2 Section 2.3.2 summarizes the sample sizes for the survey-based verification activity for the C&I Appliance and Thermostat Program.

During document-based verification, if any deviations between the tracking data and application values are found, ADM will communicate these differences to Avista through periodic updates and summarize deviations the final report. ADM will not conduct survey verification efforts for this program.

5.1.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data including customer identifiers, address, and date of rebate
- Rebate application forms and applicable invoices

5.1.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodologies to estimate verified net energy savings in the Residential Appliance and Thermostat Program:

- Deemed savings using RTF UES values

Measure-level impact evaluation methodologies for this program are specified in Table 5-1, separated by fuel type.

For measures in which an RTF-approved measure has been specified and considered active, ADM proposes to measure net savings using UES values in each RTF workbook for that. ADM will also apply adjustments to these RTF values if deviations are found between invoices and tracking data or if in-service rates deviate from 100% in verification surveys. This methodology is summarized in further detail in Section 2.5.1.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

5.1.4 Timing and Cadence

This program is considered “low risk” and therefore will be evaluated once in the 2024-2025 evaluation period.

5.1.5 Technical Comments

ADM provides no technical comments for this program’s evaluation.

5.2 C&I Site-Specific Program

The Site-Specific Program provides calculated incentives to support the installation of qualifying energy efficiency equipment at commercial/industrial sites. These projects typically have a higher degree of complexity than the traditional prescriptive offerings and rely on custom calculations of savings and incentive levels. Examples of these projects include process improvements, upgrades to specialized equipment used in manufacturing, lighting installations that rely on specialized controls, and other measures designed around the customer’s specific needs.

ADM understands that Avista incorporated a Contractor Incentive Program (CIP) for contractors who complete projects in order to meet savings goals in a difficult labor and supply chain environment. This incentive will be paid directly to contractors and would be in addition to customer incentives that continue to go directly to the customer.

Avista’s Site-Specific Program is a major component in its non-residential offerings. The program approach strives for a flexible response to energy efficiency projects that have demonstrable kWh savings within program criteria. The majority of site-specific kWh savings are composed of custom lighting projects and custom HVAC, envelope, and industrial process load projects that do not fit the prescriptive path. The Site-Specific Program is available to all commercial/industrial retail electric customers, and typically brings in the largest portion of savings to the overall energy efficiency portfolio.

ADM's proposed site-specific M&V approach involves (1) selecting a representative sample of customers or sites that participated in a project; (2) determining the savings for each customer or site in the sample, usually by using one or more of M&V Options defined in the IPMVP; and (3) applying the results of estimating the savings for the sample to the entire population in the project.

5.2.1 Impact Approach

Some programs, particularly for commercial and industrial customers, may include provisions for custom measures. For such measures, we develop specifications on how to sample and verify actual project savings and the engineering calculations used to calculate savings. Major methods for estimating energy savings include engineering analysis, computer simulations, end-use metering, and billing data analysis.

- Engineering analysis includes those methods of analysis in which savings and load impacts are calculated by applying engineering principles and calculations.
- Energy analysis through computer simulation is a more sophisticated version of engineering analysis. ADM has developed DOE-2 and EnergyPlus analyses for energy use and savings for over 10,000 buildings of different types in projects throughout the United States and abroad. We use a framework that uses EnergyPlus, eQuest or DOE-2 as the computational engine for simulating and analyzing energy use in different types of facilities. This streamlining of the analysis process greatly reduces the time and cost of analyzing energy use in a building while providing analytical results of high quality.
- End-use metering can be used to obtain data that directly measures pre- or post-measure (or both) energy use for those specific end-uses affected by an energy efficiency measure. ADM has experience with a wide variety of monitoring approaches and is well-equipped with an extensive inventory of monitoring equipment available for use during this project. Having both the experience and the proper tools, ADM can provide end-use monitoring very cost efficiently for this evaluation effort.
- Trending data from building automation systems can substitute for or augment metering data. ADM explores this possibility with the implementation team, trade allies, and customers. Through regular meetings with key trade allies, we have been able to procure both baseline and post-retrofit trend data to support M&V for numerous large and complex projects. ADM will always explore this data acquisition mode as a first option, since it reduces the M&V burden on the customers (trade allies typically set up the trends) and tends to reduce evaluation costs and improve evaluation turnaround time.
- QAQC: quality assurance and quality control, or pre-review, will be conducted for all projects eligible for an incentive greater than $20,000 or exceeding 500,000 kWh in savings.

Our project team has extensive experience in using all these methods. We draw on the lessons we have learned from this experience to prepare specifications for methods that are appropriate for each custom measure, considering advantages and disadvantages of each method. Moreover, we specify methods that depend on the type of measure and project-specific opportunities or constraints.

5.2.2 Sampling and Precision

For the Site-Specific Program simple random sampling is not an effective sampling methodology as the CV values observed in business programs are typically very high because the distributions of savings are

generally positively skewed. Often, a relatively small number of projects account for a high percentage of the estimated savings for the program.

To address this situation, we will use a sample design for selecting projects for the M&V sample that takes such skewness into account. With this approach, we select a number of sites with large savings for the sample with certainty and take a random sample of the remaining sites. To further improve the precision, non-certainty sites are selected for the sample through systematic random sampling. That is, a random sample of sites remaining after the certainty sites have been selected is selected by ordering them according to the magnitude of their savings and using systematic random sampling. Sampling systematically from a list that is ordered according to the magnitude of savings ensures that any sample selected will have some units with high savings, some with moderate savings, and some with low savings. Samples cannot result that have concentrations of sites with atypically high savings or atypically low savings. We will establish sample sizes to safely exceed ±10% precision at 90% confidence (90/10 confidence precision).

Using past program year participation, ADM has estimated sample sizes required to meet 90/10 precision for each state and fuel type. Table 5-2 below presents expected sample sizes,

Table 5-2: Expected Sample Sizes by State and Fuel Type

Fuel	WA	ID
Electric	17	9
Natural Gas	5	3

5.2.3 Site Visits

For sampled sites in the Site-Specific Program ADM will conduct on-site verification visits to confirm the installation conditions and use-case for sampled projects. For projects where most measures have deemed savings values, we do not expect to conduct extensive metering or monitoring. However, we have conducted both long-term and short-term metering and monitoring in past efforts to collect additional data required for a wide variety of evaluations. For measures for which deemed savings values are not available, we will use site visits to accomplish two major things: First, our field personnel will verify that reported measures have been installed, that they were installed correctly, and that they still function properly. Second, field staff will collect the data needed to analyze the energy savings and demand impacts for the installed measures. ADM will work with Avista to schedule the site visits in an efficient manner to lessen any impact on customer satisfaction. When needed, metered data will be collected either via a data logger or by EMS trend data (if available).

5.2.4 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms and applicable invoices
- Individual project files and supporting documentation for sampled projects

5.2.5 Impact Analysis

For the Site-Specific programs, our evaluation work will include:

- Stratified Random Sampling and by selecting large saving sites with certainty;
- QAQC (pre-review) of large and custom projects;
- Engineering reviews of non-prescriptive projects;
- On-site verification and data logging;
- Interviewing of program participants; and
- Net-to-gross.

For custom or otherwise non-deemed measures, we use site-specific methods to determine savings that depend on the type of measure being analyzed (e.g., lighting measures, HVAC measures, refrigeration and process improvement measures, motors, and variable frequency drives).

For measures evaluated according to the site-specific approach, we review documentation for projects selected for the analysis samples to assess (1) whether the methodology used for the savings and kW impact calculations were appropriate, (2) whether data sources or assumptions used were valid, and (3) whether savings calculations were done correctly. We consider a variety of factors in this review, including:

- Energy (kWh) savings and demand (kW) reductions
- Number of different measures in a project;
- Number of installed measures;
- Interactive effects between measures and building systems;
- Uncertainty of the measure itself; and
- Percentage of savings vs. baseline.

As noted, the type of method used to determine savings through the site-specific approach depends on the type of measure being analyzed. A high-level summary of our approach to evaluating lighting projects is as follows:

As a first step, we review ex ante lighting calculations and supporting documents. This review includes checking that the invoices and cut sheets for the purchased materials match the specified lighting upgrades in the calculation spreadsheet. If there are any discrepancies or internal inconsistencies in the documentation these are identified as researchable issues in the site-specific M&V plan. In these instances, our approach is to contact the implementer and the applicant and request for clarification or additional information. In general, our approach is to identify and remove as many uncertainties as possible prior to the on-site visit.

The second step is to devise a metering and project-level sampling plan. For certain projects, notably ones in universities and hospitals, it may not be possible to verify every fixture upgrade in the allotted time[24]. In such cases a sampling plan is created to verify the installation of the project with better than ±20% precision at the 90% confidence level[25].

[24] Most site visits will only require one to three hours of on-site work, but verifications of extensive projects in universities and hospitals can sometimes require one to two working days.

[25] If the project represents a significant portion of the program-level savings these criteria can be tightened as required to ensure that the overall precision goals are achieved at the program level.

The on-site work focuses on determining the hours of operation and verifying the baseline fixtures. During the scheduling process, a preliminary interview will inform the site contact of our data collection needs. Depending on program implementation protocols, the baseline fixtures may represent a significant uncertainty in lighting projects. Our approach to verifying the baseline fixtures and controls is summarized below:

If any of the supplanted fixtures are in storage on site, ADM field staff are instructed to photographically document the baseline fixtures. During the scheduling process we ask if this is possible, since the opportunity may exist to ask the site contact to either retain a sample fixture or to document the make/model.

If the above is not possible but the site contact can attest that fixtures like the baseline fixture are still in utilization in other areas of the facility, those fixtures are documented as proxies for the supplanted fixtures.

If the above is not possible, the site contact (or if applicable, the most knowledgeable person on-site in the matter) is asked to describe the baseline fixtures. Our field staff are trained interviewers and can often obtain enough information to help piece together the connected load of the supplanted fixtures.

Depending on the evaluation protocol chosen for a particular project, the hours of operation may need to be metered. If the new fixtures are high bays with integral occupancy sensors, then the preferred approach is to meter current at the electrical panel. Otherwise, light level loggers or lighting on/off loggers will suffice. On average, just a handful of loggers are required per site, but large projects may require 20 or more loggers to be installed.

Though custom commercial and industrial projects are quite different than lighting projects from an engineering standpoint, there are commonalities in our evaluation approaches. The main goal is to identify and remove or minimize the key uncertainties in the energy savings estimations. After a full review of project documentation and if necessary, brief exploratory interviews with the program implementer or the applicant, ADM develops an M&V plan that (1) describes the project and the initial impact estimation methods (2) identifies the major sources of uncertainty in the impact estimation (3) proposes a method for assessing the project's energy impacts and (4) motivates and details a plan to collect and analyze data to reduce or remove uncertainties from the energy savings estimation.

During a site visit, we use a documentation checklist to record the following types of information.

- We document any equipment changed or new equipment installed, including (1) descriptions, (2) schematics, (3) performance data, and (4) other supporting information.
- We also document information about the savings calculation, including (1) what method was used, (2) specifications of assumptions and sources for these specifications, and (3) correctness of calculations.

In our review of the energy savings calculations, we focus on the key factors and assumptions used to determine energy use, including operating hours, usage patterns, and loading factors. Our review includes the following:

- Review of energy-efficiency improvements considered for comprehensiveness
- Review of energy analysis input assumptions

- Review of methods used to calculate energy savings
- Recommendations for corrective actions if an energy analysis is found to be deficient

We use several sources of information to inform our work:

- Technical reference manuals, such as the NW RTF, PA TRM 2021 and the IL TRM 10.0;
- Evaluation studies that ADM has conducted;
- Data and evaluation and market analysis reports that have been prepared that are specific to WA, ID or other nearby states; and
- Evaluation and market reports that have been prepared for other regions of the country. These types of reports are available through the evaluation report databases maintained by CALMAC (for California) and the Consortium on Energy Efficiency.

After all problems in the documentation for a measure have been resolved and it has been determined that the energy efficiency measures have been correctly analyzed and are justifiable, the engineer performing the review will prepare a worksheet that details the review information.

To verify savings for measures installed at project sites, we use methods that depend on the type of measure.

Savings from Process Improvement Measures: Analysis of savings from process improvements, including changes to process equipment, is inherently project specific. Because of the specificity of such processes, analyzing impacts through building simulations is generally not feasible. The M&V effort therefore typically involves retrofit isolation. If pre-installation metering is not possible, then post-installation metering is coupled with regressions, engineering analysis, and production logs to determine energy savings. Whole-facility meter data analysis can be accurate and efficient, provided that the project's impacts are large relative to the amount of unexplained variation (e.g., not correlated with production or weather data) in the facility's energy usage. We often rely on engineering analysis of the process affected by the improvements. Where appropriate, we use a specialized analysis tool such as DOE's excellent Steam System Modeler Tool.

Savings from Air Compressor Measures: We analyze savings from air compressor system measures using custom analysis tools. We use the characteristics and monitoring data collected on-site to develop the air flow and kWh load profiles that are the inputs to our analytical tool. These data will include not only electrical load measurements for compressors and auxiliary equipment (e.g., dryers, fans, etc.) but also inlet and discharge pressure measurements to calculate flows and pressure measurements for the compressor, dryer, and other critical components of the air compression system. We have developed an R-based script to help process large data sets (compressed air data can sometimes come in 1-second intervals) that sometimes accompany this measure.

Savings from Motor and VFDs: Unless baseline data are available, estimates of the energy savings from use of high efficiency motors or of VFDs are derived through an "after-only" analysis. With this method, energy use is measured for the high efficiency motor or VFD after it has been installed. We (1) make one-time measurements of voltage, current, and power factor of the ASD/motor and (2) use loggers to take continuous measurements of power over a period of time in order to obtain the data needed on operating schedules. The data thus collected are then used in estimating what energy use would have been for the motor application if the high efficiency motor or VFD had not been installed.

Savings from Refrigeration Measures: Refrigeration measures are usually project-specific, and the methods used to evaluate savings may differ from case to case. In most cases, we perform the analysis using engineering principles aided by monitored data. Data on the efficiency of new equipment installed will be gathered from program records and verified with the manufacturers. Data on equipment runtime will be collected through short-term monitoring where applicable. We use these data to develop regression models of refrigeration energy usage, or as inputs for the eQuest refrigeration energy analysis program, which has the capability for simulating the energy use associated with various types of refrigeration. Utility interval meter data is particularly useful for evaluations of projects at refrigerated warehouses, or of multiple, similar projects at chains of grocery stores.

Savings from HVAC Measures: For the analysis of HVAC measures, we develop estimates of the savings through simulations with our energy analysis models (e.g., DOE-2, eQuest, EnergyPlus). Each simulation produces estimates of HVAC energy and demand usage to be expected under different assumptions about equipment and/or construction conditions. For the analysis of HVAC measures, we draw on the data collected through on-site visits and monitoring. For facility upgrades involving energy management system upgrades, central plant or plant operation upgrades ADM often employs retrofit isolation or calibrated simulations.

We have conducted numerous evaluations of custom energy efficiency measures and programs using this site-specific approach and are therefore well qualified to apply any of these methods of analysis.

Verified savings from sampled sites will be extrapolated to the program level achieving 90% confidence and 10% precision (90/10) for each fuel type in each state.

5.2.6 Estimating Net Savings

The net savings attributable to the Site-Specific Program may differ from gross savings due to free-ridership and spillover. Free ridership decreases net program impacts whereas spillover increases net program impacts. Spillover includes several effects. First, participants may be influenced by the program to invest in energy-efficient measures not included in the program. Second, non-participants may adopt measures promoted by the program as a direct result of the program but do so outside of the program. One impact of spillover is the additional energy savings that result because non-participants purchase greater efficiency than they otherwise would have, due to differences in dealer and contractor actions available at the time of purchase. There may also be additional energy savings from non-participants due to program marketing impact on awareness of energy efficiency. The goal of the net savings analysis is to infer the magnitude of free-ridership and spillover effects and to determine the net savings impact of a program. Net-to-gross ratios or factors are applied to the adjusted or verified gross savings to estimate net program savings.

Unlike deemed UES found in the RTF and Avista TRM, as well as billing analyses which have net savings 'baked in,' savings resulting from the methods described above will be *gross* savings. If required to report verified net savings, ADM offers to use self-reported survey data to evaluate free ridership, spillover, and overall net savings for most programs. Participant surveys for the Site-Specific Program will include a subsection of questions designed to measure both free-ridership and spillover. Survey free-ridership questions are followed by questions designed to measure spillover, referring to where a customer installed equipment through the program in the past year and then installed additional equipment due to program influences without the help of a rebate.

Resulting survey data will be used the develop individual state and fuel type net-to-gross ratios used to adjust verified program-level gross savings to verified net savings. Survey efforts will be such that we will attempt to reach 90/10 precision for NTG estimates. The NTG adjustment will be gathered via the methods described under the Section 2.6.

5.2.7 Timing and Cadence

This program is considered “high risk” and therefore will be evaluated each year in the 2024-2025 evaluation period.

5.2.8 Technical Comments

ADM provides no technical comments for this program’s evaluation.

5.3 C&I Prescriptive Lighting Program

This program is intended to prompt commercial electric customers to increase the energy efficiency of their lighting equipment through direct financial incentives. It indirectly supports the infrastructure and inventory necessary to ensure that the installation of high-efficiency equipment is a viable option for customers.

In an effort to streamline the process and make it easier for customers and vendors to participate in the program, Avista developed a prescriptive approach for commercial/industrial customers in 2004. This program provides for many common retrofits to receive a pre-determined incentive amount. The Prescriptive Lighting program makes it easier for customers – especially smaller customers and vendors – to participate in the program.

The measures included in the Prescriptive Lighting program include retrofits from fluorescent lamps and fixtures, HID, directional, and incandescent can fixtures to more energy-efficient LED light sources and controls.

The Prescriptive Lighting Program accounts for the second largest share of non-residential expected savings, or roughly 32% of the expected non-residential portfolio. Table 5-3 lists eligible program measures and proposed impact savings sources.

Table 5-3: Prescriptive Lighting Program Measures

Location	Measure	Savings Source
Interior	LED tubes	Standard prescriptive engineering algorithms with inputs from actual equipment and RTF lighting workbooks
	LED U-Bend	
	LED W reduction	
	LED Downlamps/Directional	
	Linear LED Fixtures	
	HID LED fixtures/lamps	
	Occupancy Sensors	
	LLLC Fixtures	
Exterior	HID LED fixtures/lamps	
	Sign Lighting	
New Construction	HID LED fixtures	

ADM will use the Avista TRM in place at the time of plan filing to estimate verified unit energy savings for the measures in the table above. ADM will verify a sample of participating rebates for detailed review of the rebate documentation and verification of measure type. ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Prescriptive Lighting Program in the section below.

5.3.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Prescriptive Lighting Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

If ADM finds any deviations between the tracking data and application values, ADM will note and summarize these differences to Avista through periodic updates and the final report. Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Prescriptive Lighting Program.

In addition, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure, displayed in Table 2-2 ADM will include questions such as:

- What type of lighting was installed?
- Is the equipment still installed and operational?

These questions will help ADM verify that the measure was documented accurately and that data collection activities are progressing smoothly for the program. This simple verification will help ADM more accurately estimate measure-level impacts using engineering algorithms.

5.3.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms and applicable invoices

5.3.3 Impact Analysis

Savings from lighting measures will be verified using a standard engineering algorithm shown below.

$$kWh_{savings} = \sum \left(\left[N_{fixt(i)} \times \frac{W_{fixt(i)}}{1000} \right]_{pre} - \left[N_{fixt(i)} \times \frac{W_{fixt(i)}}{1000} \right]_{post} \right) \times AOH \times ISR$$

Where:

Nfixt(i), pre = Pre-retrofit number of fixtures of type i
Nfixt(i), post = Post-retrofit number of fixtures of type i
Wfixt(i), pre = Rated wattage of pre-retrofit fixtures of type i (Standard Wattage Table developed from RTF materials)
Wfixt(i), post = Rated wattage of post-retrofit fixtures of type i (Varies). Self-reported, verified.
AOH = Annual operating hours for specified space type (Varies). Self-reported. Reported weekly hours were divided by seven, then multiplied by 365.25.
ISR = The In-Service Rate, based on type. RTF estimates.

Fixture/lamp quantities, wattages and hours of operation will be taken directly from program tracking data once their accuracy has been verified. In-service rates will be based on primary data collection and supplemented by RTF estimates as needed.

Table 5-4: Prescriptive Lighting Program Measures

Location	Measure	Impact Analysis Savings Section(s)
Interior	LED tubes	Standard prescriptive engineering algorithms with inputs from actual equipment and RTF lighting workbooks
	LED U-Bend	
	LED W reduction	
	LED Downlamps/Directional	
	Linear LED Fixtures	
	HID LED fixtures/lamps	
	Occupancy Sensors	
	LLLC Fixtures	
Exterior	HID LED fixtures/lamps	
	Sign Lighting	
New Construction	HID LED fixtures	

5.3.4 Timing and Cadence

This program is considered “low risk” and therefore will be evaluated once in the 2024-2025 evaluation period.

5.3.5 Technical Comments

ADM provides no technical comments for this program’s evaluation.

5.4 C&I Small Business Direct Install Lighting Program

The Direct Install Lighting Program is being offered starting 2024 in partnership with Resource Innovations, to supplement and enhance the ongoing customer engagement and energy efficiency

efforts already in place. Avista offers this program for customers who have traditionally been unable to participate in programs requiring upfront capital to receive new lighting and lower energy costs. The direct install delivery method also boosts local markets by endorsing local businesses and trade allies and providing training and upskill opportunities.

In contract with local electrical trade allies, customers receive installation of appropriate energy-saving lighting measures such as lamps, fixtures, and controls; a brief onsite audit identifying additional efficiency opportunities; and marketing and collateral handouts to encourage future program participation.

Table 5-5 lists eligible program measures and proposed impact savings sources.

Table 5-5: Direct Install Lighting Program Measures

Measure	Savings Source
Direct Installation – LED Lighting and Controls	Standard prescriptive engineering algorithms with inputs from actual equipment and RTF lighting workbooks

5.4.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Direct Install Lighting Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

If ADM finds any deviations between the tracking data and application values, ADM will note and summarize these differences to Avista through periodic updates and the final report. Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Direct Install Lighting Program.

In addition, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure, displayed in Table 2-2 ADM will include questions such as:

- What type of lighting was installed?
- Is the equipment still installed and operational?

These questions will help ADM verify that the measure was documented accurately and that data collection activities are progressing smoothly for the program. This simple verification will help ADM more accurately estimate measure-level impacts using engineering algorithms.

5.4.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms and applicable invoices

5.4.3 Impact Analysis

Savings from lighting measures will be verified using a standard engineering algorithm shown below.

$$kWh_{savings} = \sum \left(\left[N_{fixt(i)} \times \frac{W_{fixt(i)}}{1000} \right]_{pre} - \left[N_{fixt(i)} \times \frac{W_{fixt(i)}}{1000} \right]_{post} \right) \times AOH \times ISR$$

Where:

Nfixt(i), pre = Pre-retrofit number of fixtures of type i
Nfixt(i), post = Post-retrofit number of fixtures of type i
Wfixt(i), pre = Rated wattage of pre-retrofit fixtures of type i (Standard Wattage Table developed from RTF materials)
Wfixt(i), post = Rated wattage of post-retrofit fixtures of type i (Varies). Self-reported, verified.
AOH = Annual operating hours for specified space type (Varies). Self-reported. Reported weekly hours were divided by seven, then multiplied by 365.25.
ISR = The In-Service Rate, based on type. RTF estimates.

