

PacifiCorp's 2024 - 2025 Biennial Conservation Plan for its Washington Service Area

November 1, 2023



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Preface

Under Washington Administrative Code (WAC) 480-109-110 (3), PacifiCorp d/b/a Pacific Power & Light Company (PacifiCorp or Company) provided a draft of this Biennial Conservation Plan (Plan) to its Demand Side Management (DSM) Advisory Group on October 2, 2023. PacifiCorp also provided the draft Plan to its Equity Advisory Group.

Introduction

Background

Seeking to increase energy conservation in Washington, voters passed Initiative Measure No. 937 (codified as Revised Code of Washington 19.285 and WAC 480-109) in 2006. As a result, each electric utility subject to the jurisdiction of the Washington Utilities and Transportation Commission (Commission) is required to project its cumulative 10-year electric conservation potential and to establish biennial conservation targets.

When determining its 10-year conservation potential, WAC 480-109-100 (2) (a) states that a utility must "...consider all available conservation resources that are cost-effective, reliable, and feasible." The potential must be derived from the utility's most recent Integrated Resource Plan (IRP), including any information learned in its subsequent resource acquisition process, or the utility must document the reasons for any differences. When developing this projection, utilities must use methodologies that are consistent with those used in the Northwest Conservation and Electric Power Plan. The projection must include a list of each measure used in the potential, its unit energy savings value, and the source of that value.¹

With respect to establishing a biennial conservation target, WAC 480-109-100 (3) states that: a) the biennial conservation target must identify, and quantify in megawatt-hours (MWh), all available conservation that is cost-effective, reliable and feasible, and b) the biennial conservation target must be no lower than a pro rata share of the utility's 10-year conservation potential. In WAC 480-109-060 (26) "pro rata" is defined as "the calculation dividing the utility's projected ten-year conservation potential into five equal proportions to establish the minimum biennial conservation target."

With respect to the Clean Energy Transformation Act, "PacifiCorp must consider how and whether existing conservation programs serve the highly impacted communities and vulnerable populations identified in its CEIP (Clean Energy Implementation Plan). In addition, PacifiCorp must 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"².

In compliance with these requirements, the Company provides this Biennial Conservation Plan and requests that the Commission approve the 10-year conservation potential, the Energy Independence Act (EIA) Target and the EIA Penalty Threshold established in this Plan.

¹ WAC 480-109-100 (2) (a) through (c).

² Docket UE-210830 Order 01 Attachment A, condition 9b

Types of Conservation Included in the 10-Year Forecast

WAC 480-109-100 (1) (b) establishes six types of conservation for consideration in establishing a conservation forecast:

1. End-use efficiency.
2. Behavioral programs.
3. High efficiency cogeneration.
4. Production efficiency.
5. Distribution efficiency; and
6. Market transformation.

The Company's method for forecasting the potential for each of the above types of conservation is described below.

End-Use Efficiency, Behavioral Program, and Market Transformation

The April 2019 passage of Senate Bill 5116, Clean Energy Transformation Act (CETA) required certain components, such as the social cost of carbon to be included in the modeling of resource options for Washington in the IRP process. PacifiCorp established their target using the CETA compliant preferred portfolio, W-10 SC CETA³.

The conservation potential in W-10 SC CETA was informed by the energy efficiency potential identified in PacifiCorp's *Demand-Side Resource Potential Assessment for 2023-2042* (Conservation Potential Assessment, or CPA), performed by Applied Energy Group, using methodologies consistent with those used by the Northwest Power and Conservation Council (Council) and representing opportunities specific to the Company's Washington service area.⁴ The amount of cost-effective, reliable and feasible conservation identified in W-10 SC CETA encompasses three of the six types of conservation: end-use efficiency, behavioral programs,⁵ and market transformation.⁶

Efficiency opportunities from waste heat-to-power and regenerative technologies were included in the 2023 CPA assessment of end-use efficiency. To the extent they are cost effective, they are included in the W-10 SC CETA portfolio selections.

High-Efficiency Cogeneration

The potential for high-efficiency cogeneration was derived from PacifiCorp's *Private Generation Long-Term Resource Assessment (2023-2042)* (Private Generation Study), performed by DNV.⁷

³ Information on IRP portfolios, including the preferred portfolio, W-10 SC CETA and underlying assumptions can be found in the Washington 2021 IRP Two-Year Progress Report (Amended Final) – Chapters 8 and 9.

