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Avista Utilities 2025 Clean Energy Action Plan September 3, 2024

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 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 management 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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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 1¹ illustrates annual resource additions, including demand response (DR) and energy efficiency, for 2026 through 2035.

	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

Table 1: Resource Acquisition Forecast

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,

¹ Energy efficiency savings totals 44.5 aMW when considering savings from line losses.

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

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%

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

Clean Energy Action Plan Requirements

CETA committed Washington to an electricity supply free of greenhouse gas emissions 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 Washington's policy requirements and needs. Avista does not allocate supply-side resources by state. New resources in the 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 Avista to 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.² 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 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."³

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."⁴

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.

² 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.

³ RCW 19.405.060(1)(c)(iii).

⁴ 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.

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 "… requires an understanding of historic and ongoing inequalities and prescribes efforts that seek to reconcile these inequalities."⁵

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:

⁵ 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)⁶ 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 resource selection used additional modeling of non-financial

⁶ See Docket No. UE-210295 for Avista's 2021 Public Participation Plan and Docket UE-210628 for its 2023 Public Participation Plan.

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

Avista has taken several steps to incorporate energy equity tenets in this CEAP and in overall resource planning. Incorporating equity is not a one-and-done activity but is an iterative process that changes and grows as Avista continues to engage with communities it serves. "Operationalizing equity" – moving from theory to practice – is not as easy as it may appear. Some of the inherent challenges to fully implementing the tenets of energy justice are:

- **Data availability and quality:** 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.
- Engaging interested parties: More effective CEAP/IRP outcomes require collaboration among everyone interested in how we generate and use energy now and going forward, beyond those who have been involved in the past. Engaging these customers or advocates is often difficult due to several factors. These may include resource constraints within external organizations, desire to participate, ability to participate based on existing priorities, or even fear of external consequences.⁷
- **Policy and regulatory framework**: Avista is a regulated utility subject to state and federal regulations, including the Federal Energy Regulatory Commission (FERC), and the North American Electric Reliability Corporation (NERC) among others. In addition, Avista must comply with both Washington and Idaho laws and regulations resulting in potential conflicting priorities and may increase the complexities associated with the IRP/CEAP.

⁷ Such as undocumented workers who may have immigration concerns. This was brought up in an EAG meeting specific to certain farming communities.

- **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.
- **Equity expertise**: While Avista is working to gain understanding and experience with equity and its tenets, Avista is fundamentally an energy provider not a social justice expert in integrating equity into traditional technical planning and delivery processes.
- **Technical expertise:** Customers may want to participate. However, long-term planning is a technical process. While Avista takes specific steps to make the process as easy to understand as possible, it is still highly technical in nature due to complexity of the electric system and the skills required to understand the multi-faceted system.
- **Competing priorities**: Balancing the need for reliability, affordability, resiliency, and safety with equity goals can create tensions among the different objectives, making a comprehensive approach more difficult.

Although these challenges exist, Avista is actively working to overcome the challenges by taking actions to incorporate equity into its business practices. Avista's equity actions and considerations should not be evaluated strictly on those within the CEAP/IRP, but in totality across the utility, as the nature of long-term planning presents different challenges compared to actual implementation and operations.

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 each of the four categories shown in Figure 2. Communities where the combined average score of the four categories was nine or higher are considered Highly Impacted Communities. The DOH also included any areas fully or partially within "Indian Country".⁸

In Avista's 2021 CEIP, its methodology to determine Vulnerable Population characteristics was conditionally approved.⁹ The EAG and other advisory groups helped Avista determine the geographic boundaries of Vulnerable Populations for the 2021 CEIP by using the Health Disparities Map¹⁰ 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 the 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.

⁸ 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.
⁹ Docket No. UE-210628.

¹⁰ <u>https://fortress.wa.gov/doh/wtnibl/WTNIBL/Map/EHD</u>



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 serve current customers and acquire more resources to maintain a reliable system in the future. Planning an electric system using a footprint greater than a single utility takes advantage of load and resource diversity. To address this, Avista is participating in the development of Western Power Pool's Western Resource Adequacy Program (WRAP)¹¹. 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 found that with current resources and projected retirements to cover both Washington and Idaho load, the system would 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). In 3.2% of future scenarios where resource adequacy is not met. Avista would be dependent on the energy market or load curtailment. 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 online delivery by the winter of 2029/2030 to maintain a reliable system. The new capacity addresses 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.

¹¹ The WRAP is currently operated by the Southwest Power Pool (SPP) on the behalf of WPP.

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 vehicle 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.¹² 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 20year 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.

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
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

Table 3: Cumulative Demand Response (MW)

¹² 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.

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. The selected resources 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 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.