Similarly, savings from occupancy sensors will be verified using a standard engineering algorithm shown below.

$$kWh_{savings} = \left[N_{fixt(i)} \times \frac{W_{fixt(i)}}{1000} \right]_{post} \times AOH \times reduction$$

Where:

Nfixt(i), post = Post-retrofit number of fixtures of type i
Wfixt(i), post = Rated wattage of post-retrofit fixtures of type i (Varies). Self-reported, verified.
AOH = Annual operating hours for specified space type (Varies). Self-reported.
reduction = The reduction in operating hours as a result of the installation of occupancy sensors, 32%for fixture/ceiling mounted sensors.

In both cases, fixture/lamp quantities, wattages and hours of operation will be taken directly from program tracking data once their accuracy has been verified. In-service rates will be based on primary data collection and supplemented by RTF estimates as needed.

Table 5-6: Direct Install Lighting Program Measures

Measure	Savings Source
Direct Installation – LED Lighting and Controls	Standard prescriptive engineering algorithms with inputs from actual equipment and RTF lighting workbooks

5.4.4 Timing and Cadence

This program is considered “low risk” and therefore will be evaluated once in the 2024-2025 evaluation period.

5.4.5 Technical Comments

ADM provides no technical comments for this program’s evaluation.

5.5 C&I Prescriptive HVAC Variable Frequency Drive Program

The Prescriptive HVAC Variable Frequency Drive Program is intended to prompt customers to increase the energy efficiency of their HVAC fan or pump applications with a Variable Frequency Drive (VFD) retrofit. Adding a VFD to HVAC systems is an effective tool for cutting operating costs, improving overall system performance, and reducing wear and tear on motors. The prescriptive rebate approach issues payment to the customer after the measure has been installed. Commercial customers who use Avista electricity and apply the VFD to the eligible fan or pump measures are eligible for this program.

The Prescriptive HVAC Variable Frequency Drive Retrofit Program is offered for retrofitting VFDs on existing HVAC equipment. Customers must submit a completed rebate form, invoices, and documentation to verify the horsepower of the motor on which the VFD was installed within 90 days of installation. This program is promoted by trade allies, Avista account executives, the Avista website, and Avista marketing efforts. The website is also used to communicate program requirements, incentives, and forms.

Table 5-7 lists eligible program measures and proposed impact savings sources.

Table 5-7: Prescriptive HVAC VFD Program Measures

Measure	Savings Source
HVAC Cooling Pump	RTF Variable Speed Drives v3.1
HVAC Heating Pump or Combo	
HVAC Exhaust Fan	

ADM will use the Avista TRM to estimate verified savings for the measures in the table above, as approved UES values are estimated for each. ADM will verify a sample of participating rebates for detailed review of the rebate documentation and verification of measure type. ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Prescriptive HVAC VFD Program in the section below.

5.5.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Prescriptive HVAC VFD Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

If ADM finds any deviations between the tracking data and application values, ADM will note and summarize these differences to Avista through periodic updates and the final report. Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Prescriptive HVAC VFD Program.

In addition, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure, displayed in Table 2-2 ADM will include questions such as:

What type of pump/fans was the VFD installed on?

- Is the equipment still operational?

These questions will help ADM verify that the measure was documented accurately and that data collection activities are progressing smoothly for the program. This simple verification will help ADM more accurately estimate measure-level impacts using engineering algorithms.

5.5.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms and applicable invoices

5.5.3 Impact Analysis

All measures in the Prescriptive HVAC VFD Program have applicable electricity UES through the Avista TRM. Table 5-8 summarizes the anticipated measures offered under this program and corresponding impact M&V methodology sources. ADM will apply the TRM UES values to the types and quantities of each measure, after applying adjustments from database review and verification surveys, if necessary.

Table 5-8: Prescriptive HVAC VFD Program Measures

Measure	Impact Analysis Savings Section(s)
HVAC Cooling Pump	RTF Variable Speed Drives v3.1
HVAC Heating Pump or Combo	
HVAC Exhaust Fan	

5.5.4 Timing and Cadence

This program is considered “low risk” and therefore will be evaluated once in the 2024-2025 evaluation period.

5.5.5 Technical Comments

ADM provides no technical comments for this program’s evaluation.

5.6 C&I Midstream Program

ADM understands that Avista’s Prescriptive HVAC Program and Food Service Equipment Program measure offerings have transitioned to the midstream delivery method under the C&I Midstream Program, which works with distributors to incentivize contractors who purchase energy efficient equipment. This delivery mechanism change removes barriers from C&I customers by removing the requirement for customers to fill out rebate application forms themselves, and instead places the responsibility on professionals in the field, such as contractors. Many measures offered through the program do not have corresponding RTF workbooks

Table 5-9 lists eligible program measures and proposed impact savings sources.

Table 5-9: C&I Midstream Program Measures

Measure	Savings Source
Air Conditioners	Standard prescriptive engineering algorithms with inputs from actual equipment, RTF workbooks and regional data, as necessary
Heat Pumps	
Ductless Heat Pumps	
Furnaces	
Boilers	
Water Heaters	
Demand Control Ventilation for Kitchens	Current Avista Midstream TRM Workbook
Combination Ovens	RTF Combination Ovens v5.0
Convection Ovens	RTF Convection Ovens v5.1
Conveyor Ovens	CA eTRM SWFS008-02
Ice Machines	RTF Commercial ENERGY STAR Ice Machines v2.1
Hot Food Holding Cabinets	RTF Commercial Hot Food Holding Cabinets v5.1
Freezers	RTF Commercial Freezers v5.1
Griddles	RTF Commercial Griddles v2.1
Rack Ovens	RTF Commercial Rack Ovens v2.1
Steamers	RTF Commercial Steamers v5.1
Dishwashers	CA eTRM SWFS002-04, SWFS018-05
Hand Wraps	CA eTRM SWFS010-03
Fryers	RTF Commercial Fryers v5.1

ADM will use the RTF to estimate verified savings for the measures in the table above, as RTF-approved UES values are estimated for each. In the case where a measure is not covered by the RTF, such as certain heating zones for the Natural Gas Boiler measure, ADM will evaluate savings using the Avista TRM. ADM will verify a sample of participating rebates for detailed review of the rebate documentation and verification of measure type. ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the C&I Midstream Program in the section below.

5.6.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the C&I Midstream Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

If ADM finds any deviations between the tracking data and application values, ADM will note and summarize these differences to Avista through periodic updates and the final report. Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the C&I Midstream Program. ADM will not conduct verification surveys for this program. Instead, ADM will interview distributors and trade allies.

5.6.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install

- Filled rebate application forms and applicable invoices
- Monthly energy consumption for participating customers

5.6.3 Impact Analysis

Many measures in the C&I Midstream Program have applicable electric and natural gas UES through the RTF. These UES will be used as the primary savings source. For high impact measures, such as HVAC and water heating, not covered by RTF workbooks or whose capacities exceed those provided by the RTF, ADM will use industry standard engineering algorithms with actual equipment specifications and regional data as appropriate. For lower impact measures not covered by the RTF, ADM will first source applicable savings from the California eTRM, followed by the current Avista Midstream TRM document.

Table 5-10 summarizes the anticipated measures offered under this program and corresponding impact M&V methodology sources.

Table 5-10: C&I Midstream Program Measures

Measure	Savings Source
Air Conditioners	Standard prescriptive engineering algorithms with inputs from actual equipment, RTF workbooks and regional data, as necessary
Heat Pumps	
Ductless Heat Pumps	
Furnaces	
Boilers	
Water Heaters	
Demand Control Ventilation for Kitchens	Current Avista Midstream TRM Workbook
Combination Ovens	RTF Combination Ovens v5.0
Convection Ovens	RTF Convection Ovens v5.1
Conveyor Ovens	CA eTRM SWFS008-02
Ice Machines	RTF Commercial ENERGY STAR Ice Machines v2.1
Hot Food Holding Cabinets	RTF Commercial Hot Food Holding Cabinets v5.1
Freezers	RTF Commercial Freezers v5.1
Griddles	RTF Commercial Griddles v2.1
Rack Ovens	RTF Commercial Rack Ovens v2.1
Steamers	RTF Commercial Steamers v5.1
Dishwashers	CA eTRM SWFS002-04, SWFS018-05
Hand Wraps	CA eTRM SWFS010-03
Fryers	RTF Commercial Fryers v5.1

5.6.4 Timing and Cadence

This program is considered “high risk” and therefore will be evaluated each year in the 2024-2025 evaluation period.

5.6.5 Technical Comments

ADM provides no technical comments for this program’s evaluation.

5.7 C&I Prescriptive Shell Program

The Prescriptive Shell Program offers incentives to commercial customers who improve the envelopes of their existing buildings by adding insulation, which may make a business more energy-efficient and comfortable. This prescriptive rebate approach issues payment to the customer after the measure has been installed by a licensed contractor. Commercial customers must have an annual heating footprint for a fuel provided by Avista.

Customers must submit a completed rebate form, invoices, and an insulation certificate within 90 days after the installation has been completed. Avista will send incentive checks to customers or their designees after project approval. This program is promoted by trade allies, Avista account executives, the Avista website, and Avista marketing efforts. The website is also used to communicate program requirements, incentives, and forms.

Table 5-11 lists eligible program measures and proposed impact savings sources.

Table 5-11: Prescriptive Shell Program Measures

Measure	Savings Source
Attic Insulation	Avista TRM UES
Roof Insulation	
Wall Insulation	

Insulation measures are not covered by the RTF therefore, ADM will evaluate savings using the Avista TRM. ADM will verify a sample of participating rebates for detailed review of the rebate documentation and verification of measure type. ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Prescriptive Shell Program in the section below.

5.7.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Prescriptive Shell Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

If ADM finds any deviations between the tracking data and application values, ADM will note and summarize these differences to Avista through periodic updates and the final report. Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Prescriptive Shell Program.

In addition, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure, displayed in Table 2-2 ADM will include questions such as:

- Approximately how many square feet of insulation were installed?
- What is the final R-level of insulation?

These questions will help ADM verify that the measure was documented accurately and that data collection activities are progressing smoothly for the program. This simple verification will help ADM more accurately estimate measure-level impacts using engineering algorithms.

5.7.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms and applicable invoices

5.7.3 Impact Analysis

All measures in the Prescriptive Shell Program have applicable electricity and natural gas UES through the Avista TRM. Table 5-12 summarizes the anticipated measures offered under this program and corresponding impact M&V methodology sources. ADM will apply the TRM UES values to the types and quantities of each measure, after applying adjustments from database review and verification surveys, if necessary.

Table 5-12: Prescriptive Shell Program Measures

Measure	Impact Analysis Savings Section(s)
Attic Insulation	Avista TRM UES
Roof Insulation	
Wall Insulation	

5.7.4 Timing and Cadence

This program is considered “low risk” and therefore will be evaluated once in the 2024-2025 evaluation period.

5.7.5 Technical Comments

ADM provides no technical comments for this program’s evaluation.

5.8 C&I Green Motors Program

The Green Motors Program ensures quality rewinding that results in the motor maintaining its original efficiency, which is commonly called a "green rewind." The Green Motors Practices Group (GMPG) is a non-profit organization that identifies, promotes, and verifies only excellent member motor service centers. These companies are committed to consistently producing repair/rewinds that retain or improve reliability and efficiency and provide on-site motor driven systems assistance.

The incentive for this program is $1 per HP of the motor being rewound, up to $10,000 for 5,000 HP, and is taken directly off the customer bill at the service center. There is also a $1 per HP fee paid to the service center for participating.

The measure offered by the Green Motors Program, motor rewinding, will be analyzed using the RTF-approved UES form the RTF workbook. ADM will verify a sample of participating rebates for detailed review of the rebate documentation and verification of measure type. ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Green Motors Program in the section below.

Table 5-13: Green Motors Rewind Program Measures

Measure	Impact Analysis Savings Section(s)
Industrial Motor Rewind	RTF Green Motor Rewind v5.2
Agricultural Motor Rewind	

5.8.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Green Motors Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Green Motors Program. If ADM finds any deviations between the tracking data and application values, ADM will note and summarize these differences to Avista through periodic updates and the final report.

In addition, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure, displayed in Table 2-2 ADM will include questions such as:

- What is the horsepower of the rewound motor?
- Is the motor used in industrial or agricultural applications?
- Is the newly rewound motor properly functioning?

These questions will help ADM verify that the measure was documented accurately and that data collection activities are progressing smoothly for the program. This simple verification will help ADM more accurately estimate measure-level impacts using engineering algorithms.

5.8.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms and applicable invoices

5.8.3 Impact Analysis

The measure offered by the Green Motors Program, motor rewinding, will be analyzed using the RTF 'Industrial and Agricultural Motor Rewind v5.2 workbook and based upon horsepower and sector. ADM will apply the RTF UES values to the types and quantities of each measure, after applying adjustments from database review and verification surveys, if necessary.

Table 5-14: Green Motors Rewind Program Measures

Measure	Impact Analysis Savings Section(s)
Industrial Motor Rewind	RTF Green Motor Rewind v5.2
Agricultural Motor Rewind	

5.8.4 Timing and Cadence

This program is considered “low risk” and therefore will be evaluated once in the 2024-2025 evaluation period.

5.8.5 Technical Comments

ADM provides no technical comments for this program’s evaluation.

5.9 C&I Grocer Program

This program offers incentives to customers who increase the energy efficiency of their refrigerated cases and related grocery equipment. Refrigeration often represents the primary electricity expense in a grocery store or supermarket. The prescriptive rebate approach issues payment to the customer after the measure has been installed. Commercial customers who use Avista fuel for the measure applied for are eligible.

Customers must submit a completed rebate form and invoice within 90 days after the installation has been completed. This program is promoted by trade allies, Avista account executives, the Avista website, and Avista marketing efforts. The website is also used to communicate program requirements, incentives, and forms.

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Grocer Program in in the section below. Table 5-15 lists eligible program measures and proposed impact savings sources.

Table 5-15: Grocer Program Measures

Measure	Savings Source
Refrigerator Case Lighting	RTF UES
ASH Controls	RTF UES
Door Gaskets	Avista TRM UES
Floating Head Pressure Controls	RTF UES
Strip Curtains	RTF UES
Walk-In ECM Controllers	RTF UES
ECMs on Evaporator Fans	RTF UES
ECM Replacing Evaporator PS and PSC	RTF UES

ADM will use the RTF to estimate verified savings for the measures in the table above, as RTF-approved UES values are estimated for each. In the case where a measure is not covered by the RTF, ADM will evaluate savings using the Avista TRM. ADM will verify a sample of participating rebates for detailed review of the rebate documentation and verification of measure type. ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Grocer Program in the section below.

5.9.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Grocer Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

If ADM finds any deviations between the tracking data and application values, ADM will note and summarize these differences to Avista through periodic updates and the final report. Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Grocer Program.

In addition, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure, displayed in Table 2-2 ADM will include questions such as:

- Was the previous equipment functional?
- Is the newly installed equipment properly functioning?
- What is the efficiency and sizing of the newly installed equipment?

These questions will help ADM verify that the measure was documented accurately and that data collection activities are progressing smoothly for the program. This simple verification will help ADM more accurately estimate measure-level impacts using engineering algorithms.

5.9.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms and applicable invoices

5.9.3 Impact Analysis

All measures in the Grocer Program have applicable electricity and gas UES through the RTF and/or the Avista TRM. Table 5-16 summarizes the anticipated measures offered under this program and corresponding impact M&V methodology sources. ADM will apply the RTF or TRM UES values to the types and quantities of each measure, after applying adjustments from database review and verification surveys, if necessary.

Table 5-16: Grocer Program UES Sources

Measure	Impact Analysis Savings Section(s)
Refrigerator Case Lighting	RTF Commercial Grocery Display Case Lighting v1.2
ASH Controls	RTF Commercial Grocery Anti-Sweat Heater Controls v4.3
Door Gaskets	Avista TRM Gaskets for Reach-In and Walk-In Applications
Floating Head Pressure	RTF Commercial Grocery Floating Head Pressure Controls v2.1
Strip Curtains	RTF Commercial Grocery Strip Curtain v2.1
Walk-In ECM Controllers	RTF Grocery Walk-in Evaporator Fan ECM Controller v4.2
ECM Replacing Evaporator PS and PSC	RTF Com. Grocery Compressor Head Fan Motor Retrofit v4.2, Com. Grocery Walk-in ECM Retrofit v4.3, and/or Com Grocery Display Case Evap. Fan Motor Retrofit v5.2, depending upon application

5.9.4 Timing and Cadence

This program is considered “low risk” and therefore will be evaluated once in the 2024-2025 evaluation period.

5.9.5 Technical Comments

ADM provides no technical comments for this program's evaluation.

5.10 C&I Building Operator Certification Program

The C&I Building Operator Certification Program is being offered by Avista in the 2024-2025 biannual period. This program is offered to encourage building operator certified (BOC) credentialed operators to save electricity and natural gas in buildings they manage while reducing electrical demand. The BOC program has consistently produced positive documented energy savings and has proved to be cost effective. Third party evaluators have assessed and documented the BOC's energy savings impacts[26].

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Grocer Program in in the section below. Table 5-16 lists eligible program measures and proposed impact savings sources.

ADM will use the BOC independent impact evaluation approved by the Idaho Public Utilities Commission and Washington Utilities and Transportation Commission to estimate verified savings for the program. ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Grocer Program in the section below.

5.10.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Building Operator Certification Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

If ADM finds any deviations between the tracking data and application values, ADM will note and summarize these differences to Avista through periodic updates and the final report. Table 2-1 in Section 2.3.1 summarizes the sample sizes for each the document-based verification activity in the Building Operator Certification Program. Instead of conducting a survey for these participants, ADM will conduct in-depth interviews with a sample of program participants.

5.10.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms and applicable invoices

5.10.3 Impact Analysis

All measures in the Grocer Program have applicable electricity and gas UES through the RTF and/or the Avista TRM. Table 5-17 summarizes the anticipated measures offered under this program and corresponding impact M&V methodology sources. ADM will apply the RTF or TRM UES values to the

[26] https://www.theboc.info/wp-content/uploads/2020/08/2020-BOC-Energy-Savings-FAQ_1.0.pdf

types and quantities of each measure, after applying adjustments from database review and verification surveys, if necessary.

Table 5-17: C&I Building Operator Certification Program UES Sources

Measure	Impact Analysis Savings Section(s)
Building Operator Certification – Electric	Energy Savings for the BOC Program Document[27]
Building Operator Certification – Natural Gas	

5.10.4 Timing and Cadence

This program is considered "high risk" and therefore will be evaluated each year in the 2024-2025 evaluation period.

5.10.5 Technical Comments

In the event that Avista wishes to conduct a more rigorous analysis to confirm the assumed and approved savings for the BOC program through the IPUC and WUTC, ADM will request monthly billing data to conduct a billing analysis across the population of participants in this program.

[27] https://www.theboc.info/wp-content/uploads/2020/08/2020-BOC-Energy-Savings-FAQ_1.0.pdf

6. Pilot Program-Level EM&V Approaches

ADM presents a summary of the pilot-specific impact evaluation work procedures for pilots presented in Avista's 2024 Natural Gas and Electric Energy Efficiency Annual Conservation Plans. ADM will work with Avista to adjust pilot-specific impact and sampling plans as additional information is received about pilot participation, pilot restrictions, measure offerings, implementation changes, and available data for each pilot.

6.1 Time-of-Use Pilot

Per the RFP, at the conclusion of the first full year of the initial Time of Use pilot for Washington electric customers, (June 1, 2024, through May 30, 2025) ADM will provide a bill impact evaluation of the pilot participants. ADM will also make it a priority to include Named Community with the general population in all evaluation, planning, and communication activities. Additionally, ADM will provide verification and review of the Avista's Load Impact analysis for the pilot participants.

6.1.1 Bill Impact Evaluation

For this effort, ADM plans to analyze Avista interval consumption data to estimate the program impacts for treatment in the TOU Pilot. ADM proposes to estimate total kWh and kW impacts for Avista's participating residential customers recruited in this pilot period.

ADM will assess the load impacts for the various pilot groups through statistical analysis of the hourly usage data for the TOU Pilot. The goal of this plan will be to estimate the percentage reduction in peak demand and percentage reduction in overall usage/responsiveness (demand shift) to the pilot prices as well as the impacts to the Avista system and identification of potential persistence of impacts from year to year. The evaluation will be designed in such a way that the effort will be able to be conducted each year for the same pilot participants, the results also indicate persistence energy and load impacts year over year.

The intent of this task is to determine the achieved impacts of the Time-of-Use Pilot within the participant group and whether it would be reasonable to expand the program for customers in the Washington and Utah service territories.

ADM will use several types of data in the analysis, including the following:

- Metered data on hourly loads of treatment and control customers in the trial
- Hourly weather data
- Assessors' data on characteristics of houses occupied by trial treatment and control customers

ADM will use the cleaned hourly load data to prepare simple statistical and graphical comparisons of average loads under different conditions. These descriptive statistics will provide a summary of customer responses under different conditions.

Estimates of load impacts for each treatment will be reported according to four standardized formats segmented by customer type:

- Average kWh reduction per customer per impact hour (where the impact hour is the hour of interest for the evaluation, e.g., peak hours for TOU rates)
- Average percent energy reduction per impact hour
- Total energy conservation, measured as average kWh reduction per customer per month over all hours in that month
- Average percent energy reduction per month over all hours in that month
- Average peak demand impact on all event days
- Peak demand impacts by event day
- Persistence of impacts for consecutive event days
- Event day peak impacts
- Bill distribution impacts by season
- Daily price elasticity
- Inter-period substitution elasticity
- Average change in customer arrears between treatment and control groups
- Average change in number of disconnects between treatment and control groups

Each of the above estimates will also include the following elements:

- Its standard error;
- A p-value and/or confidence interval indicating statistical significance;
- The number of treatment customers, the number of control customers, and the total number of observations used in the analysis;
- A description of the dates and hours used in the analysis if it is a subset of the total amount of data collected; and
- A description of the customers used in the analysis if it is a subset of the total number of treatment and control customers.

ADM will work with Avista staff to determine the final methods to be used to estimate the load impacts according to the various metrics. As a guide in determining the methods to be used, ADM will use the report prepared by LBNL/EPRI on Quantifying the Impacts of Time-Based Rates, Enabling Technology, and Other Treatments in Consumer Behavior Studies: Protocols and Guidelines (July 2013).

ADM will work with personnel from Avista's Rates department to perform difference-of-means and difference-of-differences calculations on the hourly load data. These calculations will be performed such that results can be reported to the WUTC, per their requirements.

ADM will extend the descriptive statistics approach by estimating the parameters of a regression model of customer demand for electricity. The data for the regression analysis are in "panel" format, with time series (hourly) observations of electricity use pooled across cross-sectional observations (customers). ADM will use estimation procedures for the regression analysis that take account of both the time-series and the cross-sectional dimensions of the data.