⁴ The 2023 Conservation Potential Assessment and all previous studies are available on the Company's website: <https://www.pacificorp.com/energy/integrated-resource-plan/support.html>

⁵ Because savings from behavioral programs, such as PacifiCorp's Home Energy Reports (HER) program, are already reflected in actual and forecasted sales, IRP selections include only behavioral program savings incremental to current program achievements.

⁶ Savings from market transformation are included in the Council's assumption that 85 percent of energy efficiency potential is achievable over 20 years, an assumption that PacifiCorp uses in its CPA.

⁷ The Private Generation study is available on the Company's website:

http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Integrated_Resource_Plan/2017_IRP/Pacifi

The Private Generation Study is an economic assessment providing forecasts of projected penetration levels of private generation resources within PacifiCorp's service areas through 2042, including a Washington-specific assessment of high-efficiency cogeneration. The Private Generation Study also identified the levelized costs for these resources. CETA focuses on low carbon or non-emitting resources and requires the social cost of carbon be added when considering the economics of emitting resources. To align the analysis of high efficiency co-generation resources, the private generation study costs were increased for two adjustments, each applied separately; a) social cost of carbon consistent with the process curves used in the IRP and b) the use of renewable natural gas. When the adders were applied, the levelized costs still did not exceed the highest annual cost used in the selection for energy efficiency resources. As a result, high-efficiency co-generation was added to the 2024-2033 conservation forecast.

Production Efficiency

Facilities allocated to Washington under the Washington Inter-Jurisdictional Allocation Methodology (WIJAM) include:

- Wind: Glenrock/Rolling Hills facilities, Seven Mile Hill 1 and 2, Dunlap, High Plains and McFadden Ridge, Foote Creek Rim, Ekola Flats, TB Flats 1 and 2, Cedar Springs 2, Pryor Mountain, Marengo 1 and 2, Leaning Juniper, Goodnoe Hills
- Thermal: Jim Bridger (coal), Chehalis, Hermiston, and Colstrip (coal)

Detailed studies of opportunities at these plants have been completed in prior periods⁸ and were updated for this 2024-2025 Biennial Conservation Plan. Economic screening was performed by generation engineering using the same methodology used to screen investments intended to be recovered in rates. Results and updates were shared with the DSM Advisory Group in June, July and August 2023.

Production Efficiency – Thermal Plants

The engineering studies performed for the two gas fired generation plants, Chehalis and Hermiston, in 2011 were updated recently in 2021 by Cascade Energy Engineering and are included in Appendix 5.

At the time of the 2022-2023 Biennial Conservation Plan, based on the 2021 study, no opportunities existed for Chehalis, and two Hermiston projects passed for proposal to the joint owners – lighting and compressed air. Since this time, the lighting upgrades identified for Hermiston are either complete or projected to be completed in 2023. The company anticipates reporting savings for these projects in 2023, and there are no other lighting savings opportunities at Hermiston. The company revisited the economics of the compressed air opportunity identified for Hermiston and it is still not economic at this time in 2023.

[Corp_IRP_DG_Resource_Assessment_Final.pdf](#)

https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/energy/integrated-resource-plan/2021-irp/2021-irp-support-and-studies/PacifiCorp_2021_IRP_PG_Resource_Assessment.pdf

⁸ Starting in 2011 and completed in 2012, Cascade Energy completed studies at seven of the eight non-hydro facilities that serve Washington customers. Cascade Energy updated the study for Chehalis and Hermiston in 2021 for the 2022-2023 Biennial Conservation Plan.

As a result, the Company is not forecasting any cost-effective, reliable and feasible production efficiency from thermal plants during the 2024-2025 period, and thus, no savings from production efficiency (thermal) are included in the Company's 2024-2025 Biennial Conservation Target.