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

Table 4: W	ind Select	ions (MW)
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As mentioned earlier, Avista is not proposing any GHG-emitting resources or energy storage to serve Washington due to the wind, DR, and energy efficiency additions contributing to the additional resource adequacy needed to meet load growth.¹³ 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.

¹³ 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.

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 aMW¹⁴ of renewable energy as early 2029. 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.

¹⁴ Renewable generation is preferred between July and March as the other months typically have excess renewable energy from hydroelectric production.

Blue Bird – Garden Springs 230kV 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.¹⁵ 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.

¹⁵ 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.

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.

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 pullline 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.¹⁶

H. Alternative Compliance & Social Cost of Greenhouse Gas

Beginning in 2030, Avista must be greenhouse gas neutral, this means up to 20% of Washington's retail load can be offset with alternative compliance.¹⁷ 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 facility¹⁸

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).

¹⁶ (Open Access Same-Time Information System), <u>https://www.oasis.oati.com/avat/index.html</u>.

¹⁷ RCW 19.405.040 (1)(b).

¹⁸ 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.

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

Table 5: Alternative Compliance

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

CBI	CBI Measurement Metrics
(1) Participation in Company Programs	Participation in weatherization programs and energy assistance programs (all customers and Named Communities)
	Saturation of energy assistance programs (all customers and Named Communities)
	Residential appliance and equipment rebates provided to customers residing in Named Communities and rental units (Condition No. 17)
(2) Number of households with a High Energy Burden (>6%)	Number and percent of households (known low income, all customers, Named Communities) (Condition No. 18)
	Average excess burden per household
(3) Availability of	Number of outreach contacts
Methods/Modes of Outreach and	Number of marketing impressions
Communication	Translation services (Condition No. 19)
(4) Transportation Electrification	Number of trips provided by Community Based Organizations (CBOs) for individuals utilizing electric transportation
	Number of annual passenger miles provided by CBOs for individuals utilizing electric transportation
	Number of public charging stations located in Named Communities
(5) Named Community Clean	Total MWh of distributed energy resources 5 MW or less
Energy	Total of MWh of energy storage resources under 5 MW
	Number of sites/projects of renewable distributed energy resources and energy storage resources
(6) Investments in Named	Incremental spending each year in Named Communities
Communities	Number of customers and/or CBOs served
	Quantification of energy/non-energy benefits from investments (if applicable)
(7) Energy Availability	Average outage duration
	Planning Reserve Margin (Resource Adequacy)
	Frequency of customer outages
(8) Energy Generation Location	Percent of generation located in Washington or connected to Avista transmission
(9) Outdoor Air Quality	Weighted average days exceeding healthy levels
	Avista plant air emissions
	Decreased wood use for home heating
(10) Greenhouse Gas (GHG)	Regional GHG emissions
Emissions	Avista GHG emissions
(11) Employee Diversity	Employee diversity representative of communities served by 2035
(12) Supplier Diversity	Supplier Diversity of 11 percent by 2035
(13) Indoor Air Quality	In development
(14) Residential Arrearages and Disconnections for Nonpayment	Number and percent of residential electric disconnections for non- payment
	Residential arrearages as reported to Commission in Docket U- 200281

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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 H. 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 metrics¹⁹ 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.²⁰ 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 usage²¹ is forecasted using current energy use reduced by the amount of energy efficiency selected for a specific income group.²² 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 percent of energy total, customers with energy burden decreases until 2045. The increase

¹⁹ Separate tracking on a forecasted basis for known low-income and Named Communities cannot be completed until additional data is gathered.

²⁰ 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.

²¹ 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.
²² Typical increases to energy usage (i.e., adding new technology and devices) for this purpose is being ignored.

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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. This impact could be lower if Avista hits the CETA cost cap for compliance, but depending on how the cap applies, the rate increase could still be significant. An increase in the amount of energy assistance will likely be required to offset these higher costs in 2045.





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.²³ 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 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.

²³ The amount of net metered generation in a Named Community was not available at the time of this report.

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 projects²⁴. 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.²⁵



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).

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

²⁴ Energy storage projects within the DER potential study forecast will be available in the final draft.

²⁵ <u>https://www.myavista.com/about-us/projects/mlk-community-center</u>.

driven by energy efficiency projects. Investments peak in 2033²⁶ 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.



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.

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.²⁷ The PRM target for the resource plan is 24% in the winter and 16% in the

²⁶ 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.

²⁷ QCC values were derived by the WRAP with input from participating utilities and compiled by the program administrator – SPP.

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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:

• 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. 9 – Outdoor Air Quality²⁸

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.

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 SO₂, 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

²⁸ 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.

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. 10 – 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 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 <u>not</u> 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 participate 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)²⁹ 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 socioeconomic 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,

²⁹ <u>UTC Docket UE-200607</u>, 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. 11 Employee Diversity and No. 12 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. 13 – 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.

CBI No. 14 – 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.