For the bill impacts analysis, a two-phase regression modeling approach will be used. In the first phase of regression modeling, ADM will use the data for each site individually in single equation regression estimation. For the regression analyses, the dependent variable is average hourly demand (kW).

The analysis of the data for each individual customer provides a set of coefficients showing the responsiveness of customers' electricity use to changes in explanatory variables. Because there may be commonality in responsiveness among different groups of customers, a second level of regression analysis is undertaken to relate the responsiveness coefficients to household characteristics (e.g., house size, vintage). For example, it may be appropriate to conduct separate analyses, one for electric-heated homes and another for gas-heated homes.

ADM will apply standard statistical tests and regression diagnostics to evaluate the performance of the regression modeling and to screen models for implausible results. ADM will use the results from the model providing the best "fit" in the analysis of electricity savings.

6.1.2 Arrears

ADM will also include a customer arrears analysis. ADM plans to aggregate data on customer bills, disconnects and arrearages, customer utility transactions, low-income and energy savings program enrollment, customer demographics, and address whether the Pilots impact electric service disconnections, and if so, to what extent. ADM will then compare the amount of arrears between pilot participation groups to determine if participation in the program impacted the customer's propensity to lead to a disconnect.

6.1.3 Customer Surveys

ADM also anticipates conducting a survey effort to collect customer survey responses in terms of demographics, behaviors, and satisfaction. ADM anticipates that there is a plan for the following survey efforts:

- Customer pre-pilot survey
- Customer post-pilot survey

Assuming a survey will be deployed newly enrolled Pilot participants, ADM will conduct the follow up survey for these same participants after a full year of Pilot deployment to enable evaluators to compare pre- and post-Pilot deployment survey responses.

ADM will survey customer participants in order to gauge the impact of Pilot participation towards customer energy usage behaviors in response to pricing. Survey questions may include, but not be limited to:

- How participants plan to change their energy usage habits to reduce their energy costs
- Customer feedback on actions taken during the Pilot to reduce energy usage
- Identification of barriers that prevent participants to change the energy usage habits
- Other questions identified by either Avista or ADM during the term of the Pilots

This effort will help Avista and implementors separate and characterize and quantify bill impacts for low-income households and retired households.

The pilot will be open to a maximum of 500 residential customers on an opt-in basis. ADM will develop a sampling plan that aims to achieve a sampling precision of ±10% with 90% statistical confidence – or "90/10 precision" – for households participating in the TOU Pilot during survey-based data collection

efforts. With a population size of 500, a sample size of 70 total survey completions will meet the 90/10 precision requirements for the TOU Pilot.

ADM anticipates conducting surveys as telephone, web, paper mail or mixed-phone/web/paper mail surveys. Survey efforts may require physical mail surveys to ensure representativeness. The selected sample participants will be offered a $20 gift card incentive to participate in and complete the demographics and satisfaction survey. ADM will deploy the pre-participation surveys to the newly registered customers every two weeks in order to capture accurate pre-participation behaviors and beliefs.

The survey will address the following topics:

- What are customers' motivations for participating in the program (i.e., decrease monthly energy bill, decrease energy usage)
- What are customers' current behaviors towards energy conservation?
- Are customers' energy use schedules flexible? (i.e., retirees schedules tend to be less flexible than the working class)
- How familiar are customers with their new TOU rate?
- Are customers receiving educational materials based on actions to help respond appropriately to the TOU rates?
- What are customers' current behaviors/actions undertaken due to messaging from the program?
- Is there other information that customers would find more beneficial to receive in messaging?
- Did customers feel they saved a meaningful amount on their bills?
- What is the satisfaction among customers for participation in the program?
- What is the satisfaction among customers of Avista as a utility provider?
- Do customers have electric vehicles (EVs) and EV charging stations installed in their household?
- What are the pilot customers' demographics? (e.g., household income, occupancy, heating/cooling type)

ADM will employ the use of our in-house call center, which is dedicated solely to energy efficiency-related efforts and comprised fully of full-time ADM staff. This allows maximum transparency of evaluation management and data collection efforts.

The goal of the Pilot participant customer survey responses for the questions listed above is to identify whether there are differences in demand reduction potential across customer groups. Therefore, ADM will use the participant responses to conduct additional bill impact analysis by subgroup.

In the case that low-income customers do not benefit from the TOU pilot, this information will help identify the need for a rate subsidy for low-income customers. This information will be useful to Avista and Avista stakeholders on how to proceed with implementation of the TOU rates.

6.1.4 Program Recommendations

Per the RFP, at the conclusion of the 2025 Program year, ADM will assist Avista in recommendations for Time of Use (TOU)/ Peak Time Rebate (PTR) program design/modifications in anticipation of full program rollout for the 2026-2027 biennium.

ADM anticipates the program recommendations will allude to the following topics:

- Recommendations for revisions or additions to evaluation plan
- Recommendations for customer survey plan and implementation
- Recommendations for customer eligibility requirements, and recruitment targets
- Recommendations for customer incentive and reimbursement

ADM further details each of the above items in the subsection below.

6.1.5 Program Evaluation Plan

ADM shall provide recommendations for edits or additions to the existing pilot evaluation plan, if necessary, with the goal of estimating the load impacts for the Pilot participants through statistical analysis of the hourly usage data for both the TOU and PTR Pilots. ADM will review plans to ensure that these methods can be used year after year to conduct a comparison of pilot improvements, successes, and learnings. Load metrics to be quantified include peak, off-peak, mid-day discount, average daily conservation impacts, and estimated load shift, by season. ADM anticipates a sufficient plan must:

- Capture data sources, data collection, tracking and storing, Avista tasks and responsibilities and the tasks for third-party service providers
- Ensure all metrics from the M&R Plans are included, as well as how they will be measured from the data.
- Include a schedule of all EM&V activities.
- Include a customer arrears analysis. The EM&V Plan will include efforts to gather data on customer bills, disconnects and arrearages, customer utility transactions, low-income and energy savings program enrollment, customer demographics, and address whether the Pilots impact electric service disconnections, and if so, to what extent.
- Include a method to assess the Pilots' impacts on participant program choices, payment behavior, and energy use.
- Include a method to assess the Pilots' impacts on access to essential services.

6.1.6 Customer Survey Plan & Implementation

ADM will also recommend adjustments to Avista's pilot survey plan and instruments, as well as the implementation schedule. ADM will make recommendations to maximize survey responses, such as the timing of survey deployment, the incentive amount provided to customers for completing the survey, and the method in which the surveys are conducted (online, mixed mode, etc.) to ensure the best success for survey responses.

6.1.7 Customer Eligibility & Recruitment Targets

ADM shall help ADM develop a final list of customer eligibility requirements, utilizing industry best practices. ADM will consider the following:

- Customer home type: single-family, manufactured home, multifamily, etc.
- Multi-premise customers: allowing more than one premise to participate if customer has multiple homes or businesses on their account.

- Customers secondary residences: vacation properties, auxiliary dwelling units, residential units used for business.
- Landlords
- Customers with on-site generation: solar, net metering, batteries.
- In addition, ADM shall use insights from Milestone 1 to guide recruitment strategy for behaviors observed among Avista residential and nonresidential customers, including analyzing AMI data to determine which customers have the highest potential to offset their peak time energy usage.

ADM shall develop, with input from Avista, a recruitment strategy, utilizing industry best practices, to develop a recruitment strategy to meet the designed participation limits of each Pilot Program while supporting accepted statistically valid design principals, including:

- Determining participants that will be most successful. (As used in this context, "successful" is defined as a participant whose bill does not increase because of their participation in the TOU Pilot.)
- Determining participants that have the potential to shift loads for positive bill impacts.

6.1.8 Customer Reimbursement Strategy

ADM will analyze the extent to which a customer required reimbursement in the pilot evaluation period. ADM will accomplish this by calculating a monthly comparison between the participant's monthly bill under the TOU Pilot ("TOU Bill") versus what participant's monthly bill would have been absent their participation ("Standard Bill"). The participant will receive a reimbursement at the end of the first year if their total annual TOU Bill is greater than their total Standard Bill.

ADM will also assist Avista with a recommended schedule for deploying reimbursement payments to customers and the messaging involved in the reimbursement notifications.

For this effort, ADM plans to analyze Avista interval consumption data to estimate the program impacts for treatment in the TOU Pilot. ADM proposes to estimate total kWh and kW impacts for Avista's participating residential customers recruited in this pilot period.

ADM will assess the load impacts for the various pilot groups through statistical analysis of the hourly usage data for both the TOU Pilot. The goal of this plan will be to estimate the percentage reduction in peak demand and percentage reduction in overall usage/responsiveness (demand shift) to the pilot prices as well as the impacts to the Avista system and identification of potential persistence of impacts from year to year. The evaluation will be designed in such a way that the effort will be able to be conducted each year for the same pilot participants, the results also indicate persistence energy and load impacts year over year.

The intent of this task is to determine the achieved impacts of the Time-of-Use Pilot within the participant group and whether it would be reasonable to expand the program for customers in the Washington and Utah service territories.

ADM will use several types of data in the analysis, including the following:

- Metered data on hourly loads of treatment and control customers in the trial

- Hourly weather data
- Assessors' data on characteristics of houses occupied by trial treatment and control customers

ADM will use the cleaned hourly load data to prepare simple statistical and graphical comparisons of average loads under different conditions. These descriptive statistics will provide a summary of customer responses under different conditions.

Estimates of load impacts for each treatment will be reported according to four standardized formats segmented by customer type:

- Average kWh reduction per customer per impact hour (where the impact hour is the hour of interest for the evaluation, e.g., peak hours for TOU rates)
- Average percent energy reduction per impact hour
- Total energy conservation, measured as average kWh reduction per customer per month over all hours in that month
- Average percent energy reduction per month over all hours in that month
- Average peak demand impact on all event days
- Peak demand impacts by event day
- Persistence of impacts for consecutive event days
- Event day peak impacts
- Bill distribution impacts by season
- Daily price elasticity
- Inter-period substitution elasticity
- Average change in customer arrears between treatment and control groups
- Average change in number of disconnects between treatment and control groups

Each of the above estimates will also include the following elements:

- Its standard error;
- A p-value and/or confidence interval indicating statistical significance;
- The number of treatment customers, the number of control customers, and the total number of observations used in the analysis;
- A description of the dates and hours used in the analysis if it is a subset of the total amount of data collected; and
- A description of the customers used in the analysis if it is a subset of the total number of treatment and control customers.

ADM will work with Avista staff to determine the final methods to be used to estimate the load impacts according to the various metrics. As a guide in determining the methods to be used, ADM will use the report prepared by LBNL/EPRI on Quantifying the Impacts of Time-Based Rates, Enabling Technology, and Other Treatments in Consumer Behavior Studies: Protocols and Guidelines (July 2013).

ADM will work with personnel from Avista's Rates department to perform difference-of-means and difference-of-differences calculations on the hourly load data. These calculations will be performed such that results can be reported to the WUTC, per their requirements.

ADM will extend the descriptive statistics approach by estimating the parameters of a regression model of customer demand for electricity. The data for the regression analysis are in “panel” format, with time series (hourly) observations of electricity use pooled across cross-sectional observations (customers). ADM will use estimation procedures for the regression analysis that take account of both the time-series and the cross-sectional dimensions of the data.

For the bill impacts analysis, a two-phase regression modeling approach will be used. In the first phase of regression modeling, ADM will use the data for each site individually in single equation regression estimation. For the regression analyses, the dependent variable is average hourly demand (kW).

The analysis of the data for each individual customer provides a set of coefficients showing the responsiveness of customers’ electricity use to changes in explanatory variables. Because there may be commonality in responsiveness among different groups of customers, a second level of regression analysis is undertaken to relate the responsiveness coefficients to household characteristics (e.g., house size, vintage). For example, it may be appropriate to conduct separate analyses, one for electric-heated homes and another for gas-heated homes.

ADM will apply standard statistical tests and regression diagnostics to evaluate the performance of the regression modeling and to screen models for implausible results. ADM will use the results from the model providing the best "fit" in the analysis of electricity savings.

6.1.9 Timing and Cadence

This program is considered “high risk” and therefore will be evaluated each year in the 2024-2025 evaluation period.

6.2 Peak Time Rebate Pilot

For this effort, ADM plans to analyze Avista interval consumption data to estimate the program impacts for treatment in the PTR Pilot. ADM will to estimate total kWh and kW impacts for Avista’s participating residential customers recruited in this pilot period.

ADM will assess the load impacts for the various pilot groups through statistical analysis of the hourly usage data for the PTR Pilot. The goal of this plan will be to estimate the percentage reduction in peak demand and percentage reduction in overall usage/responsiveness (demand shift) to the pilot prices as well as the impacts to the Avista system and identification of potential persistence of impacts from year to year. The evaluation will be designed in such a way that the effort will be able to be conducted each year for the same pilot participants, the results also indicate persistence energy and load impacts year over year.

The intent of this task is to determine the achieved impacts of the Peak Time Rebate Pilot within the participant group and whether it would be reasonable to expand the program for customers in the Washington and Idaho service territories.

ADM will use several types of data in the analysis, including the following:

- Metered data on hourly loads of treatment and control customers in the trial
- Hourly weather data

- Assessors' data on characteristics of houses occupied by trial treatment and control customers

ADM will use the cleaned hourly load data to prepare simple statistical and graphical comparisons of average loads under different conditions. These descriptive statistics will provide a summary of customer responses under different conditions.

Estimates of load impacts for each treatment will be reported according to four standardized formats segmented by customer type:

- Average kWh reduction per customer per impact hour (where the impact hour is the hour of interest for the evaluation, e.g., peak hours for PTR rates)
- Average percent energy reduction per impact hour
- Total energy conservation, measured as average kWh reduction per customer per month over all hours in that month
- Average percent energy reduction per month over all hours in that month
- Average peak demand impact on all event days
- Peak demand impacts by event day
- Persistence of impacts for consecutive event days
- Event day peak impacts
- Bill distribution impacts by season
- Daily price elasticity
- Inter-period substitution elasticity
- Average change in customer arrears between treatment and control groups
- Average change in number of disconnects between treatment and control groups

Each of the above estimates will also include the following elements:

- Its standard error;
- A p-value and/or confidence interval indicating statistical significance;
- The number of treatment customers, the number of control customers, and the total number of observations used in the analysis;
- A description of the dates and hours used in the analysis if it is a subset of the total amount of data collected; and
- A description of the customers used in the analysis if it is a subset of the total number of treatment and control customers.

ADM will work with Avista staff to determine the final methods to be used to estimate the load impacts according to the various metrics. As a guide in determining the methods to be used, ADM will use the report prepared by LBNL/EPRI on Quantifying the Impacts of Time-Based Rates, Enabling Technology, and Other Treatments in Consumer Behavior Studies: Protocols and Guidelines (July 2013).

ADM will work with personnel from Avista's Rates department to perform difference-of-means and difference-of-differences calculations on the hourly load data. These calculations will be performed such that results can be reported to the WUTC, per their requirements.

ADM will extend the descriptive statistics approach by estimating the parameters of a regression model of customer demand for electricity. The data for the regression analysis are in "panel" format, with time

series (hourly) observations of electricity use pooled across cross-sectional observations (customers). ADM will use estimation procedures for the regression analysis that take account of both the time-series and the cross-sectional dimensions of the data.

For the bill impacts analysis, a two-phase regression modeling approach will be used. In the first phase of regression modeling, ADM will use the data for each site individually in single equation regression estimation. For the regression analyses, the dependent variable is average hourly demand (kW).

The analysis of the data for each individual customer provides a set of coefficients showing the responsiveness of customers' electricity use to changes in explanatory variables. Because there may be commonality in responsiveness among different groups of customers, a second level of regression analysis is undertaken to relate the responsiveness coefficients to household characteristics (e.g., house size, vintage). For example, it may be appropriate to conduct separate analyses, one for electric-heated homes and another for gas-heated homes.

ADM will apply standard statistical tests and regression diagnostics to evaluate the performance of the regression modeling and to screen models for implausible results. ADM will use the results from the model providing the best "fit" in the analysis of electricity savings.

6.2.1 Arrears

ADM will also include a customer arrears analysis. ADM plans to aggregate data on customer bills, disconnects and arrearages, customer utility transactions, low-income and energy savings program enrollment, customer demographics, and address whether the Pilot impact electric service disconnections, and if so, to what extent. ADM will then compare the amount of arrears between pilot participation groups to determine if participation in the program impacted the customer's propensity to lead to a disconnect.

6.2.2 Customer Surveys

ADM also anticipates conducting a survey effort to collect customer survey responses in terms of demographics, behaviors, and satisfaction. ADM anticipates that there is a plan for the following survey efforts:

- Customer pre-pilot survey
- Customer post-pilot survey

Assuming a survey will be deployed newly enrolled Pilot participants, ADM will conduct the follow up survey for these same participants after a full year of Pilot deployment to enable evaluators to compare pre- and post-Pilot deployment survey responses.

ADM will survey customer participants in order to gauge the impact of Pilot participation towards customer energy usage behaviors in response to pricing. Survey questions may include, but not be limited to:

- How participants plan to change their energy usage habits to reduce their energy costs
- Customer feedback on actions taken during the Pilot to reduce energy usage
- Identification of barriers that prevent participants to change the energy usage habits

- Other questions identified by either Avista or ADM during the term of the Pilot

This effort will help Avista and implementors separate and characterize and quantify bill impacts for low-income households and retired households.

The pilot will be open to a maximum of 500 residential customers on an opt-in basis. ADM will develop a sampling plan that aims to achieve a sampling precision of ±10% with 90% statistical confidence – or "90/10 precision" – for households participating in the PTR Pilot during survey-based data collection efforts. With a population size of 500, a sample size of 70 total survey completions will meet the 90/10 precision requirements for the PTR Pilot.

ADM anticipates conducting surveys as telephone, web, paper mail or mixed-phone/web/paper mail surveys. Survey efforts may require physical mail surveys to ensure representativeness. The selected sample participants will be offered a $20 gift card incentive to participate in and complete the demographics and satisfaction survey. ADM will deploy the pre-participation surveys to the newly registered customers every two weeks in order to capture accurate pre-participation behaviors and beliefs.

The survey will address the following topics:

- What are customers' motivations for participating in the program (i.e., decrease monthly energy bill, decrease energy usage)
- What are customers' current behaviors towards energy conservation?
- Are customers' energy use schedules flexible? (i.e., retirees schedules tend to be less flexible than the working class)
- How familiar are customers with their new PTR rate?
- Are customers receiving educational materials based on actions to help respond appropriately to the PTR rates?
- What are customers' current behaviors/actions undertaken due to messaging from the program?
- Is there other information that customers would find more beneficial to receive in messaging?
- Did customers feel they saved a meaningful amount on their bills?
- What is the satisfaction among customers for participation in the program?
- What is the satisfaction among customers of Avista as a utility provider?
- Do customers have electric vehicles (EVs) and EV charging stations installed in their household?
- What are the pilot customers' demographics? (e.g., household income, occupancy, heating/cooling type)

ADM will employ the use of our in-house call center, which is dedicated solely to energy efficiency-related efforts and comprised fully of full-time ADM staff. This allows maximum transparency of evaluation management and data collection efforts.

The goal of the Pilot participant customer survey responses for the questions listed above is to identify whether there are differences in demand reduction potential across customer groups. Therefore, ADM will use the participant responses to conduct additional bill impact analysis by subgroup.

In the case that low-income customers do not benefit from the PTR pilot, this information will help identify the need for a rate subsidy for low-income customers. This information will be useful to Avista and Avista stakeholders on how to proceed with implementation of the PTR rates.

6.2.3 Program Recommendations

Per the RFP, at the conclusion of the 2025 program year, ADM will assist Avista in recommendations for Time of Use (TOU)/ Peak Time Rebate (PTR) program design/modifications in anticipation of full program rollout for the 2026-2027 biennium.

ADM anticipates the program recommendations will allude to the following topics:

- Recommendations for revisions or additions to evaluation plan
- Recommendations for customer survey plan and implementation
- Recommendations for customer eligibility requirements, and recruitment targets
- Recommendations for customer incentive and reimbursement

ADM further details each of the above items in the subsection below.

6.2.4 Program Evaluation Plan

ADM shall provide recommendations for edits or additions to the existing pilot evaluation plan, if necessary, with the goal of estimating the load impacts for the Pilot participants through statistical analysis of the hourly usage data for both the TOU and PTR Pilots. ADM will review plans to ensure that these methods can be used year after year to conduct a comparison of pilot improvements, successes, and learnings. Load metrics to be quantified include peak, off-peak, mid-day discount, average daily conservation impacts, and estimated load shift, by season. ADM anticipates a sufficient plan must:

- Capture data sources, data collection, tracking and storing, Avista tasks and responsibilities and the tasks for third-party service providers
- Ensure all metrics from the M&R Plans are included, as well as how they will be measured from the data.
- Include a schedule of all EM&V activities.
- Include a customer arrears analysis. The EM&V Plan will include efforts to gather data on customer bills, disconnects and arrearages, customer utility transactions, low-income and energy savings program enrollment, customer demographics, and address whether the Pilots impact electric service disconnections, and if so, to what extent.
- Include a method to assess the Pilots' impacts on participant program choices, payment behavior, and energy use.
- Include a method to assess the Pilots' impacts on access to essential services.

6.2.5 Customer Survey Plan & Implementation

ADM will also recommend adjustments to Avista's pilot survey plan and instruments, as well as the implementation schedule. ADM will make recommendations to maximize survey responses, such as the timing of survey deployment, the incentive amount provided to customers for completing the survey,

and the method in which the surveys are conducted (online, mixed mode, etc.) to ensure the best success for survey responses.

6.2.6 Customer Eligibility & Recruitment Targets

ADM shall help ADM develop a final list of customer eligibility requirements, utilizing industry best practices. ADM will consider the following:

- Customer home type: single-family, manufactured home, multifamily, etc.
- Multi-premise customers: allowing more than one premise to participate if the customer has multiple homes or businesses on their account.
- Customers secondary residences: vacation properties, auxiliary dwelling units, residential units used for business.
- Landlords
- Customers with on-site generation: solar, net metering, batteries.
- In addition, ADM shall use insights from Milestone 1 to guide recruitment strategy for behaviors observed among Avista residential and nonresidential customers, including analyzing AMI data to determine which customers have the highest potential to offset their peak time energy usage.

ADM shall develop, with input from Avista, a recruitment strategy, utilizing industry best practices, to develop a recruitment strategy to meet the designed participation limits of each Pilot Program while supporting accepted statistically valid design principals, including:

- Determining participants that will be most successful. (As used in this context, “successful” is defined as a participant whose bill does not increase because of their participation in the PTR Pilot.)
- Determining participants that have the potential to shift loads for positive bill impacts.

For this effort, ADM plans to analyze Avista interval consumption data to estimate the program impacts for treatment in the PTR Pilot. ADM proposes to estimate total kWh and kW impacts for Avista’s participating residential customers recruited in this pilot period.

ADM will assess the load impacts for the various pilot groups through statistical analysis of the hourly usage data for both the PTR Pilot. The goal of this plan will be to estimate the percentage reduction in peak demand and percentage reduction in overall usage/responsiveness (demand shift) to the pilot prices as well as the impacts to the Avista system and identification of potential persistence of impacts from year to year. The evaluation will be designed in such a way that the effort will be able to be conducted each year for the same pilot participants, the results also indicate persistence energy and load impacts year over year.