Production Efficiency - Wind

The Goodnoe Hills Wind Project was included in the 2011 production efficiency study, and the estimated savings was very small, so the focus for production efficiency was on thermal plants for the next several biennial periods. The lighting at Goodnoe Hills was updated to LED since the study. Based on questions/interest in revisiting wind production efficiency, the company completed an assessment in 2023. The analysis included an assessment of opportunities and economics for wind generation facilities with an allocation to Washington according to the WIJAM. The updated assessment was completed by Cascade Energy Engineering and is included in Appendix 5. Opportunities identified included lighting and heat pump water heaters. For lighting, many of the buildings already had LED lighting, but some could benefit from lighting upgrades and/or controls. Of the buildings with savings potential, the company identified those likely to be completed in 2024-2025 based on the plans for the sites and project economics. The savings potential is very limited, especially once the Washington allocation is applied⁹, but the company included 1,260 kWh (at the generator) in the target for wind production efficiency (half in 2024 and half in 2025). The assessment results and the plan for the target were shared at the DSM Advisory Group meeting on August 31, 2023.

Distribution Efficiency

Distribution efficiency in this plan continues to build upon the Company's migration to the new CYME¹⁰ distribution analysis software, projects completed and the on-going process of updating the CYME distribution analysis model with actual field measurements. Throughout the year, and especially as scheduled planning studies are performed, connectivity corrections and equipment ratings and settings are being researched, verified and input. This process competes for time from engineers performing other routine work. The combination of CYME and updated model information will enable more robust analyses of complex scenarios and the assessment of cost-effective, efficiency projects on the distribution system such as Volt Amperes Reactive (VAR) reduction.

Two projects identified for the 2022-2023 biennium were completed and a third, the Wiley Substation feeder 5Y164 reconductor and voltage optimization project, was re-scheduled to be complete by end of year 2025. The estimated annual energy savings for this project is 227 MWh (at site) and is included in the target in 2025.

The company followed a similar process to the one used for the last biennium to identify new distribution efficiency opportunities for 2024-2025. Of the five potential circuits identified for improvements, none passed economic screening, so there is no additional savings beyond the 227 MWh to add to the 2024-2025 target.

The approach and proposed addition of 227 MWh to the target was shared with the DSM Advisory Group during the 2024-2025 target setting process.

⁹ The Washington allocation of wind facilities is assumed to be 7.5% for the biennial period.

¹⁰ CYME is a Power Engineering software program provided by EATON

Ahead of the next biennial period (2026-2027), the Company proposes the following approach and schedule to identify opportunities to inform a multi-year forecast.

- Using CYME, screen all circuits with less than 0.95 power factor for volt VAR opportunities by Oct 1, 2024.¹¹ Provide list of circuits within the range in the 2025 annual conservation plan due in draft by October 15, 2024 and final November 15, 2024.
- Using CYME, conduct detailed analysis on circuits within range in prioritized manner based on circuit total annual MWh usage Feb 1, 2025.
- Estimate costs of implementation and conduct economic analysis by May 1, 2025.
- Provide forecasted costs and savings by year for 2026 -2035 by July 1, 2025.

Note – the Distribution System Planning team will be forming a Washington Distribution Planning Advisory Group, and this could result in changes to the approach outlined above.

Overview of 2024-2033 Conservation Forecast & 2024-2025 Targets

Collectively, the analyses described above, and in greater detail later in this Plan, form the basis of the 10-year cumulative conservation potential available in PacifiCorp’s Washington service area before applying adjustments to account for updates since the time of the analysis. These adjustments are described later in this Plan and are detailed in Appendix 1. The 10-year cumulative conservation potential deemed cost-effective, reliable, and feasible in PacifiCorp’s Washington service area is 437,252 MWh, as shown in Table 1.

Table 1. Cumulative 2024-2033 Conservation Potential by Type

Conservation Category	10 - Year Cumulative Potential (MWh at generator)
W-10 SC CETA Selections (End Use Energy Efficiency and Market Transformation)	437,252
Home Energy Reports	28,179
Energy Efficiency Adjustments*	(29,094)
High Efficiency Co-Generation	158
Distribution Efficiency	244
Production Efficiency	1
Total	436,741

* Includes measure-level adjustments based on updated information from the regional technical forum.

To establish a biennial conservation target, consistent with WAC 480-109-100 (3), the Company identified all available conservation that is cost-effective, reliable and feasible for the 2024-2033 period. This amount, 91,318 MWh, is the two-year sum for 2024 and 2025 which is larger than the pro-rata share of 87,348 MWh, and thus satisfies the requirement of WAC 480-109-100 (3) (b). The identified 2024-2025 level of conservation is then adjusted, per Commission guidance

¹¹ Over the last planning cycle (five years), approximately 30% (or 44) circuits of the 142 circuits have shown some combination of voltage violations and/or lagging power factor and/or operational issues.

described later in this Plan, to develop PacifiCorp’s EIA Penalty Threshold of 80,410 MWh (at generation), as shown in Table 2.

Table 2 - 2024-2025 EIA Target and EIA Penalty Threshold

Category	2024-2025	
	Gross MWh Savings @site	Gross MWh Savings @gen
i. Ten-year potential:	406,486	436,741
ii. Two-year EIA target (includes NEEA):	84,971	91,318
iii. Two-year EIA Penalty Threshold (excludes NEEA):	74,839	80,410
iv. Two-year Decoupling Penalty Threshold (5% of EIA Target):	4,249	4,566
v. Two-Year Utility Conservation Goal (EIA Target + Decoupling):	89,220	95,884
NEEA	10,132	10,908

Conservation forecast and Clean Energy Implementation Plan (CEIP) targets

CETA requires a four-year conservation target (2022-2025) and an intermediate target (2022-2023). The 2021 and 2023 IRP preferred portfolio with adjustments identified cost-effective, reliable, and feasible conservation for the EIA targets. PacifiCorp proposes to use the same forecast to draft specific targets for the CEIP, as follows:

The four-year conservation target is updated in the CEIP Biennial Update filed November 1, 2023. The company made three changes to the energy efficiency targets in the CEIP Biennial Update, which are summarized below.

- The energy efficiency target for 2022-2025 is now characterized as MWh at site instead of MWh at the generator, consistent with the characterization of energy efficiency targets used to comply with the EIA.
- The energy efficiency target for 2024-2025 reflects the 2024-2025 Biennial Conservation Plan (this document). Previously, the Company relied on the prior 2022-2023 BCP for 2024-2025 targets and indicated the target would be updated using the value from the 2024-2025 BCP.
- The energy efficiency target now includes distribution efficiency and production efficiency, consistent with the characterization of energy efficiency targets used to comply with the EIA.

Budget and Savings by Program

The Company’s 2024-2025 DSM Business Plan is provided as Appendix 2 to this plan. The DSM Business Plan contains forecasted savings and expenditures from the Company’s existing programs as well as information on adaptive management strategies, pilots, outreach, evaluation efforts and CEIP Utility Actions to increased Named Community customer participation for the 2024-2025 period. The DSM Business Plan also provides cost-effectiveness results in support of the Company’s direction and program strategies. The Company may add programs or make

changes to existing programs as filed tariff attachments or as revisions to the business plan during the 2024-2025 biennium under the adaptive management program delivery structure, which includes consultation with the Company's DSM Advisory Group. Forecasted savings and budgets are based on the best information available at the time of this filing; a variance between planned and actual savings and spending is expected, given uncertainty in customer participation levels in the programs during the biennium, uncertainty given the re-procurement underway for Home Energy Savings and Wattsmart Business¹², and uncertainty related to the lingering effects of the COVID-19 pandemic that are affecting program participation. There is complexity, uncertainty and potential opportunities with a multitude of federal and state funded programs related to energy efficiency. The Company will adaptively manage its portfolio and co-deployment strategies as needed in consultation with its advisory groups as the details of opportunities become more certain. As required by WAC 480-109-120(2) the Company will file an Annual Conservation Plan for 2025 on or before November 15, 2024.

Excess Conservation

WAC 480-109-100 (3) (c) (i) states that “cost-effective conservation achieved in excess of a biennial conservation target may be used to meet up to twenty percent of each of the immediately subsequent two biennial targets.” And that “[t]he presence of excess conservation does not relieve a utility of its obligation to pursue the level of conservation in its biennial target.”

As stated in PacifiCorp's 2020-2021 Biennial Conservation Report approved in Order 04 in Docket UE-190908, the company applied all available excess conservation savings towards the shortfall in 2020-2021 and had none available for 2022-2023.