The intent of this task is to determine the achieved impacts of the Time-of-Use Pilot within the participant group and whether it would be reasonable to expand the program for customers in the Washington and Utah service territories.

ADM will use several types of data in the analysis, including the following:

- Metered data on hourly loads of treatment and control customers in the trial

- Hourly weather data
- Assessors' data on characteristics of houses occupied by trial treatment and control customers

ADM will use the cleaned hourly load data to prepare simple statistical and graphical comparisons of average loads under different conditions. These descriptive statistics will provide a summary of customer responses under different conditions.

Estimates of load impacts for each treatment will be reported according to four standardized formats segmented by customer type:

- Average kWh reduction per customer per impact hour (where the impact hour is the hour of interest for the evaluation, e.g., peak hours for PTR rates)
- Average percent energy reduction per impact hour
- Total energy conservation, measured as average kWh reduction per customer per month over all hours in that month
- Average percent energy reduction per month over all hours in that month
- Average peak demand impact on all event days
- Peak demand impacts by event day
- Persistence of impacts for consecutive event days
- Event day peak impacts
- Bill distribution impacts by season
- Daily price elasticity
- Inter-period substitution elasticity
- Average change in customer arrears between treatment and control groups
- Average change in number of disconnects between treatment and control groups

Each of the above estimates will also include the following elements:

- Its standard error;
- A p-value and/or confidence interval indicating statistical significance;
- The number of treatment customers, the number of control customers, and the total number of observations used in the analysis;
- A description of the dates and hours used in the analysis if it is a subset of the total amount of data collected; and
- A description of the customers used in the analysis if it is a subset of the total number of treatment and control customers.

ADM will work with Avista staff to determine the final methods to be used to estimate the load impacts according to the various metrics. As a guide in determining the methods to be used, ADM will use the report prepared by LBNL/EPRI on Quantifying the Impacts of Time-Based Rates, Enabling Technology, and Other Treatments in Consumer Behavior Studies: Protocols and Guidelines (July 2013).

ADM will work with personnel from Avista's Rates department to perform difference-of-means and difference-of-differences calculations on the hourly load data. These calculations will be performed such that results can be reported to the WUTC, per their requirements.

ADM will extend the descriptive statistics approach by estimating the parameters of a regression model of customer demand for electricity. The data for the regression analysis are in “panel” format, with time series (hourly) observations of electricity use pooled across cross-sectional observations (customers). ADM will use estimation procedures for the regression analysis that take account of both the time-series and the cross-sectional dimensions of the data.

For the bill impacts analysis, a two-phase regression modeling approach will be used. In the first phase of regression modeling, ADM will use the data for each site individually in single equation regression estimation. For the regression analyses, the dependent variable is average hourly demand (kW).

The analysis of the data for each individual customer provides a set of coefficients showing the responsiveness of customers’ electricity use to changes in explanatory variables. Because there may be commonality in responsiveness among different groups of customers, a second level of regression analysis is undertaken to relate the responsiveness coefficients to household characteristics (e.g., house size, vintage). For example, it may be appropriate to conduct separate analyses, one for electric-heated homes and another for gas-heated homes.

ADM will apply standard statistical tests and regression diagnostics to evaluate the performance of the regression modeling and to screen models for implausible results. ADM will use the results from the model providing the best "fit" in the analysis of electricity savings.

6.2.7 Timing and Cadence

This program is considered “high risk” and therefore will be evaluated each year in the 2024-2025 evaluation period.

6.3 Hybrid Heat Pump Pilot

Starting in 2024, Avista plans to conduct a pilot program to explore the differences between cold climate heat pumps and hybrid heat pumps, with a focus on learning more about the performance of each type. Avista defines a hybrid heat pump as an electric heat pump with natural gas backup heating. ADM will focus on determining the feasibility of adding these measures to the company’s efficiency programs.

The pilot will subsidize the installation costs of 12 heat pumps in total – six cold climate and six hybrid. In addition to the pilot’s primary goals, Avista hopes to learn more about the factors that influence customers (economic, environmental, behavioral, emotional) as they consider significant HVAC upgrades. In addition, ADM will conduct in-depth interviews with the 12 participants in order to learn more about perceived home comfort for each of these systems. The pilot will span two years in order to allow Avista to collect data over two cooling and two heating seasons, with a total budget of approximately $500,000.

In addition to this pilot, Avista is also exploring a possible pilot to evaluate gas absorption heat pumps. This pilot is in preliminary planning phases but may move forward in the late spring or early summer of 2024. Avista will consult with its advisory group if it intends to move forward with this pilot. After the decision is made, ADM will work with Avista to develop a more comprehensive evaluation plan. In the meantime, ADM anticipates the following methodology to evaluate the measures in the Hybrid Heat Pump Pilot Program.

Table 6-1: Hybrid Heat Pump Pilot Measures

Measure	Impact Analysis Methodology
Hybrid heat pump	Billing Analysis
Gas absorption heat pumps	Billing Analysis
E Ductless heat pump (with existing FAF)	RTF UES, ResDHPonFAF_v3_1

ADM summarizes the program-specific and measure-specific impact analysis activities and requirements for the Hybrid Heat Pump Pilot Program in the section below.

6.3.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Hybrid Heat Pump Pilot Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)
- Survey-based verification for a random subset of customers (Section 2.3.2)

ADM will work with Avista to determine a preliminary sampling plan once participation trends are better informed. During document-based verification, if any deviations between the tracking data and application values are found, ADM will communicate these differences to Avista through periodic updates and summarize deviations in the final report.

During survey-based verification, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure and documentation of prior equipment. ADM will include questions such as:

- Was this hybrid heat pump a new construction, or did it replace another heat pump?
- Was the previous heat pump functional?
- Is the newly installed heat pump still properly functioning?
- What is the efficiency and sizing of the newly installed heat pump?

These questions will help ADM verify that the measure was collected and documented accurately and will allow ADM to calculate measure-level savings more accurately. In addition, in the event that billing analysis is infeasible due to low participation, this simple verification will help ADM more accurately estimate measure-level impacts for the other measures using engineering algorithms.

6.3.2 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms, applicable invoices, and equipment certificates if available
- Monthly billed consumption data for participating customers and for similar, non-participating customers

6.3.3 Impact Analysis

ADM proposes to utilize the following impact evaluation methodologies to estimate verified net energy savings in the Hybrid Heat Pump Pilot Program:

- Billing Analysis with counterfactual group (IPMVP Option C)

ADM does not anticipate RTF UES are available for this measure – therefore, we propose a billing analysis to estimate verified savings for the measure. ADM proposes to measure verified net savings by conducting a billing analysis with a counterfactual group selected via propensity score matching. The methodology used to select the quasi-experimental counterfactual group and the methodology for linear regression billing analysis are summarized in further detail in the "Billing Analysis (IPMVP Option C)" section. ADM will isolate each unique measure and verify each participant included in the analysis did not also participate in other programs; therefore, ADM will be able to isolate the measure effects using the household's billed consumption data.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

6.3.4 Timing and Cadence

This program is considered "high risk" because it is a new pilot, and therefore will be evaluated each year in the 2024-2025 evaluation period.

6.3.5 Technical Comments

In the event that the required data is not available or sufficient to conduct a billing regression analysis, ADM will conduct a benchmarking analysis and literature review and apply the most reasonable savings estimates for the novel measure.

6.4 Building Operator IQ Pilot

The Building Operator IQ (BEIQ) Pilot Program provides incentives and energy management services to commercial, industrial, and agricultural customers to implement energy efficiency measures, adjust and tune existing equipment, systems and behaviors in a Retrocomissioning-type program.

As a proof-of-concept pilot, Avista aims to evaluate the program by providing sufficient information to better understand the potential energy savings of implementing the BEIQ pilot.

ADM summarizes the program-specific impact analysis activities and requirements for the BEIQ pilot in the section below. These methodologies are similar to the Site-Specific program evaluation, described above in 5.1.

6.4.1 Sampling and Precision

Depending upon participation levels, ADM may choose to analyze a census of projects. If participation exceeds approximately 10 projects, ADM will select a representative sample of projects to analyze and extrapolate pilot-level results from. For this, simple random sampling is not an effective sampling methodology as the CV values observed in business programs are typically very high because the distributions of savings are generally positively skewed. Often, a relatively small number of projects account for a high percentage of the estimated savings for the program.

To address this situation, we will use a sample design for selecting projects for the M&V sample that takes such skewness into account. With this approach, we select a number of sites with large savings for the sample with certainty and take a random sample of the remaining sites. To further improve the precision, non-certainty sites are selected for the sample through systematic random sampling. That is, a random sample of sites remaining after the certainty sites have been selected is selected by ordering them according to the magnitude of their savings and using systematic random sampling. Sampling systematically from a list that is ordered according to the magnitude of savings ensures that any sample selected will have some units with high savings, some with moderate savings, and some with low savings. Samples cannot result that have concentrations of sites with atypically high savings or atypically low savings. We will establish sample sizes to safely exceed ±10% precision at 90% confidence (90/10 confidence precision).

6.4.2 Data Required

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms and applicable invoices
- Individual project files and supporting documentation for sampled projects including:
    a. Facility square footage, facility occupancy, detailed information on facility type, schedule of operations, list of dates in which facility was shut down or closed, information on efficiency measures installed
    b. Changes in facility or building operations or production unrelated to program, but affecting energy consumption

- Facility billing data from two years prior to project installation through the time the data request is sent (typically 3 months to one year of post data)
- A list of all other energy savings measures installed at the facility which are not part of the BEIQ pathway.

6.4.3 Impact Analysis

The goals and methods of the BEIQ Pilot aligns with a Retrocomissioning (RCx) program. Therefore, ADM proposes to evaluate energy savings for this program that aligns with the methodologies presented in the UMP chapter for RCx. This involves analyzing whole-facility energy consumption data for each facility to estimate observed savings through retrofitting projects. By evaluating energy consumption data on a facility-level, completed by comparing building energy usage before retrofitting with building energy usage after retrofitting, the evaluators are able to measure all individual equipment retrofit savings as well as capture all interactive effects resulting from a combination of measures being installed in a single facility. In addition, this method avoids costly monitoring efforts for a large volume and variety of equipment within a single facility.

ADM proposes to utilize the following impact evaluation methodology to estimate verified net energy savings in the BEIQ pilot:

- Facility-level Regression Analysis (IPMVP Option C)

ADM proposes to measure verified net savings by conducting a billing analysis which compares each facility's pre-retrofit meter consumption to the same facility's post-retrofit meter consumption. The methodology used for linear regression analysis are summarized in further detail in the "Facility-Level Regression Analysis (IPMVP Option C)" section. This analysis is a whole building analysis. Therefore, any retrofitting projects, along with non-retrofitting projects, that affect building energy consumption, will be included in this analysis. ADM proposes this analysis because it is an accurate method to quantify observed savings at the facility level and includes interactive effects of multiple energy efficiency measures. ADM will focus analysis efforts for the building's meters which comprise the retrofitted areas of the building.

For projects whose savings cannot be measured through billing analysis, a separate IPMVP option or options will be selected. See section 5.2.5 for details.

For facilities who have opted to install energy savings measures outside of the BEIQ Pilot pathway, ADM will conduct separate analyses of these measures using the appropriate IPMVP option and deduct these savings from the BEIQ project billing analyses.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

6.4.4 Timing and Cadence

This program is considered "high risk" because it is a new pilot, and therefore will be evaluated each year in the 2024-2025 evaluation period.

6.4.5 Technical Comments

ADM provides no technical comments for this program's evaluation.

6.5 Compressed Air Pilot

Avista plans to launch the Compressed Air Pilot Program to nonresidential customers during tis biannual period. ADM expects this pilot to offer direct installation of a programmable line isolation device that will automatically detect leaks in a compressed air line. This line isolation technology works by eliminating demand on the air compressor from air leaks or timer drains. The program applicant performs a pre and post logging around the install date to capture and quantify kWh savings.

Commercial customers who use Avista electricity to operate rotary screw compressors of at least 15 horsepower that are not turned off daily are eligible for this program. Customers must submit a completed application form, invoice and the pre and post logging report summarizing kWh savings and photos of actual install along with the compressor nameplate within 90 days are eligible to receive up to $0.20/verified kWh savings.

ADM summarizes the expected program-specific and measure-specific impact analysis activities and requirements for the Compressed Air Pilot in the section below.

6.5.1 Database Review & Verification

Before conducting the impact analysis, ADM will conduct the following activities for the Compressed Air Pilot Program:

- Database review for program-level data fields (Section 2.2)
- Document-based verification for a random subset of rebates (Section 2.3.1)

ADM will select a subset of rebate applications to cross-verify tracking data inputs, to be determined once the pilot has launched and initial program tracking data is available. If ADM finds any deviations between the tracking data and application values, ADM will note and summarize these differences to Avista through periodic updates and the final report.

In addition, ADM will randomly select a subset of participant customers to survey for simple verification of installed measure to meet 90/10 confidence and precision requirements. ADM will include questions such as:

- How much horsepower is being controlled?
- Is the newly installed equipment properly functioning?

These questions will help ADM verify that the installed equipment was documented accurately and that data collection activities are progressing smoothly for the program. This simple verification will help ADM more accurately estimate unit-level savings using engineering algorithms.

6.5.2 Impact Analysis

ADM will utilize the following impact evaluation methodologies to estimate verified net energy savings in the Compressed Air Pilot Program:

- Deemed savings using RTF UES or Avista TRM values
- Partial/Full Measure Isolation (IPMVP Option A & B)

ADM will review engineering calculations for the projects completed in the Compressed Air Pilot Program. If any changes are necessitated during review, ADM will also apply adjustments in addition to adjustments from deviations are found between invoices and tracking data or if in-service rates deviate from 100% in verification surveys, if applicable. This methodology is summarized in further detail in Section 2.5.1, *Deemed Savings*.

ADM will also explore partial or full measure isolation, described in Section 2.5.2, Partially/Fully Measured Retrofit Isolation (IPMVP Options A & B). End-use metering will be used to obtain data that directly measures pre- or post-measure (or both) energy use for those specific end-uses affected by an energy efficiency measure. Having both the experience and the proper tools, ADM will provide end-use monitoring very cost effectively for this evaluation effort.

ADM will perform engineering reviews of Compressed Air Pilot Program projects to ensure methodology and inputs are sound and calculations have been carried out correctly. For a subset of high-savings projects, ADM will request project documentation and logging data to perform a secondary verification analysis.

Using the International Performance Measure Verification Protocol (IPMVP), ADM will develop a comparison of before and after energy consumption (pre and post install of compressed air isolation device). IVPMP's framework requires that certain energy logging activities happen at key points in this process and describes other important activities that much be included as part of the M&V impact analysis. ADM will analyze savings from air compressor system measures using custom analysis tools. We use the characteristics and monitoring data collected on-site to develop the air flow and kWh load profiles that are the inputs to our analytical tool. These data will include not only electrical load measurements for compressors and auxiliary equipment (e.g., dryers, fans, etc.) but also inlet and discharge pressure measurements to calculate flows and pressure measurements for the compressor, dryer, and other critical components of the air compression system. ADM will utilize our R-based script developed to help process large data sets (compressed air data can sometimes come in 1-second intervals) that sometimes accompany this measure.

6.5.3 Required Data

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Rebate application forms and applicable invoices
- Individual project files, supporting documentation and logging data for any sampled projects

For this effort, ADM plans to analyze Avista interval consumption data to estimate the program impacts for treatment in the TOU Pilot. ADM proposes to estimate total kWh and kW impacts for Avista's participating residential customers recruited in this pilot period.

ADM will assess the load impacts for the various pilot groups through statistical analysis of the hourly usage data for both the TOU Pilot. The goal of this plan will be to estimate the percentage reduction in

peak demand and percentage reduction in overall usage/responsiveness (demand shift) to the pilot prices as well as the impacts to the Avista system and identification of potential persistence of impacts from year to year. The evaluation will be designed in such a way that the effort will be able to be conducted each year for the same pilot participants, the results also indicate persistence energy and load impacts year over year.

The intent of this task is to determine the achieved impacts of the Time-of-Use Pilot within the participant group and whether it would be reasonable to expand the program for customers in the Washington and Utah service territories.

ADM will use several types of data in the analysis, including the following:

- Metered data on hourly loads of treatment and control customers in the trial
- Hourly weather data
- Assessors' data on characteristics of houses occupied by trial treatment and control customers

ADM will use the cleaned hourly load data to prepare simple statistical and graphical comparisons of average loads under different conditions. These descriptive statistics will provide a summary of customer responses under different conditions.

Estimates of load impacts for each treatment will be reported according to four standardized formats segmented by customer type:

- Average kWh reduction per customer per impact hour (where the impact hour is the hour of interest for the evaluation, e.g., peak hours for TOU rates)
- Average percent energy reduction per impact hour
- Total energy conservation, measured as average kWh reduction per customer per month over all hours in that month
- Average percent energy reduction per month over all hours in that month
- Average peak demand impact on all event days
- Peak demand impacts by event day
- Persistence of impacts for consecutive event days
- Event day peak impacts
- Bill distribution impacts by season
- Daily price elasticity
- Inter-period substitution elasticity
- Average change in customer arrears between treatment and control groups
- Average change in number of disconnects between treatment and control groups

Each of the above estimates will also include the following elements:

- Its standard error;
- A p-value and/or confidence interval indicating statistical significance;
- The number of treatment customers, the number of control customers, and the total number of observations used in the analysis;
- A description of the dates and hours used in the analysis if it is a subset of the total amount of data collected; and

- A description of the customers used in the analysis if it is a subset of the total number of treatment and control customers.

ADM will work with Avista staff to determine the final methods to be used to estimate the load impacts according to the various metrics. As a guide in determining the methods to be used, ADM will use the report prepared by LBNL/EPRI on Quantifying the Impacts of Time-Based Rates, Enabling Technology, and Other Treatments in Consumer Behavior Studies: Protocols and Guidelines (July 2013).

ADM will work with personnel from Avista's Rates department to perform difference-of-means and difference-of-differences calculations on the hourly load data. These calculations will be performed such that results can be reported to the WUTC, per their requirements.

ADM will extend the descriptive statistics approach by estimating the parameters of a regression model of customer demand for electricity. The data for the regression analysis are in "panel" format, with time series (hourly) observations of electricity use pooled across cross-sectional observations (customers). ADM will use estimation procedures for the regression analysis that take account of both the time-series and the cross-sectional dimensions of the data.

For the bill impacts analysis, a two-phase regression modeling approach will be used. In the first phase of regression modeling, ADM will use the data for each site individually in single equation regression estimation. For the regression analyses, the dependent variable is average hourly demand (kW).

The analysis of the data for each individual customer provides a set of coefficients showing the responsiveness of customers' electricity use to changes in explanatory variables. Because there may be commonality in responsiveness among different groups of customers, a second level of regression analysis is undertaken to relate the responsiveness coefficients to household characteristics (e.g., house size, vintage). For example, it may be appropriate to conduct separate analyses, one for electric-heated homes and another for gas-heated homes.

ADM will apply standard statistical tests and regression diagnostics to evaluate the performance of the regression modeling and to screen models for implausible results. ADM will use the results from the model providing the best "fit" in the analysis of electricity savings.

6.5.4 Arrears

ADM will also include a customer arrears analysis. ADM plans to aggregate data on customer bills, disconnects and arrearages, customer utility transactions, low-income and energy savings program enrollment, customer demographics, and address whether the Pilots impact electric service disconnections, and if so, to what extent. ADM will then compare the amount of arrears between pilot participation groups to determine if participation in the program impacted the customer's propensity to lead to a disconnect.

6.5.5 Customer Surveys

ADM also anticipates conducting a survey effort to collect customer survey responses in terms of demographics, behaviors, and satisfaction. ADM anticipates that there is a plan for the following survey efforts:

- Customer pre-pilot survey

- Customer post-pilot survey

Assuming a survey will be deployed newly enrolled Pilot participants, ADM will conduct the follow up survey for these same participants after a full year of Pilot deployment to enable evaluators to compare pre- and post-Pilot deployment survey responses.

ADM will survey customer participants in order to gauge the impact of Pilot participation towards customer energy usage behaviors in response to pricing. Survey questions may include, but not be limited to:

- How participants plan to change their energy usage habits to reduce their energy costs
- Customer feedback on actions taken during the Pilot to reduce energy usage
- Identification of barriers that prevent participants to change the energy usage habits
- Other questions identified by either Avista or ADM during the term of the Pilots

This effort will help Avista and implementors separate and characterize and quantify bill impacts for low-income households and retired households.

The pilot will be open to a maximum of 500 residential customers on an opt-in basis. ADM will develop a sampling plan that aims to achieve a sampling precision of ±10% with 90% statistical confidence – or "90/10 precision" – for households participating in the TOU Pilot during survey-based data collection efforts. With a population size of 500, a sample size of 70 total survey completions will meet the 90/10 precision requirements for the TOU Pilot.

ADM anticipates conducting surveys as telephone, web, paper mail or mixed-phone/web/paper mail surveys. Survey efforts may require physical mail surveys to ensure representativeness. The selected sample participants will be offered a $20 gift card incentive to participate in and complete the demographics and satisfaction survey.

The survey will address the following topics:

- What are customers' motivations for participating in the program (i.e., decrease monthly energy bill, decrease energy usage)
- What are customers' current behaviors towards energy conservation?
- Are customers' energy use schedules flexible? (i.e., retirees schedules tend to be less flexible than the working class)
- How familiar are customers with their new TOU rate?
- Are customers receiving educational materials based on actions to help respond appropriately to the TOU rates?
- What are customers' current behaviors/actions undertaken due to messaging from the program?
- Is there other information that customers would find more beneficial to receive in messaging?
- Did customers feel they saved a meaningful amount on their bills?
- What is the satisfaction among customers for participation in the program?
- What is the satisfaction among customers of Avista as a utility provider?
- Do customers have electric vehicles (EVs) and EV charging stations installed in their household?

- What are the pilot customers' demographics? (e.g., household income, occupancy, heating/cooling type)

ADM will employ the use of our in-house call center, which is dedicated solely to energy efficiency-related efforts and comprised fully of full-time ADM staff. This allows maximum transparency of evaluation management and data collection efforts.

The goal of the Pilot participant customer survey responses for the questions listed above is to identify whether there are differences in demand reduction potential across customer groups. Therefore, ADM will use the participant responses to conduct additional bill impact analysis by subgroup.

In the case that low-income customers do not benefit from the TOU pilot, this information will help identify the need for a rate subsidy for low-income customers. This information will be useful to Avista and Avista stakeholders on how to proceed with implementation of the TOU rates.

6.5.6 Program Recommendations

Per the RFP, at the conclusion of the 2025 Program year, ADM will assist Avista in recommendations for Time of Use (TOU)/ Peak Time Rebate (PTR) program design/modifications in anticipation of full program rollout for the 2026-2027 biennium.

ADM anticipates the program recommendations will allude to the following topics:

- Recommendations for revisions or additions to evaluation plan
- Recommendations for customer survey plan and implementation
- Recommendations for customer eligibility requirements, and recruitment targets
- Recommendations for customer incentive and reimbursement

ADM further details each of the above items in the subsection below.