Stakeholder Engagement

PacifiCorp appreciates the collaboration and guidance of stakeholders in the development of the conservation forecast and biennial conservation target established in this Plan. A timeline of DSM Advisory Group meetings, including topics applicable to the biennial planning process, is provided below along with IRP public input meetings¹³ where DSM related topics were on the agenda. These meetings, coupled with email communications in which supporting information was shared, were pivotal in helping the Company develop the conservation forecast and biennial target. Slides for DSM Advisory Group meetings as well as the list of Equity Advisory Group meetings and slides are available at [Washington Clean Energy Transformation Act & Equitable Distribution of Benefits \(pacificorp.com\)](#). Additional detail on how the Company complied with stakeholder engagement requirements established in WAC 480-109-110 and Attachment 1 to Order 01 in Docket UE-210830 is provided in the “Plan Compliance Information” section later in this document.

¹² The company anticipates the contract(s) resulting from this RFP to begin April 1, 2024.

¹³ Information on all 2021 IRP public meetings is available at <https://www.pacificorp.com/energy/integrated-resource-plan/public-input-process.html>.

Table 3 – Summary of DSM Advisory Group Meetings in 2022

Meeting #/Date	Key Topics	Updates
#1, 2/28/2022	<ul style="list-style-type: none"> All Source Request for Proposals Review of the 2022 communications and outreach plan Business Energy Reports Future Non-Energy Impacts research 	<ul style="list-style-type: none"> Conservation Potential Assessment Low-income Ductless Heat Pump (DHP) Conversion Measures Washington Equity Advisory Group schedule/updates Clean Energy Implementation Plan process/next steps Clean Energy Implementation Plan utility actions 2022-2023 DSM forecast indicating shortfall
#2, 4/28/2022	<ul style="list-style-type: none"> 2020-2021 Biennial Conservation Report preview 2022-2023 DSM forecast indicating shortfall System Benefits Charge (Schedule 191) review, condition 12d – including options for proposed increase Conservation Potential Assessment, Non-Energy Impacts (condition 11a) Demand Response programs – preview of upcoming filings Procurement update – Home Energy Reports / Business Energy Reports 	<ul style="list-style-type: none"> Follow-up from 2/28/2022 meeting CETA: Equity Advisory Group, Clean Energy Implementation Plan Clean Energy Implementation Plan utility actions On-Bill Financing, Craft3 requested amendments to enable financing for critical repairs and unsecured loans (e.g., for homeowners residing on Tribal lands or manufactured home parks) Upcoming drafts due to the DSM Advisory Group DSM Advisory Group meetings for balance of 2022
#3, 6/28/2022	<ul style="list-style-type: none"> NEI and CPA updates Demand Response Adoption of air conditioning with low global warming potential refrigerants (condition 10b), including presentation by NEEA Whether and how to research and evaluate opportunities for cool roof and tree planting conservation (condition 10c) 2022-2023 DSM Forecast indicating shortfall Energy Burden Assessment presentation by Empower Dataworks 	<ul style="list-style-type: none"> Follow-up from 2/28/2022 meeting on The Energy Project proposal CETA: Equity Advisory Group Clean Energy Implementation Plan utility actions – CBI metrics for 2022 YTD Recent filings (EIA reports, SBC filing) – status and next steps On-Bill Financing (Craft3) Pilot: Clean Buildings Accelerator Upcoming drafts for DSM Advisory Group review DSM Advisory Group meetings for balance of 2022
#4, 9/8/2022	<ul style="list-style-type: none"> 2023 Annual Conservation Plan, preview of planned program changes (condition 5b) Conservation Potential Assessment updates 2022-2023 DSM Forecast indicating shortfall 	<ul style="list-style-type: none"> Demand Response Update CETA: Equity Advisory Group Clean Energy Implementation Plan utility actions Pilots - Non-residential Lighting Controls Recent filings, upcoming drafts due to the DSM Advisory Group

Meeting #/Date	Key Topics	Updates
	<ul style="list-style-type: none"> Other Conditions: adoption of low global warming potential refrigerants (condition 10b), tree planting conservation (condition 10c) 	<ul style="list-style-type: none"> 2022 DSM Advisory Group meetings
#5, 12/14/2022	<ul style="list-style-type: none"> 2023 communications and outreach plan Conservation Potential Assessment results Home Energy Reports – measure life assumption change, procurement update 2022-2023 DSM Forecast indicating shortfall, adaptive management 	<ul style="list-style-type: none"> Whether and how to research and evaluate opportunities for cool roof and tree planting conservation (condition 10c) Demand Response, CETA, pilots Recent filings, upcoming drafts due to the DSM Advisory Group Proposed 2023 DSM Advisory Group meeting topics, schedule for drafts coming for review

Table 4 – Summary of DSM Advisory Group Meetings in 2023

Meeting #/Date	Key Topics	Updates
#1 3/30/2023	<ul style="list-style-type: none"> System Benefits Charge Review 2022-2023 DSM Forecast Procurement: Delivery Contracts (Home Energy Savings, Wattsmart Business) Distribution Efficiency Preview: 7/1/2023 program changes 	<ul style="list-style-type: none"> Home Energy Reports Demand Response CETA: Equity Advisory Group CEIP: Utility Actions/Customer Benefit Indicator Metrics Pilots Wrap-up
#2 6/29/2023	<ul style="list-style-type: none"> 2024-2025 Target Setting (including Distribution Efficiency) Production Efficiency - thermal 2022 Annual Report 2022-2023 DSM Forecast and adaptive management Clean Energy Implementation Plan (CEIP) CEIP Progress Report – energy efficiency CBI metrics, utility actions 	<ul style="list-style-type: none"> CETA: Equity Advisory Group Demand Response Procurement: Delivery Contracts (Home Energy Savings, Wattsmart Business) Wrap-up
#3 7/27/2023	<ul style="list-style-type: none"> Distribution Efficiency Production Efficiency – thermal and wind Draft ten-year conservation potential, revised four-year target, and two-year target NEI progress: EE and Resiliency Competitive Procurement Framework – 2024-2025 2022-2023 DSM Forecast 	<ul style="list-style-type: none"> Clean Energy Implementation Plan, Equity Advisory Group Wrap-up

#4 8/31/2023	<ul style="list-style-type: none"> Draft program details, program budgets (2024-2025) Preview of planned program changes, adaptive management for 2024 Preview of Utility Actions 2022-2023 DSM Forecast 	<ul style="list-style-type: none"> Demand Response – EV Managed Charging Pilot Wrap-up
#5 9/13/2023	<ul style="list-style-type: none"> Draft 2024-2025 Biennial Conservation Plan (incl. pilots, CETA incremental costs, other open items) 2022-2023 DSM Forecast 	<ul style="list-style-type: none"> Clean Energy Implementation Plan, Equity Advisory Group CEIP specific targets – Demand Response Procurement update Wrap-up
#6 Planned for December	<ul style="list-style-type: none"> 2024 communications and outreach plan 2022-2023 DSM Forecast 	

In addition to DSM Advisory Group meetings, 11 public input meeting for the 2023 IRP were held in 2022 and 2023 prior to the filing the 2023 IRP on March 31 2023 (Docket UE-200420). There were five meetings with focus on the CPA. Meeting dates and presentation materials available at <https://www.pacificorp.com/energy/integrated-resource-plan/public-input-process.html>.

Feedback and comments were received from DSM Advisory Group members and well as stakeholders in other states. Comments and responses are available at:

<https://www.pacificorp.com/energy/integrated-resource-plan/comments.html>

Conservation Potential and Conservation Targets

10-Year Conservation Potential

The forecast of cost-effective, reliable and feasible conservation for the 2024-2033 period is provided in Table 5. This section describes the process for developing the 10-year potential forecasts for each of the six types of conservation described above and provides a description of the technologies, data collection, processes, procedures, and assumptions used to develop this figure as required by WAC 480-109-120 (1) (b) (iv).

Table 5. 2024-2033 Annual and 10-Year Conservation Forecast (MWh at generator)

Category	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2024-2033
											Cumulative
Adjusted Energy Efficiency	37,920	44,563	32,529	37,400	43,508	42,723	44,542	44,130	40,802	40,044	408,159
Home Energy Reports	4,536	4,029	3,578	3,179	2,823	2,508	2,228	1,979	1,758	1,561	28,179
High-Efficiency Co-Generation	12	13	14	14	15	15	16	17	20	23	158
Distribution Efficiency	-	244									244
Production Efficiency	0.6	0.6									1
Total	42,469	48,850	36,121	40,593	46,346	45,246	46,786	46,125	42,579	41,627	436,741
										2024-2025 Target	91,318

End-Use Efficiency, Behavioral Program, and Market Transformation

The conservation forecast for end-use efficiency, behavioral programs and market transformation (collectively referred to in this document as energy efficiency) is developed through the following steps:

1. Completion of the 2023 CPA.
2. Economic screening/selection of resources through the 2023 IRP development process.
3. Addition of projected savings from the existing HER (behavioral) program.
4. Identification of adjustments to the 2023 IRP preferred portfolio conservation resource selections based on updates from Regional Technical Forum (RTF) Unit Energy Savings (UES) values.