6.5.7 Program Evaluation Plan

ADM shall provide recommendations for edits or additions to the existing pilot evaluation plan, if necessary, with the goal of estimating the load impacts for the Pilot participants through statistical analysis of the hourly usage data for both the TOU and PTR Pilots. ADM will review plans to ensure that these methods can be used year after year to conduct a comparison of pilot improvements, successes, and learnings. Load metrics to be quantified include peak, off-peak, mid-day discount, average daily conservation impacts, and estimated load shift, by season. ADM anticipates a sufficient plan must:

- Capture data sources, data collection, tracking and storing, Avista tasks and responsibilities and the tasks for third-party service providers
- Ensure all metrics from the M&R Plans are included, as well as how they will be measured from the data.
- Include a schedule of all EM&V activities.
- Include a customer arrears analysis. The EM&V Plan will include efforts to gather data on customer bills, disconnects and arrearages, customer utility transactions, low-income and energy savings program enrollment, customer demographics, and address whether the Pilots impact electric service disconnections, and if so, to what extent.

- Include a method to assess the Pilots' impacts on participant program choices, payment behavior, and energy use.
- Include a method to assess the Pilots' impacts on access to essential services.

6.5.8 Customer Survey Plan & Implementation

ADM will also recommend adjustments to Avista's pilot survey plan and instruments, as well as the implementation schedule. ADM will make recommendations to maximize survey responses, such as the timing of survey deployment, the incentive amount provided to customers for completing the survey, and the method in which the surveys are conducted (online, mixed mode, etc.) to ensure the best success for survey responses.

6.5.9 Customer Eligibility & Recruitment Targets

ADM shall help ADM develop a final list of customer eligibility requirements, utilizing industry best practices. ADM will consider the following:

- Customer home type: single-family, manufactured home, multifamily, etc.
- Multi-premise customers: allowing more than one premise to participate if customer has multiple homes or businesses on their account.
- Customers secondary residences: vacation properties, auxiliary dwelling units, residential units used for business.
- Landlords
- Customers with on-site generation: solar, net metering, batteries.
- In addition, ADM shall use insights from Milestone 1 to guide recruitment strategy for behaviors observed among Avista residential and nonresidential customers, including analyzing AMI data to determine which customers have the highest potential to offset their peak time energy usage.

ADM shall develop, with input from Avista, a recruitment strategy, utilizing industry best practices, to develop a recruitment strategy to meet the designed participation limits of each Pilot Program while supporting accepted statistically valid design principals, including:

- Determining participants that will be most successful. (As used in this context, "successful" is defined as a participant whose bill does not increase because of their participation in the TOU Pilot.)
- Determining participants that have the potential to shift loads for positive bill impacts.

6.5.10 Customer Reimbursement Strategy

ADM will analyze the extent to which a customer required reimbursement in the pilot evaluation period. ADM will accomplish this by calculating a monthly comparison between the participant's monthly bill under the TOU Pilot ("TOU Bill") versus what participant's monthly bill would have been absent their participation ("Standard Bill"). The participant will receive a reimbursement at the end of the first year if their total annual TOU Bill is greater than their total Standard Bill.

ADM will also assist Avista with a recommended schedule for deploying reimbursement payments to customers and the messaging involved in the reimbursement notifications.

6.5.11 Timing and Cadence

This program is considered "high risk" because it is a new pilot, and therefore will be evaluated each year in the 2024-2025 evaluation period.

6.5.12 Technical Comments

ADM provides no technical comments for this program's evaluation.

6.6 Pay for Performance Pilot

The Pay for Performance Program is an incentive program that pays customers for actual energy savings at the meter. Energy savings can come from building retrofits and equipment upgrades, as well as from behavioral, operations and maintenance, and retro-commissioning activities.

The Pay for Performance Program pays annual incentives for all electricity/natural gas saved, rather than separate incentives for individual measures. Qualifying customers who implement whole-building energy retrofits will receive a set incentive rate for measurable savings that are achieved over the course of three years, with incentive payments made at the end of each year. Incentives are paid at $0.08 per kWh and $1.25 per therm.

This program is available for any Avista commercial customer who owns or operates buildings with at least 20,000 square feet of heated or cooled space and has consistent and measurable energy usage. Each building must have stable energy use over the past year and be metered separately, preferably with interval meters. To be eligible for this program, savings from planned improvements must be at least 10 percent of the building's baseline kWh or therm consumption. Manufacturing/industrial processes are excluded under this program but may be eligible under the site-specific path. Customers submit a completed rebate form, and Avista establishes a usage baseline, approves the projects, and sends a contract for the project. After improvements are implemented, savings are measured against the baseline, and payments are made annually for three years if savings are met.

6.6.1 Sampling and Precision

Depending upon participation levels, ADM may choose to analyze a census of projects. If participation exceeds approximately 10 projects, ADM will select a representative sample of projects to analyze and extrapolate pilot-level results from. For this, simple random sampling is not an effective sampling methodology as the CV values observed in business programs are typically very high because the distributions of savings are generally positively skewed. Often, a relatively small number of projects account for a high percentage of the estimated savings for the program.

To address this situation, we will use a sample design for selecting projects for the M&V sample that takes such skewness into account. With this approach, we select a number of sites with large savings for the sample with certainty and take a random sample of the remaining sites. To further improve the precision, non-certainty sites are selected for the sample through systematic random sampling. That is, a random sample of sites remaining after the certainty sites have been selected is selected by ordering

them according to the magnitude of their savings and using systematic random sampling. Sampling systematically from a list that is ordered according to the magnitude of savings ensures that any sample selected will have some units with high savings, some with moderate savings, and some with low savings. Samples cannot result that have concentrations of sites with atypically high savings or atypically low savings. We will establish sample sizes to safely exceed ±10% precision at 90% confidence (90/10 confidence precision).

6.6.2 Data Required

ADM requires the following data to complete the analysis for this program:

- Program tracking data, including customer identifiers, address, and date of measure install
- Filled rebate application forms and applicable invoices
- Individual project files and supporting documentation for sampled projects including:
    a. Facility square footage, facility occupancy, detailed information on facility type, schedule of operations, list of dates in which facility was shut down or closed, information on efficiency measures installed
    b. Changes in facility or building operations or production unrelated to program, but affecting energy consumption
- Facility billing data from two years prior to project installation through the time the data request is sent (typically 3 months to one year of post data)
- A list of all other energy savings measures installed at the facility which are not part of the Pay for Performance pathway.

6.6.3 Impact Analysis

The goals and methods of the Pay for Performance Pilot aligns with a custom or retrocommissioning program. Therefore, ADM proposes to evaluate energy savings for this program that aligns with the methodologies presented in the UMP chapter for RCx. This involves analyzing whole-facility energy consumption data for each facility to estimate observed savings through retrofitting projects. By evaluating energy consumption data on a facility-level, completed by comparing building energy usage before retrofitting with building energy usage after retrofitting, the evaluators are able to measure all individual equipment retrofit savings as well as capture all interactive effects resulting from a combination of measures being installed in a single facility. In addition, this method avoids costly monitoring efforts for a large volume and variety of equipment within a single facility.

ADM proposes to utilize the following impact evaluation methodology to estimate verified net energy savings in the Pay for Performance Pilot:

- Facility-level Regression Analysis (IPMVP Option C)

ADM proposes to measure verified net savings by conducting a billing analysis which compares each facility's pre-retrofit meter consumption to the same facility's post-retrofit meter consumption. The methodology used for linear regression analysis are summarized in further detail in the "Facility-Level Regression Analysis (IPMVP Option C)" section. This analysis is a whole building analysis. Therefore, any retrofitting projects, along with non-retrofitting projects, that affect building energy consumption, will be included in this analysis. ADM proposes this analysis because it is an accurate method to quantify

observed savings at the facility level and includes interactive effects of multiple energy efficiency measures. ADM will focus analysis efforts for the building's meters which comprise the retrofitted areas of the building.

For projects whose savings cannot be measured through billing analysis, a separate IPMVP option or options will be selected. See section 5.2.5 for details.

For facilities who have opted to install energy savings measures outside of the Pay for Performance Pilot pathway, ADM will conduct separate analyses of these measures using the appropriate IPMVP option and deduct these savings from the Pay for Performance project billing analyses.

ADM will summarize program-level savings by summing verified net energy savings for all projects in the program, separated and reported by state and fuel type.

6.6.4 Timing and Cadence

This program is considered "high risk" because it is a new pilot, and therefore will be evaluated each year in the 2024-2025 evaluation period.

6.6.5 Technical Comments

ADM provides no technical comments for this program's evaluation.

7. ADM Schedule and Management Plan

This section presents information on the ADM evaluation team's proposed schedule and management plan. Table 7-1 presents our preliminary schedule for the impact and process evaluation efforts. During project initiation, ADM will work with Avista to develop and revise the schedule as needed. This schedule is proposed for the 2024 program year for the Washington Electric, Washington Natural Gas, Idaho Electric, and Idaho Natural Gas Evaluation Reports. A similar timeline will be developed for 2025 that meets 2025 program evaluation deadlines and 2025-specific deliverables set forth in the RFP. This will give ample time for meeting deliverables set forth in the RFP.

Table 7-1: Proposed Schedule

Activity	Time Period
Kickoff Meeting	One week subsequent to contract award
ADM submits draft 2024 impact and process EM&V Plan	Kick-off meeting + 4 weeks
ADM submits final 2024 impact and process EM&V Plan	Kick-off meeting + 6 weeks
ADM submits impact and process data request for Q1/Q2	Thursday, June 13, 2024
Avista fulfills impact and process data request for Q1/Q2	Thursday, June 27, 2024
ADM finalizes sampling plan for Q1/Q2	Thursday, July 4, 2024
ADM submits impact and process staff and trade ally interview guides for Q1/Q2	Thursday August 29, 2024
ADM submits impact and process participant survey instruments for Q1/Q2	Thursday August 29, 2024
ADM conducts impact and process survey data collection for Q1/Q2	Thursday August 29 - Monday October 28, 2024
ADM conducts preliminary impact desk reviews for Q1/Q2	Thursday August 29 - Monday October 28, 2024
ADM submits impact and process data request for full program year	Thursday, January 2, 2025
Avista fulfills impact and process data request for full program year	Monday, January 13, 2025
ADM adjusts impact and process sampling plan for full program year	Friday, January 17, 2025
ADM conducts impact and process survey data collection for full program year	Friday, January 17 - Friday, February 21, 2025
ADM conducts final impact desk reviews and billing analyses for full program year	Friday, January 17 - Monday, February 24, 2025
Perform cost-effectiveness analysis	Thursday, February 20 - Monday, February 24, 2025
Submit draft version of 2024 WA Electric & Natural Gas Impact Evaluation, 2024 WA Cost Effectiveness Analysis (Electric and Natural Gas)	Friday, February 28, 2025
Submit final version of 2024 WA Electric & Natural Gas Impact Evaluation, 2024 WA Cost Effectiveness Analysis (Electric and Natural Gas)	Saturday, March 15, 2025
Submit draft version of 2024 ID Electric & Natural Gas Impact Evaluation	Saturday, March 15, 2025

Activity	Time Period
Submit final version of 2024 ID Electric & Natural Gas Impact Evaluation	Tuesday, April 15, 2025
Submit draft version of 2025 WA Electric & Natural Gas Impact Evaluation, 2025 WA Cost Effectiveness Analysis (Electric and Natural Gas)	Saturday, February 28, 2026
Submit final version of 2025 WA Electric & Natural Gas Impact Evaluation, 2025 WA Cost Effectiveness Analysis (Electric and Natural Gas)	Sunday, March 15, 2026
Submit draft version of 2025 ID Electric & Natural Gas Impact Evaluation	Sunday, March 15, 2026
Submit draft version of 2025 WA & ID Process Evaluation	Sunday, March 15, 2026
Submit final version of 2025 ID Electric & Natural Gas Impact Evaluation	Wednesday, April 15, 2026
Submit final version of 2025 WA & ID Process Evaluation	Wednesday, April 15, 2026

ADM details the following proposed schedule for the TOU and PTR impact evaluation and recommendation deliverables.

Table 7-2: Proposed TOU/PTR Schedule

Activity	Time Period
ADM submits request for TOU & PTR billing data	Monday, June 2, 2025
ADM submits draft results of TOU & PTR impact analysis	Monday, September 22, 2025
ADM submits final results of TOU & PTR impact analysis	Wednesday, October 1, 2025
ADM submits draft PTR/TOU Full Program Design Recommendations	Sunday, March 15, 2026
ADM submits final PTR/TOU Full Program Design Recommendations	Wednesday, April 15, 2026

In addition to the above schedule, ADM commits to meeting and participating with advisory groups, subcommittees, and others as needed, in addition to presenting annual results at Avista's convenience.

7.1 Team Members

ADM proposes an efficient organization for this project. The Project Manager, Melissa Kosla, will serve as a primary point of contact with Avista and will have overall responsibility for management of project activities. She will be responsible for ensuring the work is completed in a timely fashion and within budget.

The Project Manager will be supported by evaluation leads in planning and implementing all project tasks. We will have separate evaluation leads for the residential sector impact evaluation (Chris Johnson); the nonresidential sector impact evaluation (Zephaniah Davis); and the process evaluations of both sectors (Nathaniel Albers). The evaluation leads will directly supervise the planning and execution of data collection and analysis for their respective parts of the evaluation. Each impact lead will coordinate with the process evaluation lead in the development and programming of survey instruments and coordination with the call center. Zephaniah Davis also will serve as Deputy Project Manager and will be able to step in and carry out all project management activities (under the PIC's supervision), if needed, in the Project Manager's absence.

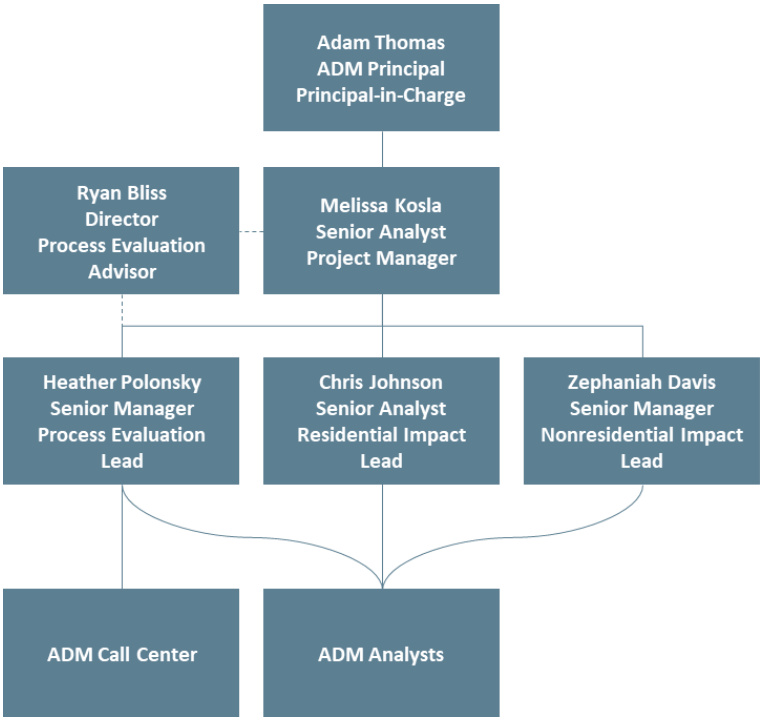
ADM has a deep reserve of analysts and data scientists capable of staffing this project. All have extensive experience in data analysis and survey programming. We have included resumes for several of these, all of whom are either located in Oregon or have done significant work in the Pacific Northwest.

To effectively manage the study and meet Avista's research needs, the Project Manager will report to Principal-in-Charge, Adam Thomas. Adam is a Principal at ADM. In this role, he regularly reviews the status of the technical work with the Project Manager and works with him so that potential problems can be identified and avoided. He also works with the Project Manager to solve problems when they do arise and to ensure that the required administrative and technical support is being supplied. On the contractual side, Mr. Thomas ensures that contract costs are managed and that we provide the personnel and equipment needed to successfully conduct the project.

In addition, Ryan Bliss, an ADM Director with more than 37 years' social science research experience, including 14 years' experience in energy efficiency process evaluation research, will provide high-level advice and supervision of process evaluation activities.

ADM is accurate, thorough, and efficient in our evaluation work. ADM staff have deep expertise, e.g., Adam Thomas has conducted similar consulting activities for utility clients for 15-plus years, Heather has led survey development and deployment activities for dozens of clients per year, and Melissa Kosla and Chris Johnson have a combined 15-plus years of conducting technical billing analyses related to their roles in this evaluation project. Zephaniah Davis is a subject matter expert in nonresidential sector impact evaluation and has over 10 years of experience evaluating complex projects. The experienced, talented, motivated ADM team has all the skills to achieve a rigorous evaluation expertly and efficiently within this scope of work. Figure 7-1 shows our project organization.

Figure 7-1: Project Organization



Appendix B – Cost-Effectiveness Methodology

The cost-effectiveness evaluation of Avista's energy efficiency programs has been standardized to a significant degree in order to provide for greater transparency and understanding of the metrics. Avista has brought these standardized[7] approaches into the evaluation of the cost-effectiveness of its portfolio through a series of specific interpretations, approaches, and policies. The summarization of these key guidelines provides a greater insight into the evaluation and how to interpret the results.

The cost-effectiveness of energy efficiency programs can be viewed from a variety of perspectives, each of which leads to a specific standardized cost-effectiveness test. The below outlines and describes the various perspectives.

1. ***Total Resource Cost:*** The perspective of the entire customer class of a particular utility. This includes not only what they individually and directly pay for efficiency (through the incremental cost associated with higher efficiency options) but also the utility costs that they will indirectly bear through their utility bill. When looking at the full customer population, incentives are considered to be a transfer between ratepayers and not a cost for the overall ratepayer class. This perspective is represented in the total resource cost (TRC) test. Avista has included a 10 percent conservation credit to the TRC calculation adding a benefit to the overall cost effectiveness.
2. ***Utility Cost Test:*** If the objective is to minimize the utility bill – without regard to costs borne by the customer outside of that which is paid through the utility bill – then cost-effectiveness simply comes down to a comparison of reduced utility avoided cost and the full cost (incentive and non-incentive cost) of delivering the utility program. This is the utility cost test (UCT), also known as the program administrator cost (PAC) test.
3. ***Participant Cost Test:*** A participating customer's view of cost-effectiveness is focused upon reduced energy cost (at the customer's retail rate). Avista also includes the value of any non-energy benefits that they may receive. Incentives received by the customer offset the incremental cost associated with the efficiency measure. This is the participant cost test (PCT). Since participation within utility programs is voluntary, it could be asserted that well-informed participating customers are performing their own cost-effectiveness test based on their own circumstances and voluntarily participate only to the extent that it is beneficial for them to do so.
4. ***Ratepayer Impact Measure:*** Non-participating customers are affected by a utility program solely through the impact on their retail rate. Their usage, since they are non-participants, is unaffected by the program. The impact of energy efficiency programs on the utility rate imposed upon these non-participating customers is the result of the reduced utility energy costs, diminished utility revenues, and the cost associated with the utility program. Since utility retail energy rates exceed the avoided cost under almost all scenarios (peak end-use load and a few other exceptions apply), the non-participant rarely benefits. This is the rate impact measure (RIM), also known as the non-participant test.

[7]) California Standard Practice Manual: Economic Analysis of Demand Side Program and Projects

Although Avista historically used the UCT as the primary cost effectiveness test for natural gas efficiency programs, the company transitioned to a modified TRC test, consistent with the council, as its primary cost-effectiveness test in 2024. Since 2024, Avista has relied on the modified TRC as its primary cost-effectiveness test for evaluating existing and potential measures and programs, as well as when evaluating cost-effectiveness at the portfolio level. The modified TRC test includes all quantifiable non-energy impacts, a risk adder, and a 10 percent conservation benefit adder. All cost-effectiveness calculations assume a net-to-gross ratio of 1.0, consistent with the council's methodology.

The following table summarizes Avista's approach to calculating the four basic cost-effectiveness tests. The categorization and nomenclature provide clarity regarding each cost and benefit component. In addition to TRC and UCT cost tests, Avista also tracks the PCT and the RIM test for its natural gas program portfolio. The two latter tests provide insights into cost impacts for program participants as well as for ratepayers, which are important considerations for Avista's program designs and evaluations. Please note that some of the values within the table below represent negative values.

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SUMMARIZATION OF STANDARD PRACTICE TEST BENEFITS AND COSTS

	TRC	UCT	PCT	RIM
Benefit Components				
Avoided Cost of Utility Energy	$	$		$
Value of Non-Utility Energy Savings	$		$	
Non-Energy Impacts	$		$	
Reduced Retail Cost of Energy			$	
Cost Components				
Customer Incremental Cost	$		$	
Utility Incentive Cost		$	($)	$
Utility Non-Incentive Cost	$	$		$
Imported Funds (tax credits, federal funding, etc.)	($)		($)	
Reduced Retail Revenues				$

A summary of some of the approaches by which Avista measures these values and how they are applied within Avista's evaluation of cost-effectiveness is contained below.

> ***Avoided cost of utility energy:*** The avoided cost of electricity and natural gas is based on the results of the most recent *Integrated Resource Plan* (*IRP*) to include the valuation of several avoided costs that are somewhat unique to energy efficiency (e.g., distribution losses, the monetary cost of carbon, etc.). The cost of electric transmission and distribution (T&D) capacity benefits was adjusted to align with the seventh Power Plan, and

a $26.90 per kW-yr for 20-year levelized cost was used to bring electricity into the Avista balancing area from the mid-C market.

The electric *IRP* provides 20 years of mid-C prices for every hour of the year (8,760 hours) and system capacity benefits for generation and T&D. Different measures have different distribution of their savings of the year, so to properly value the commodity portion for individual measures the 175,200 market prices (8,760 x 20) are multiplied by the individual load shapes yielding 23 different end-use commodity-avoided costs.

To calculate the capacity value, an average of the percentage of savings on January weekdays between 7:00-12:00 and 18:00-23:00 was used to estimate the peak coincidence to be multiplied by that year's generation, transmission, and distribution capacity benefits.

The commodity and capacity benefits are summed for each year and the combined avoided costs are increased to account for avoided line loss rates.

The avoided cost of the natural gas *IRP* produces an annual and winter avoided therm value which an avoided delivery charge is added (represented by the demand portion of Schedule 150) to each.

The application of the avoided cost of energy-to-energy efficiency measures includes all interactive impacts upon the fuel specific to the measure (e.g., interactive impacts upon electric consumption by electric programs) as well as cross-fuel (e.g., interactive impacts upon natural gas usage as a result of an electric program).

Value of non-utility energy: For forms of energy not provided by the utility – such as propane or wood fuel – and for which there is no *IRP* valuation of the avoided cost, all savings are valued based on the customer's retail cost of energy.

Non-energy impacts: Impacts of efficiency measures unrelated to energy usage are incorporated into the appropriate standard practice tests to the extent that they can be reasonably quantified and externally represented to a rational but critical audience. Avista sources its NEIs from regional and national studies, and NEI values are applied with adjustment factors for the company's service territory. NEI values currently range from $0.08-$0.00002/kWh.

When Avista pays the full cost of a measure within the low-income portfolio, and includes that full cost as a customer incremental cost, the value of the baseline measure is included as a non-energy benefit as a representation of the end-use service beyond the energy efficiency impact. Those impacts that have been determined to be unquantifiable within reasonable standards of rigor consist of both benefits and costs. For example, Avista has not been able to quantify the value of comfort, preventing the company from valuing the benefit of draft reduction from efficient windows, or the increased productivity due to lighting upgrades.

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Reduced retail cost of energy: For the participant test, it is the participating customer's reduced retail cost of energy, and not the utility avoided cost of energy, that is relevant to that perspective.

Customer incremental cost: This represents the additional cost of an efficient measure or behavior above the baseline alternative. To the maximum extent possible the determination of customer incremental cost is based on alternatives that are identical in all aspects other than efficiency. When a clear comparison isn't feasible, an individualized adjustment is made to the extent possible.

Utility incentive cost: Direct financial incentives, or the utility cost of physical products or services distributed to individual customers, are transfer payments between participating and non-participating customers. The provision of program delivery services is not a transfer cost and is not incorporated into the definition of the utility incentive cost.

Utility non-incentive cost: These costs consist of all utility costs that are outside of the previously defined incentive costs. It typically consists of costs associated with the administration of the program such as labor, EM&V, training, outreach, marketing, pilot programs, conservation potential assessments, organizational memberships, etc.

Imported funds: Avista includes the value of imported funds (generally tax credits or governmental co-funding of programs) to be a reduction in the customer incremental cost of the measure for purposes of calculating the TRC test and the participant test. These funds are acquired from entities outside the ratepayer population or the individual participant.

The alternative approach to treating imported funds as an offset to the customer incremental cost is to consider these funds to be a benefit. For the purposes of Avista's cost-effectiveness objective (maximize residual net TRC benefit), there would be no mathematical difference between these two approaches.

Reduced retail revenues: For the purposes of the RIM test, the loss of retail revenue is a cost to the non-participating customer.

The means by which Avista's energy efficiency portfolio is defined for the purposes of evaluation and cost allocation is also an important part of the company's methodology. The various definitions used for the different levels of aggregation are explained below, followed by an explanation of how these are applied in the allocation of costs.

Sub-Measure: A sub-measure is a component of a measure that cannot be coherently offered without aggregating it with other sub-measures. For example, an efficient three-pan fryer couldn't be offered as part of a sensible customer-facing program if the program did not also include two-pan and four-pan fryers. Avista may offer sub-measures that fail cost-effectiveness criteria if the overall measure is cost-effective. This is the only area where Avista permits the bundling of technologies for the purposes of testing offerings against the cost-effectiveness screen. There are relatively few sub-measures meeting the criteria

specified above within the portfolio.

Measure: Measures are standalone energy efficiency options. Consequently, measures are generally expected to pass cost-effectiveness requirements barring justifiable exceptions. Exceptions include, but are not necessarily limited to, measures with market transformation value not incorporated into the assessment of the individual measure, significant non-energy benefits that cannot be quantified with reasonable rigor, and cooperative participation in larger regional programs.

Program: Programs consist of one or more related measures. The relation among the measures may be based on technology (e.g., an aggregation of efficient lighting technologies) or market segment (e.g. aggregation of efficient food service measures). The aggregation is generally performed to improve the marketability and/or management of the component measures.

Portfolio: Portfolios are composed of aggregations of programs. The aggregating factor will vary based on the definition of the portfolio. The following portfolios are frequently defined in the course of Avista's energy efficiency reporting and management:

- *Customer segment portfolio* – An aggregation of programs within a customer segment (e.g., low-income, residential, commercial/industrial).
- *Fuel portfolio* – Aggregating electric or natural gas energy efficiency programs.
- *Regular vs. low-income portfolios* – Separating income-qualified measures delivered through CAAs from the remainder of the portfolio.
- *Jurisdictional portfolio* – Aggregating programs within either the Washington or Idaho jurisdiction.
- *Local or Regional portfolio* – Aggregating all elements of the local energy efficiency portfolio vs. the regional market transformation portfolio.
- *Fuel/Jurisdictional portfolio* – Aggregating all programs within a given fuel and jurisdiction (Washington electric, Washington natural gas, Idaho electric, or the currently suspended Idaho natural gas portfolio).

Overall portfolio: Aggregating all aspects of the Washington and Idaho, electric and natural gas energy efficiency portfolio.

Methodology for Allocation of Energy Efficiency Costs

The Avista methodology for cost allocation builds from the measure or sub-measure analysis to program and ultimately portfolio analysis. At each level of aggregation, those costs that are incremental at that stage are incorporated into the cost-effectiveness analysis. Incremental customer cost and benefits are fully incorporated into measure-level analysis. Utility costs (both labor and non-labor) are currently fully incorporated within the program level of aggregation based on previous advisory group discussions regarding the company's ability to expand or contract the portfolio to meet the acquisition target. Cost allocations are made based on the expected adjusted Btu acquisition of the program, with adjustments by the relative avoided cost of electricity and natural gas (e.g., a kWh is a highly processed Btu compared with an equivalent natural gas).

Generally, little of the non-incentive utility cost (labor and non-labor) is allocated at the measure level, with the exception of programs delivered through a third-party contractor where those costs are truly incremental. Other non-incentive utility costs are allocated at the program level in the belief that the addition or elimination of programs would lead to a change in the scale of the overall portfolio, and that, therefore, these costs are incremental at the program level.

It should be noted that costs not associated with the delivery of local energy efficiency programs within the planned year are excluded from the cost-effectiveness calculations. These are termed "supplemental costs," and consist of:

- The funding associated with regional programs (NEEA)
- Cost to perform conservation potential assessment studies (CPA)
- Evaluation, Measurement, and Verification engagements (EM&V)
- Funding of low-income educational outreach programs in Idaho
- Idaho research funding and similar expenses unrelated to the planned local portfolio

Unit Energy Savings

The quantification of energy savings applicable toward achieving Washington EIA acquisition targets has been an ongoing topic of discussion since the effective date of the requirement. The company plan will create an annual locked Unit Energy Savings (UES) associated with the *Technical Reference Manual* (*TRM*) that will be updated on an annual basis. The savings will primarily be derived from the Regional Technical Forum (RTF) or previous impact evaluations.

For planning purposes, the business plan has applied the same assumptions regarding UES to the Idaho portfolio as the best current estimate of savings. However, the retrospective *Annual Conservation Report* may displace these assumptions with the results of actual impact evaluations when available and appropriate.

Analytical Methodology Applicable to Low-Income Programs

Avista has developed several analytical methodologies specific to the evaluation needs of the low-income portfolio. These include the (1) accommodation of incentive levels equal to the entire cost of the measure, including the cost of the baseline measure, and (2) the treatment and quantification of the considerable non-energy benefits incorporated within the low-income portfolio. Beyond these two rather significant analytical issues, the treatment of the low-income portfolio is similar to that applied to the other portfolios.

Except for the low-income program, Avista does not typically fully fund the customer incremental cost, and even less frequently funds the full installed cost of an end-use service. For low-income programs delivered with Avista funding in partnership with CAAs, the participating customer may receive full funding of the end-use service. There is a need to appropriately represent this expenditure within the overall energy efficiency expenditure budget, but at the same time it is necessary to recognize that only a portion of this expenditure is dedicated toward energy efficiency. The company does so by recognizing the full expenditure as a cost, but also recognizing that there is a non-energy benefit associated with the provision of base-case end-use services. The full cost less this non-energy benefit is equal to the amount invested in energy efficiency. Thus,

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the assessment of the cost-effectiveness of the energy efficiency investment is appropriately based upon the value of the energy savings of the efficient measure in comparison to this incremental cost. In situations where a measure might be found cost-effective under one fuel, it will be reimbursed at the full cost for both fuels.

Avista has also defined the expenditure of non-energy health and safety funds as a non-energy benefit (on a dollar-for-dollar basis). This quantification is based on the individual assessment of each of these expenditures by the CAA prior to the improvements being made. This approval process provides reasonable evidence that the improvements are worth, at a minimum, the amount that has been expended upon them through CAA funds.

As a consequence of these two assumptions, the low-income portfolio accrues considerable non-energy benefits.

The administrative reimbursement permitted to the CAA is considered to be a component of the measure cost. This amount reimburses the CAA for back-office costs that would, in a typical trade ally bid, be incorporated into the project invoice. For 2026, the admin reimbursement is 30 percent of the total allocated amount per agency.

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Appendix C – Natural Gas Program Summary

Program	Therm Savings	Estimated Budget
Low-Income Programs		
Low-Income Programs	27,000	$2,435,651.43
Total Low-Income Programs	**27,000**	**$2,435,651.43**
Residential Programs		
Residential Prescriptive	63,669	$2,068,676.00
Midstream	253,605	$1,889,916.81
ENERGY STAR Homes	134	$600.00
Appliances	976	$9,350.00
Total Residential Programs	**318,384**	**$3,968,542.81**
Commercial/Industrial Programs		
Commercial Prescriptive	40,012	$302,030.12
Site-Specific	175,000	$401,349.58
Midstream	141,440	$430,897.75
Building Operator Certification	2,820	$400.00
Total Commercial/Industrial Programs	**359,272**	**$1,134,677.44**
Other Program and Administrative		
NEEA	3,734	$551,691.00
CPA, EM&V	–	$78,322.12
Third Party Implementation	–	$318,657.33
Labor, Marketing, General Implementation	–	$458,442.40
Pilot Programs	–	$410,077.50
Total Other Program and Administrative	**3,734**	**$1,817,190.35**
Total Natural Gas Budget	**708,390**	**$9,356,062.02**

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Appendix D – NEEA Electric Savings Forecast

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Memorandum

8/13/2025

TO: Nicole Hydzik, Director of Energy Efficiency, Avista Utilities; Meghan Pinch, Manager of Program Managers, Avista Utilities; Kim Boynton, Manager of Planning and Analytics, Avista Utilities

FROM: Christina Steinhoff, Principal Analysis Manager

CC: Becky Walker, Chief Program Officer; Stephanie Rider; Director Portfolio Management, Data Strategy and External Reporting, Nathan Martinez, Director, Market Analytics, Research and Evaluation; Virginia Mersereau, Vice President of Corporate Strategy and Communications

SUBJECT: 2026-2027 Electric Savings Forecast Final

NEEA is an alliance of utilities and energy efficiency organizations that pools resources and shares risks to transform markets toward energy efficiency that benefits consumers in the Northwest. The alliance works together to accelerate the innovation and adoption of energy-efficient products, services, and practices in the Northwest. By pooling together regional resources, NEEA:

- Conducts research and energy use analysis, market characterization studies, and stock assessments to help the region identify the best efficiency opportunities and inform utilities resource planning efforts,
- Defines and executes program strategies to remove market barriers leading to increased adoption of the most energy efficient products available,
- Builds relationships with midstream supply chain partners such as distributors, retailers, and trade allies to collect regional data and build market capability and infrastructure to increase availability within the Northwest of the most efficient products,
- Leverages relationships with the Department of Energy, trade allies, and national and regional manufacturers to identify and advance new efficient technologies, product designs, test procedures, product specifications and standards to increase the availability and demand for energy-efficient products, services and practices,
- Gathers, cleans, and analyzes sales, shipment, and distributor data to track markets and inform regional investment decisions.

NEEA's end goal is to make energy efficiency a self-sustaining standard of practice in markets.

Utilities, energy efficiency administrators, and the Regional Technical Forum (RTF) all benefit from NEEA's work through knowledge sharing, the development of new energy efficiency measures, and the resulting

market changes that lead to energy savings. Avista Washington, Puget Sound Energy, and Pacific Power have developed a joint approach to calculate savings from these NEEA initiatives. As part of the utilities' biennium savings updates, NEEA provides a two-year electric energy savings forecast. This memo provides a final forecast for 2026-2027.

Appendix A documents NEEA's methodology to estimate savings. Details about baseline and technical assumptions are in the attached Excel spreadsheet.

Please contact Christina Steinhoff at csteinhoff@neea.org with any questions about this report.

2026-2027 Forecast

NEEA forecasts that Avista Utilities' Washington will achieve 1.7 (1.4-2.1) aMW of savings during the 2026-2027 biennium. These savings are above the *2021 Power Plan baseline* and come from NEEA programs such as Heat Pump Water Heaters, High Performance HVAC, Retail Products Portfolio, XMP Pumps, and New Construction. NEEA allocates the savings using the funder's share of NEEA's budget for programs and the share of customers/sales for state building energy code. The values are additional to savings claimed by the Bonneville Power Administration, Energy Trust of Oregon, and local utilities. The values exclude programs in development such as High-Performance Heat Pumps, Extended Motor Products-Fans, and expansion of new energy efficiency measures in the Retail Products Portfolio.

Table 1: 2026-2027 Electric Savings Forecast (aMW, first-year, at site)

Sector	2026	2027	Total
Residential	0.65	0.70	1.35
Commercial	0.15	0.20	0.35
Industrial	0.00	0.00	0.00
Total	**0.80** *(0.6-1.0)*	**0.90** *(0.7-1.1)*	**1.70** *(1.4-2.1)*

Appendix A: Methodology

Background

Avista Washington, Puget Sound Energy, and Pacific Power developed a joint approach[1] to calculate energy savings from NEEA initiatives. As part of the utilities' biennium savings updates, NEEA provides a two-year electric energy savings forecast. The utilities subtract the savings from their conservation forecast to develop their Biennium Conservation Target. The following sections explain how NEEA calculates the savings.

Savings Rates

The 2026-2027 forecast uses:

- Savings rates and technical assumptions from the RTF prior to Aug. 1, 2025.
    - If RTF savings rates are not available, the report uses savings rates from the *2021 Power Plan*.
        - If those rates are not available, NEEA will calculate savings rates based on the *2021 Power Plan* baseline assumptions.

Table 2 lists the savings rates sources. The attached spreadsheet contains references and additional information regarding the savings rate calculations.

[1] The utilities agreed that NEEA would develop a Total Regional Savings estimate using baseline and technical assumptions from the most recent Power Plan. NEEA would remove estimated savings counted by the utilities, the Bonneville Power Administration and the Energy Trust of Oregon. NEEA would allocate the remaining savings to the utilities based on their NEEA funder share percentage.

Table 2: Forecasted Savings Rate Sources for 2026-2027

Program	Source
Ductless Heat Pumps	RTF. 2024. Residential Ductless Heat Pump on Forced Air Furnace v5.2. RTF. 2024 Residential DHP for Existing Zonal v7
Extended Motor Products (Residential)	RTF. 2026. Circulator Pumps v4.1
Heat Pump Water Heaters	RTF. 2022. ResHPWH_v6_2.xlsm
Manufactured Homes	RTF. 2024. ResMHNewHomesandHVAC_v6_0.xlsm.
Refrigerators/Freezers	RTF. 2024. ResRefrigeratorsAndFreezers_v7_2.xlsm
Clothes Washers	RTF. 2023. ResClothesWAshers_v8_1.xlsm
Clothes Dryers	ResClothesDryers_v5_1.xlsm
Televisions	TRC Engineers. 2021. Baseline Assumptions Review.
Extended Motor Products (Commercial)	-RTF. April 18, 2022. Efficient Pumps v 3.0 (CL Savings) -RTF. Jun 14, 2017. Efficient Pumps v 1.1 (CL->VL Savings)
High Performance HVAC	Red Car Analytics. 2022. Analysis of Expanded Efficiency Parameters for Very High Efficiency DOAS
Luminaire Level Lighting Controls	-RTF. 2023. NonResidentialLighting_CSFandHOU_v3.1.xlsx
Residential New Construction	NEEA uses the Regional Technical Forum's (RTF) SEEM model to estimate a code-to-code savings rate.
Heat Pump Water Heaters	RTF. 2022. ResHPWH_v6_2.xlsm
Uninterruptible Power Supplies	Cadeo Group. 2021. C&R UPS Standards Model. Available upon request.
Commercial New Construction	NEEA uses values from whole-building energy modeling in an EnergyPlus simulation.

For comparison against the forecast, NEEA will update the savings rates if:

- The RTF makes an update after Aug. 1[2] of the year prior to the Biennium (e.g., 2025) and before Oct. 1 of the first year of the biennium (e.g. 2026); then, NEEA will update the forecast for the second year (e.g., 2027) with the new RTF savings rate.
- The UES is weighted based on tracked units (e.g., commercial building type, installs by climate zone, etc.).
- Or NEEA finalized savings analysis after the forecast was established.

Avoiding Double Counting

NEEA avoids double counting savings claimed through local utility programs by surveying the Bonneville Power Administration, Energy Trust of Oregon, and local utilities about their programs. NEEA multiplies the savings rate and baseline saturation assumptions in this report by the units to forecast local program savings. The regional savings minus the local program savings are the savings NEEA reports to the Washington investor-owned utilities.

Allocation

NEEA allocates the savings using funder shares. The shares vary based on the funding cycle. Savings from previous investments receive the previous funder share. Savings from current investments receive the current funder share. Table 3 shows the funder shares.

[2] Moved from Sept. 1 because NEEA provided the forecast in August 2025.

Table 3:Funder Share

Business Plan	Funding Share
2025-2029	4.07%
2020-2024	3.95%
2015-2019	4.04%

Because NEEA tracks building energy codes at the state level, NEEA is only reporting code savings for the State of Washington. NEEA distributes the Washington code savings based on the utility's share of the state residential customers (residential codes) and commercial energy sales (commercial codes) from the Energy Information Administration (EIA-861). Table 4 shows the resulting allocation shares. This approach is more reflective of the energy savings directly affecting the Washington investor-owned utility.

Table 4: Allocation Share for State Building Codes

State	Sector	Share
Washington	Residential	7.36%
	Commercial	7.61%
Oregon	Residential	0.00%
	Commercial	0.00%
Idaho	Residential	0.00%
	Commercial	0.00%
Montana	Residential	0.00%
	Commercial	0.00%

Appendix E – NEEA Natural Gas Savings Forecast

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Memorandum

August 29, 2025

TO: Nicole Hydzik, Director of Energy Efficiency, Avista Utilities; Meghan Pinch, Manager of Program Managers, Avista Utilities; Kim Boynton, Manager of Planning and Analytics, Avista Utilities

CC: Becky Walker, Chief Program Officer; Stephanie Rider; Director Portfolio Management, Data Strategy and External Reporting, Nathan Martinez, Director, Market Analytics, Research and Evaluation; Virginia Mersereau, Vice President of Corporate Strategy and Communications

FROM: Christina Steinhoff, Principal Analysis Manager

SUBJECT: 2026-2027 Natural Gas Savings Forecast

NEEA is an alliance of utilities and energy efficiency organizations whose purpose is to pool resources and share risks to transform the market for energy efficiency to the benefit of all consumers in the Northwest. NEEA works with all parts of the market to deliver energy efficiency to Northwest consumers by:

- Gathering and analyzing data to inform, market transformation efforts, regional power planning and utility programs.
- Leveraging its relationships with mid and upstream market actors like manufacturers and retailers to influence their business practices by making the case for efficiency.
- Improving how products are tested and perform in real life applications.

One outcome of NEEA's work is energy savings. NEEA provides annual tracking and reporting of energy savings resulting from the long-term market transformation efforts. As such, Avista Utilities has asked NEEA to provide a two-year energy savings forecast to support setting its 2026-2027 Biennial Conservation Target.

Appendix A documents NEEA's methodology.

Please contact Christina Steinhoff at csteinhoff@neea.org with any questions about this report.

2026-2027 Forecast

NEEA's current forecast reflects savings streams from programs in the implementation portion of its portfolio. In 2024, NEEA's Natural Gas Board of Directors asked NEEA to redirect its portfolio in response to House Bill 1589, which is a bill that restricts incentive activities in residential markets for certain utilities in Washington. NEEA pivoted its investment strategy in response, focusing on four key categories:

1. Commercial gas technologies
2. Fuel-neutral opportunities

3. Dual-fuel technologies and systems
4. Advancing building codes and product standards

In addition, investment in NEEA will continue to create value through regional stock assessments and collaboration activities.

NEEA's current portfolio development efforts remain in line with its board's direction. The organization is making solid progress toward building out the gas portfolio in the early years of the 2025-2029 funding cycle. However, the shift to a different set of market transformation opportunities is creating a delay in the development of the gas portfolio and the resulting energy savings to report in this forecast window.

NEEA has two programs in the portfolio—Efficient Rooftop Units and Advanced Commercial Water Heaters—that are in early development state and, at this point, are difficult to forecast funder-level savings. NEEA expects savings above the forecast provided below based on site-level demonstration and adoption efforts in both the Advanced Commercial Water Heating and Efficient Rooftop Unit programs, respectively. If your utility is aware of locations that would benefit from these technologies, please reach out to NEEA staff. NEEA also expects two additional programs to advance in its portfolio within the next few months. These programs include dual-fuel residential HVAC and High Efficiency Dedicated Outdoor Air System.

Given the change in focus on commercial opportunities and that many projects are in early demonstration stages, NEEA's forecast is limited to advancement in building energy codes, state standards and insights into the market adoption of efficient rooftop units. Based on these savings sources, NEEA is forecasting that it will report 13,800 therms of savings to Avista Utilities Washington in 2026-2027 (Table 1). To avoid double counting, the values are in addition to a forecast of savings that the Energy Trust of Oregon and local utilities could claim through their programs.

Table 1: Savings Forecast (therms)

		2026	2027	Total
Total		**6,600***	**7,200***	**13,800***
Programs	Efficient Rooftop Units	900	1,500	2,400
	Gas High Performance DOAS	TBD	TBD	TBD
	Residential Dual-Fuel HVAC	TBD	TBD	TBD
Codes & Standards	Commercial Kitchen Equipment	3,100	3,200	6,300
	Residential New Construction	TBD	TBD	TBD
	Commercial New Construction	2,600	2,500	5,100

Note: The savings are above NEEA's market transformation baseline and are net of savings claimed through utility programs (Appendix A). Values are rounded. The codes savings forecasts are dependent on the effects of the 2021 Washington State Energy Code. NEEA is reviewing what gas technology pathways are available under the new building energy code.

* NEEA will update these values as it continues to progress in the new portfolio efforts and gather data and insights to inform the forecast.

Appendix A: Methodology to Forecast Savings

Baseline and Technical Assumptions

This report follows NEEA's method of measuring gas energy savings from market transformation efforts. The baseline is an estimate of the market adoption without intervention by NEEA, the Energy Trust of Oregon, utilities, and other partners. The technical assumptions come from third-party research including NEEA-contracted research and the Regional Technical Forum.

Avoiding Double Counting

NEEA avoids double counting savings by surveying the local utilities about their programs. This report has a forecast of local program units that it uses to avoid over-reporting savings. NEEA multiplies the savings rate and baseline saturation assumptions by the units to forecast local program savings. The regional savings minus the local program savings are the savings NEEA reports.

Allocation Methodology

NEEA allocates code savings for gas measures using a service-territory approach. The approach uses Energy Information Administration's data on residential consumer accounts for residential codes and commercial sales estimates for commercial codes (Table 2).

Table 2: State Code Savings Allocation Share

Sector	WA	OR	ID
Residential	12.65%	0.00%	0.00%
Commercial	15.82%	0.00%	0.00%

For voluntary programs, NEEA allocates regional savings (Idaho, Oregon, and Washington) using shares of investment by funder (Table 3).

Table 3: Funder Shares Savings Allocation

Business Plan	Gas Funding Share
2025-2029	7.81%

Appendix F – 2024-2025 Compliance Record

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2024-2025 Compliance Record					
Source	Docket	Ref	Language	Condition Met	Notes
BCP - E	UE-230897	1a	The following conservation targets are approved for Avista, with conditions pursuant to RCW 19.285.040(1)(e) and WAC 480-109-120(1). This approval is subject to the Conditions described in Paragraphs (2) through (13) below. i) Ten-Year Potential: 317,000 megawatt-hours. ii) Two-Year EIA Target: 63,374 megawatt-hours. iii) Two-Year EIA Penalty Threshold: 47,635 megawatt-hours. iv) Two-Year Decoupling Penalty Threshold: 3,169 megawatt-hours, pursuant to Order 5 in Docket UE-140188. v) Total Two-Year Utility Conservation Goal: 66,543 megawatt-hours.	NA	Avista continues to pursue its stated targets.
BCP - E	UE-230897	1b	The Commission approves the above targets and thresholds as measured at the customer meter. All planning and reporting must include savings data as measured at the customer meter.	NA	All planning and reporting includes savings data as measured at the customer meter.
BCP - E	UE-230897	1c	As part of Avista's biennial conservation acquisition efforts, Avista must continue to invest in regional studies and market transformation, in collaboration with funding from other parties and with other strategic market partners in this biennium that complements Avista's energy efficiency programs, planning, services, and measures.	Yes	Avista continues to partner with NEEA on market transformation efforts.
BCP - E	UE-230897	2	Nothing in these conditions relieves Avista of the sole responsibility for complying with RCW 19.285 and WAC 480-109. Specifically, the conditions regarding the need for a high degree of transparency, and communication and consultation with external stakeholders, diminish neither Avista's operational authority nor its ultimate responsibility.	Yes	Avista continues to retain responsibility for compliance with all applicable RCWs and WACs.
BCP - E	UE-230897	3a	To meet the requirements of WAC 480-109-110, Avista must continue to use its Advisory Group, initially created under Docket UE-941377, and its Integrated Resource Planning Advisory Group as described under WAC 480-100-630.	Yes	EEAG: Feb. 27, 2024; May 16, 2024; Aug. 13, 2024; Oct. 15, 2024; Mar. 4, 2025; May 13, 2025; Jun. 25, 2025; Aug 25, 2025; Oct 21, 2025; TAC (electric): Jan. 30, 2024; Mar. 21, 2024; Apr. 9, 2024; Apr. 23, 2024; May 7, 2024; May 21, 2024; Jun. 4, 2024; Jun. 18, 2024; Jul. 30, 2024; Aug. 13, 2024; Sep. 17, 2024; TAC (natural gas): Feb. 14, 2024; Apr. 24, 2024; May 15, 2024; Jun. 5, 2024; Jun. 26, 2024; Jul. 17, 2024; Aug. 21, 2024; Sep. 25, 2024; Nov. 19, 2024; Jan. 9, 2025; Jan. 22, 2025.

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BCP - E	UE-230897	3b	Avista must notify Advisory Group members of all public meetings scheduled to address Avista's Integrated resource plan. Avista must also coordinate a meeting with Advisory Group members and the entity conducting the conservation potential assessment (CPA) addressing the scope and design of the CPA. Such a meeting must address the assumptions and relevant information utilized in the development of Avista's integrated resource plan as they apply to the development and/or modification of the ten-year conservation potential. This meeting must be held early enough in the integrated resource plan public process to incorporate the group's advice. Avista must notify Advisory Group members of IRP Advisory Group meetings that present the Company's natural gas and energy price forecasts and generation resource cost assumptions used in the development of the Company's integrated resource plan, as these assumptions will inform the ten-year conservation potential.	Yes	Avista's EEAG was notified for all meetings pertaining to the CPA and IRP; AEG presented CPA to EEAG on June 25, 2025.
BCP - E	UE-230897	3c	Avista must consult with the Advisory Groups starting no later than July 1, 2025, to begin to identify achievable conservation potential for 2026-2035 and to begin to set annual and biennial targets for the 2026-2027 biennium, including necessary revisions to program details and the quadrennial 2026-2029 CEIP target. See RCW 19.285.040(1)(b); WAC 480-109-120; and WAC 480-100-640(11).	Yes	Avista held a meeting for this purpose on June 25, 2025.
BCP - E	UE-230897	3d	Avista must inform the Advisory Group members when its projected expenditures indicate that Avista will spend more than 120 percent or less than 80 percent of its annual conservation budget.	Yes	Avista discussed current budget and tariff rider balances at its May 13, 2024 and May 13, 2025 EEAG meetings.
BCP - E	UE-230897	3e	If Avista believes that an event beyond its reasonable control has occurred that may prevent it from meeting its combined EIA Penalty Threshold and Decoupling Penalty Threshold, Avista will confer with the Advisory Group members as soon as possible to determine a path forward. See RCW 19.285.040(1)(e) and RCW 19.285.060(2).	Yes	Avista has facilitated multiple conversations with its EEAG on this topic, starting at the EEAG fall meeting on October 11, 2022. The topic was discussed again on at the Spring meeting on May 23, 2023, then a third time on October 18, 2023.
BCP - E	UE-230897	3f	Prior to filing the 2026-2027 *Biennial Conservation Plan* , Avista must provide the following information to the Advisory Group: draft ten-year conservation potential, revised four-year target, and two-year target by August 1, 2025; draft program details, including budgets, by September 1, 2025; and draft program tariffs by October 2, 2025.	Yes	Avista shared this information during EEAG meetings held on June 25, 2025, and August 25, 2025.
BCP - E	UE-230897	4	Avista must provide its proposed budget in a detailed format with a summary page indicating the proposed budget and savings levels for each conservation program, and subsequent supporting spreadsheets providing further detail for each program and line item shown in the summary sheet. Avista must allocate a reasonable amount of its program budget (as determined through consultation with the Advisory Group) towards pilot programs, research, and data collection.	Yes	This information is included in Avista's 2025 *ACP* and in the 2026-2027 *BCP*.
BCP - E	UE-230897	5	Avista must maintain its conservation tariffs, with program descriptions, on file with the Commission. Program details about specific measures, incentives, and eligibility requirements must be filed and updated in this docket. Avista must notify the Advisory Group when it files updated measures, incentives, or eligibility requirements.	Yes	Avista's conservation tariffs remain on file with the commission and are updated as needed, in consultation with the EEAG.

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BCP - E	UE-230897	6a	Avista has identified several potential conservation measures described in the BCP. The Commission is not obligated to accept savings identified in the BCP for purposes of compliance with RCW 19.285.	NA	NA
BCP - E	UE-230897	6b	When Avista proposes a new or significant change to a program, pilot, or tariff schedule, it must present the program to the Advisory Group with program details fully defined, to the extent practicable. After consultation with the Advisory Group in accordance with WAC 480-109-110(1)(h), the Advisory Group may advise if a revision to the Conservation Plan in this docket is necessary.	Yes	Avista consulted with its EEAG on all new programs introduced in 2022 and 2023 including the Small Business Lighting direct install program, the Midstream program, the Contractor Incentive program, On-Bill Repayment, Home Energy Audits, Pay for Performance, Fleet Heat and Compressed Air, Appliance and HVAC Controls, and the Clean Buildings Accelerator Program, as well as the Conservation Voltage reduction initiative . Avista also consulted with its EEAG on proposed incentive increases for residential windows and, commercial insulation, and commercial prescriptive lighting measures during its Fall 2022 meeting on October 12.
BCP - E	UE-230897	6c	Avista must spend a reasonable (as determined through consultation with the Advisory Group) amount of its conservation budget on evaluation, measurement, and verification (EM&V), including a reasonable proportion on independent, third-party EM&V. Avista must perform EM&V annually on a maximum four-year schedule of selected programs such that, over the EM&V cycle, all major programs are covered. The EM&V function includes impact, process, market, and cost test analyses. The results must verify the level at which claimed energy savings have occurred, evaluate the existing internal review processes, and suggest improvements to the program and ongoing EM&V processes.	Yes	Avista procured an independent third-party EM&V vendor to perform impact and process evaluations, as well as cost effectiveness analysis, for Avista's program portfolio. Results from this EM&V are contained within the 2022-2023 BCR.

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BCP - E	UE-230897	6d	An independent third party must review portfolio-level electric energy savings reported by Avista for the 2022-2023 biennial period, from existing conservation programs operated during that period, per WAC 480-109-120(4)(b)(v). The review will be funded by Avista's Electric Service Conservation Rider. The review will be managed jointly by Commission Staff and Avista staff with input on the scope, cost, RFP development, reviewer selection, and ongoing oversight by the Advisory Group. The independent third-party reviewer must be selected through an RFP process and is intended to: i) Verify the calculation of total portfolio MWh savings; and ii) Provide a review of EM&V activities and application for best practices and resonable findings, which include the following: (1) Validate the adequacy of Avista's savings verification process, controls and procedures. (2) Validate savings tracking and reporting processes and practices. (3) Review program process and impact evaluations completed during the biennium for appropriateness of evaluation approach/methodologies (program specific) and program cost-effectiveness calculations.	Yes	Avista contracted with ADM to perform this scope of work.
BCP - E	UE-230897	6e	A final report for the entire 2024-2025 biennium may be implemented in phases and delivered as a final product at an earlier date, as needed, by Avista.	In progress	Avista filed its 2024 *ACR* on May 30, 2025. Avista will file its 2025 *ACR* , as well as its 2024-2025 *BCR* on or before June 1, 2026.
BCP - E	UE-230897	7a	Modifications to the programs must be filed with the Commission as revisions to tariffs or as revisions to Avista's current Conservation Plan, as determined in consultation with the Advisory Group.	Yes	Avista consulted with its EEAG on all new programs introduced in 2022 and 2023 including the Small Business Lighting direct install program, the Midstream program, the Contractor Incentive program, On-Bill Repayment, Home Energy Audits, Pay for Performance, Fleet Heat and Compressed Air, Appliance and HVAC Controls, and the Clean Buildings Accelerator Program, as well as the Conservation Voltage reduction initiative .
BCP - E	UE-230897	7b	Incentives and Conservation Program Implementation — Programs, program services, and incentives may be directed to consumers, retailers, manufacturers, trade allies or other relevant market actors as appropriate for measures or activities that lead to electric energy savings. Avista must work with the Advisory Group to establish a balanced portfolio of measures that provides savings from a variety of savings types and meets the needs of a broad spectrum of Avista customers.	Yes	No new action beyond what has been discussed with its EEAG and/or filed in a plan or report.

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BCP - E	UE-230897	7c	Conservation Efforts without Approved EM&V Protocol — Avista may spend up to 10 percent of its conservation budget on programs whose savings impact has not yet been measured, if the overall portfolio of conservation passes the primary cost-effectiveness test used by the Commission. These programs may include information-only, and pilot projects. Avista may ask the Commission to modify this spending limit, following Advisory Group consultation. i) Information-only services refers to those information services that are not associated with an active incentive program or that include no on-site technical assistance or on-site delivery of school education programs. Information-only services and behavior change services must be assigned no quantifiable energy savings value without full support of the Advisory Group. ii) If quantifiable energy savings have been identified and Commission-approved for any aspect of such programs, the budget associated with that aspect of the program will no longer be subject to this 10 percent spending restriction.	Yes	Details regarding information-only or pilot projects was reported within Avista's *2024 ACR* (May 30, 2025), with further reporting of expenditures related to such programs in its *2025 ACR* (to be filed by June 1, 2026).
BCP - E	UE-230897	8a	The Commission currently uses a modified Total Resource Cost Test (TRC), consistent with the Council, as its primary cost-effectiveness test. The modified TRC test includes all quantifiable nonenergy impacts (NEIs), a risk adder, and a 10 percent conservation benefit adder. Avista's portfolio must pass the modified TRC test. All cost-effectiveness calculations will assume a Net-to-Gross ratio of 1.0, consistent with the Council's methodology.	Yes	This is a standard practice for Avista's cost-effectiveness calculation framework.
BCP - E	UE-230897	8b	Avista must also provide calculations of the Program Administrator Cost Test (also called the Utility Cost Test) as described in the National Action Plan for Energy Efficiency's study "Understanding Cost-Effectiveness of Energy Efficiency Programs" (November 2008), located at: https://www7.eere.energy.gov/seeaction/system/files/documents/understanding-cost-effectiveness-ee-programs.pdf.	Yes	Avista includes these calculations as a standard element of its cost effectiveness calculation framework.
BCP - E	UE-230897	8c	Conservation-related administrative costs must be included in portfolio-level analysis.	Yes	Included.
BCP - E	UE-230897	9a	Avista must demonstrate progress toward sustained energy burden reductions during the 2024-2025 biennium by, at a minimum, funding all eligible and cost-effective low-income conservation measures, consistent with RCW 19.405.120. i) Avista's biennial report must include the contribution of low-income conservation programs toward sustained energy burden reductions. The report must include the number of participants and any other information that demonstrates progress as described above. The utility should include a discussion of barriers to success, options for overcoming these barriers, and potential uses for increased low-income conservation funding. ii) Energy savings for low-income conservation measures will be counted toward conservation goals. iii) Avista may, after consultation with advisory groups, fully fund repairs, administrative costs, and health and safety improvements associated with cost-effective low-income conservation measures. These costs are excluded from portfolio cost-effectiveness calculations. Avista shall maintain a project cost allowance of thirty percent (30%) for Administrative/Indirect Rate associated with the delivery of low-income conservation measures.	Yes	Avista has met conditions i) and ii) through its inclusion of low-income programs in its plans and reports. Avista has met condition iii) by fulling funding repairs, administrative costs, and health and safety improvements as described.

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BCP - E	UE-230897	9b	Avista must continue to consider how and whether existing conservation programs serve the highly impacted communities and vulnerable populations identified in its CEIP. In addition, Avista must continue to adjust existing conservation programs or design new programs and offerings so that the portfolio of programs ensures an improvement in the equitable distribution of energy and nonenergy impacts to the same communities identified in its CEIP. See WAC 480-100-640(4).	Yes	Avista has designed a portfolio of programs to serve the needs of Named Communities and funds them through its Named Communities Investment Fund. In 2023, Avista began reporting on the extent to which existing conservation programs serve Named Communities, as well as CBIs that efficiency-specific actions impact.
BCP - E	UE-230897	10a	Avista must continue to evaluate opportunities for location-targeted programs that provide non-wires alternatives to eliminate or delay the need for distribution system investments. i) If Avista pursues such research, evaluation, and/or outreach, it should detail the research and evaluation results and outreach efforts in its conservation reporting.	Yes	The Connected Communities Program, which is described within the *BCP,* the *ACP* , and the *ACR* , explores opportunities to serve customers in Avista's territory with non-wires alternatives.
BCP - E	UE-230897	11a	During this biennium, Avista must continue to demonstrate progress towards identifying, researching, and properly valuing NEIs. The NEIs considered must include the costs and risks of long-term and short-term public health benefits, environmental benefits, energy security, and other applicable NEIs. In consultation with the Company's conservation, equity, and resource planning advisory groups, NEIs and risks must be included in the next *Biennial Conservation Plan* and *Conservation Potential Assessment* .	Yes	Avista partnered with DNV to conduct NEI studies, including a gas transport customer NEI study to inform program design for Avista's natural gas transport customers in WA. NEIs have been incorporated within the CPA and the 2026-2027 *BCP* where possible/ quantifiable. NEI studies were discsused with the EEAG during its Fall 2022 and Fall 2023 meetings.
BCP - E	UE-230897	11b	Avista must continue to identify the discrete NEIs and the monetized value used in cost-effectiveness testing for each electric conservation program. This must be provided in a detailed format with a summary page and subsequent supporting information in a spreadsheet or any alternate format that is adequately transparent, subject to approval by Commission Staff, in native format with formulas intact, providing further detail for each program and line item shown in the summary sheet in annual plans and reports. Such identification and evaluation of NEIs should be completed, at minimum, on a biennial basis beginning in 2025, to allow time for appropriate contracting and financing of this work.	Yes	This information was included in Avista's 2024 *ACR* , and will be included in its 2025 *ACR* as well as its 2024-2025 *BCR*.
BCP - E	UE-230897	11c	Avista must continue to identify the forecasted distribution of energy and nonenergy impacts in annual plans and reports. This reporting must use currently quantified NEIs as well as values and estimates of additional impacts as they become available. See WAC 480-100-640(3)(a)(i).	Yes	Avista has been meeting this condition beginning with its 2024 *ACP*.

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BCP - E	UE-230897	12a	Scope of Expenditures — Funds collected through the Electric Conservation Service Rider must be used on approved conservation programs and their administrative costs. Additionally, Rider funds may be used for other purposes when they have a benefit to Avista customers and are approved by the Commission.	Yes	No action needed.
BCP - E	UE-230897	12b	Recovery for Each Customer Class — Rate spread, and rate design must match Avista's underlying base volumetric rates.	NA	Standard practice for Avista's energy efficiency tariffs.
BCP - E	UE-230897	12c	Recovery of costs associated with distribution and production efficiency initiatives are not funded through the Electric Conservation Tariff Rider because these programs are not customer conservation initiatives. These are company conservation programs. As such, these costs are recovered in the general rate-making process over time and may be requested through a general rate case, a deferred accounting petition or other allowed mechanism. The method of cost recovery in no way diminishes its obligation as required in RCW 19.285 and WAC 480-109.	Yes	Avista does not recover any costs associated with distribution and production efficiency initiatives through the electric conservation tariff rider.
BCP - E	UE-230897	12d	Avista must file revisions to its cost recovery tariff (Schedule 91) by June 1 each year, with the requested effective date of August 1 of that same year.	Yes	See dockets UE-240216 and UE-250417 for Avista's approved Schedule 91 cost recovery adjustment filings for 2024 and 2025, respectively.
BCP - E	UE-230897	13a	Avista must continue to pursue cost-effective conservation in the form of reduction in electric power consumption resulting from increases in the efficiency of energy used at electric power production facilities it owns in whole or in part. Avista's Annual Report must include updates regarding production efficiency activities in power production facilities operated by Avista and, to the extent practicable, facilities wholly or partially owned by Avista that are not operated by the Company.	Yes	Avista is in regular contact with its generation and plant managers to determine if any projects at Avista owned or managed plants or facilities are planned. There were several reconductering and Clean Buildings Act projects completed in 2024. Avista will continue to monitor these plans and will share information as it becomes available.
BCP - E	UE-230897	13b	To avoid double-counting of efficiency savings achieved at electric power production facilities owned in whole or in part by Avista, the Company must consult with the Advisory Group when developing or modifying its protocol for how savings will be claimed.	Yes	NA
BCP-G	UG-230898	1a	The following conservation targets are approved for Avista Company, with conditions according to RCW 80.28.380. This approval is subject to the Conditions described in Paragraphs (2) through (14) below. i) *Two-Year Conservation Target:* 1,812,463 therms. ii) *Two-Year Decoupling Commitment:* 90,623 therms, pursuant to Order 5 in Docket UG-140189. iii) *Total Two-Year Utility Conservation Goal* : 1,903,086 therms.	NA	Avista continues to pursue its stated targets.
BCP-G	UG-230898	1b	As part of Avista's biennial conservation acquisition efforts, Avista must continue to invest in regional studies and market transformation, in collaboration with funding from other parties and with other strategic market partners in this biennium that complements Avista's energy efficiency programs, planning, services, and measures.	Yes	Avista continues to partner with NEEA on market transformation efforts.

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BCP-G	UG-230898	2	Nothing in these conditions relieves Avista of the sole responsibility for complying with RCW 80.28.380. Specifically, the conditions regarding the need for a high degree of transparency, and communication and consultation with external stakeholders, diminish neither Avista's operational authority nor its ultimate responsibility.	NA	NA
BCP-G	UG-230898	3a	*Ten-year conservation potential*. Every two years, Avista must project its cumulative ten-year conservation potential in a conservation potential assessment (CPA). i) This projection must consider all conservation resources that are cost-effective and available. ii) Methods for identifying conservation potential: (1) In identifying conservation potential Avista must be consistent with the methodologies used by the Northwest Power and Conservation Council (NWPCC) as summarized in this subsection. (a) Technical potential. Determine the amount of conservation that is technically feasible, considering measures and the number of these measures that could physically be installed or implemented, without regard to achievability or cost. (b) Achievable technical potential. Determine the amount of the conservation technical potential that is available within the planning period, considering barriers to market penetration and the rate at which savings could be acquired.	Yes	Avista has followed the processes described herein. See UG-230469 for Avista's CPA.
BCP-G	UG-230898	3a cont.	(c) Economic achievable potential. Establish the economic achievable potential, which is the conservation potential that is cost-effective, by comparing the total resource cost of conservation measures to the cost of other resources available to meet the expected demand for gas. A utility may use either of the following approaches to identify achievable economic potential: (i) Integrated portfolio approach. A utility may analyze, as a part of its integrated resource plan (IRP), the cost-effective potential of conservation resources over a range of potential future outcomes for unknown variables, such as future demand, costs, and resource availability. The achievable economic potential will be based on a resource plan that achieves a long-run lowest reasonable cost gas system considering all costs and quantifiable nonenergy costs and benefits. (ii) Benefit-cost ratio approach. A utility may establish economic achievable potential as those conservation measures or programs that pass a total resource cost test, in which the ratio of total benefits to total costs is one or greater. The benefit-cost calculation must use inputs that incorporate the cost of risks that would otherwise be reflected in an integrated portfolio approach.	Yes	Avista has followed the processes described herein. See UG-230469 for Avista's CPA.

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BCP-G	UG-230898	3a cont.	(d) Total resource cost. In determining economic achievable potential as provided in (c) of this subsection, perform a life-cycle cost analysis of measures or programs to determine the net levelized cost, as described in this subsection: (i) Conduct a total resource cost analysis that assesses all costs and all benefits of conservation measures regardless of who pays the costs or receives the benefits. (ii) Include the incremental savings and incremental costs of measures and replacement measures where resources or measures have different measure lifetimes. (iii) Calculate the value of the gas saved based on when it is saved. In performing this calculation, use time-differentiated avoided costs to conduct the analysis that determines the financial value of gas saved through conservation. (iv) Include the increase or decrease in annual or periodic operations and maintenance costs due to conservation measures. (v) Include avoided energy costs equal to a forecast of regional market prices plus variable transportation costs (e.g., fuel and variable charges), which represents the cost of the next increment of gas available to the utility for the life of the energy efficiency measures to which it is compared.	Yes	Avista has followed the processes described herein. See UG-230469 for Avista's CPA.
BCP-G	UG-230898	3a cont.	(vi) Include benefits from deferred infrastructure capacity costs for system capacity resources and distribution capacity resources required in peak load resource planning. (vii) Include the social cost of greenhouse gas emissions from avoided gas consumption. (viii) If necessary, include a risk mitigation credit to reflect the additional value of conservation, not otherwise accounted for in other inputs, in reducing the risk associated with costs of avoided nonconservation resources. If this value is negative, use a value of 0 for the risk mitigation credit. (ix) Include all nonenergy impacts that a resource or measure may provide that can be reasonably quantified and monetized. (x) Include an estimate of program administrative costs. (xi) Include the cost of financing measures using the capital costs of the entity that is expected to pay for the measure. (xii) Discount future costs and benefits at a discount rate equal to the weighted average cost of capital; and (xiii) Include a 10 percent bonus to the energy and capacity benefits of conservation measures as defined in 16 U.S.C. § 839a of the Pacific Northwest Electric Power Planning and Conservation Act. iii) This projection must be either identified through or included as input into Avista's most recent IRP. Avista must document any differences from the projection in the potential assessment and the IRP. iv) The CPA must include a list of each measure used in the potential, its unit energy savings value, first-year therm savings, customer incremental cost, life of the measure, any applicable nonenergy impacts, and the source of the values.	Yes	Avista has followed the processes described herein. See UG-UG-230469 for Avista's CPA.
BCP-G	UG-230898	3b	Avista must file a CPA by June 1, 2025, in a new docket. The CPA must be approved by the Commission per RCW 80.28.380.	Yes	See UG-230469.

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BCP-G	UG-230898	4a	Process for acquiring all conservation. i) *Process* . Avista's obligation to identify and acquire all conservation measures that are available and cost-effective includes the following process: (1) Identify potential. Identify the cost-effective and available potential of possible technologies and conservation measures in Avista's service territory. (2) Develop portfolio. Develop a conservation portfolio that includes all available, cost-effective conservation. Avista must develop programs to acquire available conservation from all the types of conservation identified in (ii) of this subsection. The portfolio must include conservation programs and mechanisms intended to reduce the energy burden of low-income customers, including programs and mechanisms identified in Condition (4)(f) below or other utility planning processes. If no cost-effective conservation is available from one of the types of conservation, Avista is not obligated to acquire such a resource.	Yes	Avista has followed the processes described herein and will include all relevant conservation acquistion information in its 2025 *ACR* /2024-2025 *BCR* .
BCP-G	UG-230898	4a cont.	(3) Implement programs. Implement conservation programs identified in the portfolio to the extent the portfolio remains cost-effective and available. Implementation methods shall not unnecessarily limit the acquisition of all available conservation that is cost-effective. (4) Adaptively manage. Continuously review and update as appropriate the conservation portfolio to adapt to changing market conditions and developing technologies. Avista must stay up to date on the latest developments in the conservation field and assess the potential of such developments for implementation in its service territory. ii) Types. Types of conservation include, but are not limited to: (1) End-use efficiency; (2) Behavioral programs; and (3) Market transformation. iii) Pilots. Avista must consider, in consultation with the Advisory Group, implementing pilot projects when appropriate and expected to produce cost-effective savings within the current or immediately subsequent biennium if the overall portfolio remains cost-effective.	Yes	Avista has followed the processes described herein and will include all relevant conservation acquistion information in its 2025 *ACR* /2024-2025 *BCR* .
BCP-G	UG-230898	4b	Biennial conservation target. Beginning January 2022, and every two years thereafter, Avista must establish a biennial conservation target. i) The biennial conservation target must identify, and quantify in therms, all conservation that is available and cost-effective. ii) The biennial conservation target must be based on the CPA developed under Condition 3 above and include any adjustments for known or expected site-specific projects. Avista must consult with the Advisory Group in determining how to set its target. iii) *Excess conservation* . No more than twenty-five percent of any biennial target may be met with excess conservation savings allowed by this condition. Excess conservation may only be used to mitigate shortfalls in the immediately subsequent two biennia and may not be used to adjust Avista's biennial target. The presence of excess conservation does not relieve Avista of its obligation to pursue the level of conservation in its biennial target. (1) Cost-effective conservation achieved over a biennial conservation target may be used to meet up to twenty percent of each of the immediately subsequent two biennial targets. (2) Avista may use single large facility conservation savings achieved over its biennial target to meet up to 10 percent of each of the immediately subsequent two biennial conservation targets. If Avista believes it has a project that may constitute a "single large facility", it should work with its Advisory Group to determine how to meet this condition.	Yes	
BCP-G	UG-230898	4c	Prudence. Avista retains the responsibility to demonstrate the prudence of all conservation expenditures.	Yes	

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BCP-G	UG-230898	4d	Energy savings. When available, Avista must use unit energy savings values and standard protocols approved by the regional technical forum. Unit energy savings value or standard protocol should be: i) Based on generally accepted methods, impact evaluation data, or other reliable and relevant data that includes verified savings levels; ii) Or based on territory-specific values determined from pre/post billing EM&V activities, and iii) Presented to its advisory group for review. The Commission retains discretion to determine an appropriate value or protocol.	Yes	
BCP-G	UG-230898	4e	Applicable sectors. Avista must offer a mix of conservation programs to ensure it is serving each customer sector, including programs targeted to the low-income subset of residential customers.	Yes	
BCP-G	UG-230898	4f	Low-income conservation. i) Avista must fully fund low-income conservation measures that are determined by the implementing agency to be cost-effective consistent with either the *Weatherization Manual* maintained by the Washington State Department of Commerce or when it is cost-effective to do so using utility-specific avoided costs. For purposes of this subsection, "fully fund" does not prohibit the agency leveraging other funding sources, in combination with utility funds, to fund low-income conservation projects. Measures identified through the priority list in the *Weatherization Manual* are considered cost-effective. In addition, Avista may fully fund repairs, administrative costs, and health and safety improvements associated with cost-effective low-income conservation measures. Avista shall maintain a project cost allowance of thirty percent (30%) for Administrative/Indirect Rate associated with the delivery of low-income conservation measures. ii) Avista's biennial conservation plan must include low-income conservation programs and mechanisms identified. To the extent practicable, Avista must prioritize energy assistance to low-income households with a higher energy burden. iii) Avista must exclude low-income conservation from portfolio-level cost-effectiveness calculations. Avista must account for the costs and benefits, including nonenergy impacts, which accrue over the life of each conservation measure. iv) Avista must count savings from low-income conservation toward meeting its biennial conservation target. Savings may be calculated consistent with the procedures in the *Weatherization Manual* .	Yes	

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BCP-G	UG-230898	5a	Biennial conservation plan. i) On or before November 15 of every odd-numbered year, Avista must file with the Commission a biennial conservation plan. ii) The plan must include, but is not limited to: (1) The extent of public participation in the development of the ten-year conservation potential and the biennial conservation target. (2) The ten-year conservation potential, the biennial conservation target, biennial program details, biennial program budgets, and cost-effectiveness calculations. (3) A description of the technologies, data collection, processes, procedures, and assumptions Avista used to develop the figures in Condition 5(a)(ii)(2). (4) A description of and support for any changes from the assumptions or methodologies used in Avista's most recent conservation potential assessment. (5) An evaluation, measurement, and verification plan for the biennium including, but not limited to: (a) The evaluation, measurement, and verification framework. (b) The evaluation, measurement, and verification budget; and (c) Identification of programs that will be evaluated during the biennium. iii) For this section, the ten-year conservation potential is derived from Condition 3 above. iv) Program details must be maintained and updated as necessary in Avista's conservation tariff throughout the biennium, under Condition 8 below.	Yes	This is a standard practice at Avista, as the company's natural gas efficiency planning complies with the electric WAC 480-109-120(1), which is almost identical to this condition.
BCP-G	UG-230898	5b	Annual conservation report. i) On or before June 15 of each year, Avista must file with the Commission, in the same docket as its current biennial conservation plan, an annual conservation report regarding its progress in meeting its conservation target during the preceding year. ii) The annual conservation report must include, but is not limited to: (1) The biennial conservation target. (2) Planned and claimed gas savings from conservation, including a description of the key sources of variance between the planned and actual savings. (3) Budgeted and actual expenditures made to acquire conservation through the conservation cost recovery adjustment described in Condition 12. (4) The portfolio- and program-level cost-effectiveness of the actual gas savings from conservation. (5) All program evaluations completed in the preceding year. (6) A discussion of the steps taken to adaptively manage conservation programs throughout the preceding year.	Yes	This is a standard practice at Avista, as the company's natural gas efficiency planning complies with the electric WAC 480-109-120(3), which is almost identical to this condition (with the exception of 3(c) of the stated WAC).

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BCP-G	UG-230898	5c	Biennial conservation report. i) Beginning in 2024, on or before June 15 of each even-numbered year, Avista must file with the Commission, in the same docket as its current biennial conservation plan, a biennial conservation report regarding its progress in meeting its conservation target during the preceding two years. ii) The biennial conservation report must include: (1) The biennial conservation target. (2) Planned and claimed gas savings from conservation. (3) Budgeted and actual expenditures made to acquire conservation. (4) The portfolio-level cost-effectiveness of the actual gas savings from conservation. (5) An independent third-party evaluation of portfolio-level biennial conservation savings achievement. (6) A summary of the steps taken to adaptively manage conservation programs throughout the preceding two years; and (7) Any other information needed to justify the conservation savings achievement. iii) Avista must provide a summary of the biennial conservation report to its customers by bill insert or other suitable method within ninety days of the Commission's final action on the report. iv) Avista may file the annual conservation report and the biennial conservation report together as one report, provided that the report includes all the information required in subsections (c) and (d) of this condition and states that it serves as both the annual conservation report and the biennial conservation report.	Yes	This is a standard practice at Avista, as the company's natural gas efficiency planning complies with the electric WAC 480-109-120(4), which is almost identical to this condition.
BCP-G	UG-230898	5d	Plan and report review. i) Interested persons may file written comments regarding the biennial conservation plan and biennial conservation report within thirty days of Avista's filing. ii) Upon conclusion of the Commission review of Avista's biennial report or plan, the Commission will issue a decision accepting or rejecting the calculation of Avista's conservation target; or determining whether Avista has acquired enough conservation resources to comply with its conservation target. If Avista does not meet its biennial conservation target described in Condition 1(a), the Commission will determine the amount in therms by which Avista was deficient. iii) Biennial plans and reports may be reviewed through the Commission's open meeting process, as described in chapter 480-07 WAC.	Yes	This is a standard practice at Avista, as the company's natural gas efficiency planning complies with the electric WAC 480-109-120(5), which is almost identical to this condition.
BCP-G	UG-230898	5e	*Publication of reports* . Beginning with the 2022-2023 BCP, all conservation plans and reports required by Commission order as well as a summary of planned and actual savings and expenditures reflected in the plans and reports, must be posted and maintained on Avista's website. Plans and reports must be posted on Avista's website within thirty days of Commission acknowledgment of the plan or order approving the report. A copy of any such plan, report, or summary must be provided to any person upon request.	Yes	This is a standard practice at Avista, as the company's natural gas efficiency planning complies with the electric WAC 480-109-120(6), which is almost identical to this condition.

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BCP-G	UG-230898	6a	Avista must use its Advisory Group, initially created under UG-941378, to advise Avista on conservation issues including but not limited to: i) Conservation programs and measures. ii) Updates to Avista's evaluation, measurement, and verification framework. iii) Modification of existing, or development of new evaluation, measurement, and verification methods. iv) Independent third-party evaluation of portfolio-level biennial conservation achievement. v) Development of conservation potential assessments. vi) The methodology, inputs, and calculations for cost-effectiveness. vii) The data sources and values used to develop and update supply curves. viii) The need for tariff modifications or mid-biennium program corrections. ix) The appropriate level of planning for: (1) Marketing conservation programs. (2) Incentives to customers for measures and services; and (3) Impact, market, and process evaluations. x) Programs for low-income residential customers. xi) Establishment of the biennial conservation target and program achievement results compared to the target. xii) Conservation program budgets and actual expenditures compared to budgets. xiii) Development and implementation of new and pilot programs.	Yes	Avista has consulted with its advisory group on all of these items over the 2024-2025 biennium.
BCP-G	UG-230898	6b	*Advisory group meetings* . Avista must meet with its conservation advisory group at least four times per year. Conservation advisory group members may request additional meetings. Avista must provide reasonable advance notice of all conservation advisory group meetings.	Yes	Avista held four meetings in 2024 and five meetings in 2025.
BCP-G	UG-230898	6c	*Advance notification of filings*. Except for the conservation cost recovery adjustment filing required in Condition 12, Avista must provide its conservation advisory group an electronic copy of all conservation filings that Avista intends to submit to the Commission at least thirty days in advance of the filing. The filing cover letter must document the amount of advance notice provided to the conservation advisory group.	Yes	This is standard practice at Avista, as the company already complies with this requirement for electic via WAC 480-109-110(3).
BCP-G	UG-230898	6d	*Advance notification of meetings*. Avista must notify its conservation advisory group of public meetings scheduled to address its conservation programs, its conservation tariffs, or the development of its conservation potential assessment.	Yes	Avista's EEAG was notified of all company and commission public meetings in 2022 and 2023.
BCP-G	UG-230898	6e	Avista must notify Advisory Group members of all public meetings scheduled to address Avista's integrated resource plan. Avista must also coordinate a meeting with Advisory Group members and the entity conducting the CPA addressing the scope and design of the CPA. This meeting must be held early enough in the integrated resource plan public process to incorporate the group's advice. Avista must notify Advisory Group members of IRP advisory group meetings that present the Company's gas price forecasts and resource cost assumptions used in the development of the company's integrated resource plan.	Yes	Avista's EEAG was notified of all meetings pertaining to the CPA as well as the *IRP*.
BCP-G	UG-230898	6f	Avista must consult with the Advisory Groups starting no later than July 1, 2025, to begin to identify achievable conservation potential for 2026-2035 and to begin to set annual and biennial targets for the 2026-2027 biennium, including necessary revisions to program details.	Yes	Avista held a meeting for this purpose on June 25, 2025.
BCP-G	UG-230898	6g	Avista must inform the Advisory Group members when its projected expenditures indicate that Avista will spend more than 120 percent or less than 80 percent of its annual conservation budget.	Yes	Avista discussed current budget and tarriff rider balances at its Spring 2025 EEAG meeting (May 13, 2025).

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BCP-G	UG-230898	6h	Before filing its Biennial Conservation Plan, Avista must provide the following information to the Advisory Group: draft ten-year conservation potential and two-year target no later than August 1, of odd-numbered years; draft program details, no later than September 15, of odd-numbered years; and draft program tariffs no later than October 16, of odd-numbered years.	Yes	
BCP-G	UG-230898	7	Annual Budgets and Energy Savings. Avista must provide its proposed budget to the Advisory Group in a detailed format with a summary page indicating the proposed budget and savings levels for each conservation program, and subsequent supporting information in a spreadsheet or any alternate format that is adequately transparent, subject to approval by Commission Staff, providing further detail for each program and line item shown in the summary sheet. The proposed budget must also be filed in support of any cost recovery filing, along with any other necessary workpapers. Avista must allocate a reasonable amount of its program budget (as determined through consultation with the Advisory Group) towards pilot programs, research, and data collection.	Yes	This information is included in Avista's 2026 *ACP* and in the 2026-2027 *BCP*.
BCP-G	UG-230898	8	Program Details. Avista must maintain its conservation tariffs, with program descriptions, on file with the Commission. Program details about specific measures, incentives, and eligibility requirements must be filed and updated in this docket. Avista must consult its Advisory Group per Condition 6 above before making changes to program details. Avista must notify the Advisory Group when it files updated measures, incentives, or eligibility requirements.	Yes	Avista's conservation tariffs remain on file with the commission and are updated as needed, in consultation with the EEAG.
BCP-G	UG-230898	9a	Avista has identified several potential conservation measures described in the BCP. The Commission is not obligated to accept savings identified in the BCP for purposes of compliance with the targets detailed in this Order.	Yes	NA
BCP-G	UG-230898	9b	When Avista proposes a new or significant change to a program, pilot, or tariff schedule, it must present the program to the Advisory Group with program details fully defined, to the extent practicable. The Advisory Group, after consultation, may advise if a revision to the Conservation Plan in this docket is necessary.	Yes	Avista consulted with its EEAG on all new programs introduced in 2024 and 2025, as well as revisions to existing programs.
BCP-G	UG-230898	9c	Avista must spend a reasonable (as determined through consultation with the Advisory Group) amount of its conservation budget on evaluation, measurement, and verification (EM&V), including a reasonable proportion on independent, third-party EM&V. Avista must perform EM&V annually on a maximum four-year schedule of selected programs such that, over the EM&V cycle, all major programs are covered. The EM&V function includes impact, process, market, and cost test analyses. The results must verify the level at which claimed energy savings have occurred, evaluate the existing internal review processes, and suggest improvements to the program and ongoing EM&V processes.	Yes	Avista procured an independent third-party EM&V vendor to perform impact and process evaluations, as well as cost effectiveness analysis, for Avista's program portfolio.
BCP-G	UG-230898	9d	A final report for the current biennium may be implemented in phases and delivered as a final product at an earlier date, as needed, by Avista.	In progress	Avista filed its 2024 *ACR* on May 30, 2025. Avista will file its 2025 *ACR* , as well as its 2024-2025 *BCR* , on or before June 1, 2026.

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BCP-G	UG-230898	10a	Modifications to the programs must be filed with the Commission as revisions to tariffs or as revisions to Avista's current Conservation Plan, as determined in consultation with the Advisory Group.	Yes	There were no modifications to Avista's conservation plan this biennium. Draft program tariff revisions for 2026 have been shared and circulated with Avista's EEAG.
BCP-G	UG-230898	10b	Incentives and Conservation Program Implementation — Programs, program services, and incentives may be directed to consumers, retailers, manufacturers, trade allies, or other relevant market actors as appropriate for measures or activities that lead to gas energy savings. Avista must work with the Advisory Group to establish a balanced portfolio of measures that provides savings from a variety of savings types and meets the needs of a broad spectrum of Avista customers.	Yes	No new action beyond what has been discussed with the EEAG and/or filed in a plan or report.
BCP-G	UG-230898	10c	Conservation Efforts without Approved EM&V Protocol — Avista may spend up to 10 percent of its conservation budget on programs whose savings impact has not yet been measured if the overall portfolio of conservation passes the primary cost-effectiveness test used by the Commission. These programs may include information-only, and pilot projects. Avista may ask the Commission to modify this spending limit, following the Advisory Group consultation. i) Information-only services refer to those information services that are not associated with an active incentive program or that include no on-site technical assistance or on-site delivery of school education programs. Information-only services and behavior change services must be assigned no quantifiable energy savings value without the full support of the Advisory Group. ii) If quantifiable energy savings have been identified and Commission-approved for any aspect of such programs, the budget associated with that aspect of the program will no longer be subject to this 10 percent spending restriction.	Yes	Done
BCP-G	UG-230898	11a	The cost-effectiveness analysis required by RCW 80.28.380 must include the costs of greenhouse gas emissions established in RCW 80.28.395.	Yes	Incorporation of the social cost of greenhouse gas is standard practice for Avista as part of its least resonable cost analysis and optimization within its resource planning process.

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BCP-G	UG-230898	11b	For the 2022-2023 biennium, Avista must use the modified Total Resource Cost Test (TRC), consistent with the Council, as its primary cost-effectiveness test. The modified TRC test includes all quantifiable nonenergy impacts, a risk adder, and a 10 percent conservation benefit adder. Avista's portfolio must pass the modified TRC test. All cost-effectiveness calculations will assume a Net-to-Gross ratio of 1.0, consistent with the Council's methodology. i) In 2024-2025, Avista must participate in any docket where the appropriate cost-effectiveness test and discount rate to be used for gas conservation is debated. ii) Beginning with the 2024-2025 biennium, Avista must either: (1) Employ the cost-effectiveness test developed through the stakeholder process described in Condition 11(b)(i); (2) Employ a properly balanced TRC, as described in the Commission's 2013 natural gas conservation policy statement; or (3) Employ a different cost-effectiveness test as determined in conjunction with Commission Staff and the Advisory Group.	Yes	Avista followed the UCT methodology for the 2022-2023 biennium. Avista intends to follow option 2, a properly-balanced TRC, as described in the commissions 2013 natural gas conservation policy statement. Avista shared these plans with its advisory group at its Fall 2023 meeting.
BCP-G	UG-230898	11c	Avista must also provide calculations of the Program Administrator Cost Test (also called the Utility Cost Test) as described in the National Action Plan for Energy Efficiency's study "Understanding Cost-Effectiveness of Energy Efficiency Programs," (November 2008; located at: https://www7.eere.energy.gov/seeaction/system/files/documents/understanding-cost-effectiveness-ee-programs.pdf).	Yes	This is standard practice at Avista.
BCP-G	UG-230898	11d	Avista must provide calculations of both the TRC and UCT in its plans and reports.	Yes	This is standard practice at Avista.
BCP-G	UG-230898	11e	Conservation-related administrative costs must be included in portfolio-level analysis.	Yes	Included.
BCP-G	UG-230898	12a	Utilities must file with the Commission for recovery of all expected conservation cost changes and amortization of deferred balances. Avista must include its conservation cost recovery procedures in its tariff.	Yes	This is standard practice at Avista.
BCP-G	UG-230898	12b	Scope of Expenditures — Funds collected through the Gas Conservation Service Rider must be used on approved conservation programs and their administrative costs.	Yes	No action needed.
BCP-G	UG-230898	12c	Recovery for Each Customer Class —Avista shall retain existing cost recovery mechanisms, subject to the Commission's Order in Docket UG-230898.	Yes	This is standard practice at Avista.
BCP-G	UG-230898	12d	Avista must file revisions to its cost recovery tariff (Schedule 191) by June 1 each year, with a requested effective date of August 1 of that same year.	Yes	Avista did not file any revisions to its Schedule 191 cost recovery tariff for 2024, as no adjustments were needed. See UG-250418 for Avista's approved Schedule 191 cost recovery adjustment filing for 2025.
BCP-G	UG-230898	12e	Avista may not accrue interest or incur carrying charges on deferred conservation cost balances. Utilities must base conservation recovery rates on forward-looking budgeted conservation program costs for the future year with revisions to recover only actual program costs of the prior year. Utilities must also include the effects of variations in actual sales on the recovery of conservation costs in the prior year.	Yes	This is a standard practice at Avista.

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BCP-G	UG-230898	13a	*Low-Income Programs*. i) Avista must demonstrate progress toward sustained energy burden reductions during the 2024-2025 biennium by, at a minimum, funding all eligible and cost-effective low-income conservation measures as described in Condition 4(f). (1) Avista's biennial report must include the contribution from low-income conservation programs toward sustained energy burden reductions. The report must include the number of participants and any other information that demonstrates progress as described above. The utility should include a discussion of barriers to success, options for overcoming these barriers, and potential uses for increased low-income conservation funding. (2) Energy savings from low-income conservation measures will be counted toward conservation goals. (3) Avista may, after consultation with advisory groups, fully fund repairs, administrative costs, and health and safety improvements associated with cost-effective low-income conservation measures. These costs are excluded from portfolio cost-effectiveness calculations.	Yes	Avista has met conditions i) and ii) through its inclusion of low-income programs in its plans and reports. iii) Avista fully funds repairs, admin costs, and health and safety improvements as described in this condition.

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Appendix G – Schedule 90 Electric Energy Efficiency Programs (Washington)

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Appendix H – Schedule 190 Natural Gas Efficiency Programs (Washington)

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Appendix H – 2025 CEIP Workpapers and Models

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