The 2023 Conservation Potential Assessment

The Company's 2023 CPA, performed by Applied Energy Group (AEG), identifies energy efficiency that is possible (technical potential) and feasible (achievable technical potential), and the 2023 IRP process identifies the share of this potential that is cost-effective (economic achievable technical potential) in the preferred portfolio which must include the social cost of carbon and the non-energy impact adder to be CETA compliant. To estimate the amount of feasible potential that is reliable, the Company uses the Council's assumptions from the 2021 Power Plan for the proportion of potential is achievable over a 20-year period, typically 85 percent. It is important to note that the Council's achievability assumption extends beyond utility incentive programs:

The Council assumes that between 85 and 100 percent of all technical potential can be achieved by the end of the plan period (20 years) to determine the achievable technical potential. Finally, through the resource strategy analysis, the Council looks at whether potential conservation measures are economically achievable. This potential is then translated into savings targets, to be achieved from utility programs, market transformation activities of the Northwest Energy Efficiency Alliance (NEEA), and activities outside of programs including market-induced savings and savings from codes and standards (also known as momentum savings).¹⁴

Because of what the achievable potential captures, the amount of energy efficiency selected by the IRP model is inclusive of savings from market transformation efforts, including those claimed through NEEA. It also includes incremental savings from behavioral programs, to the extent they are cost-effective. Because of the short measure life associated with PacifiCorp's existing HER program, the existing impacts are assumed to be reflected in the Company's load forecast and are excluded from the IRP energy efficiency selections. These impacts are added back into the conservation forecast for the purpose of establishing a 10-year conservation forecast and two-year target.

AEG identified energy efficiency potential in the 2023 CPA through the following steps:

¹⁴ Northwest Power and Conservation Council, *2021 Northwest Power Plan*
https://www.nwcouncil.org/2021powerplan_estimating-energy-efficiency-potential

1. Perform a market characterization to describe sector-level electricity use for the residential, commercial, industrial, irrigation, and street lighting sectors for the base year of 2021. To perform the market characterization, AEG used results from primary market research conducted by PacifiCorp wherever possible, supplemented by secondary data sources available from regional and national organizations such as the NEEA and the Energy Information Administration.
2. Develop a baseline projection of energy consumption by sector, segment, and end use for 2023 through 2042, building upon the base year characterization performed in step 1 above.
3. Define and characterize energy efficiency measures to be applied to all sectors, segments, and end uses. This work relied heavily on the measure characterization work performed by the RTF and Council staff in the development of the 2021 Power Plan. The 2023 CPA considered 303 unique measures for Washington across sectors, which expand to nearly 15,000 permutations when assessed separately by vintage, and market segment. Consistent with WAC 480-109-100 (2) (c), a list of each measure used in the potential, its unit energy savings value, and the source of that value are provided in Appendix H to the 2023 CPA.
4. Estimate the potential from the efficiency measures by applying achievability and ramp rate assumptions, based on the Council's methodology.

AEG used its Load Management Analysis and Planning tool (LoadMAP™) version 6.0 to perform the steps above. AEG developed LoadMAP in 2007 and has enhanced it over time, using it for the Electric Power Research Institute (EPRI) National Potential Study and numerous utility-specific forecasting and potential studies since. The LoadMAP model:

- Incorporates the Council's methodology and the core principles of rigorous end-use models (such as EPRI's Residential End Use Planning System (REEPS) and Commercial End Use Planning System (COMMEND), but in a simplified and more accessible form.
- Includes stock-accounting algorithms that treat older, less efficient appliance/equipment stock separately from newer, more efficient equipment. Equipment is replaced according to the measure life and appliance vintage distributions.
- Balances the competing needs of simplicity and robustness by incorporating important modeling details related to equipment saturations, efficiencies, vintage, and the like, where market data are available, and treats end uses separately to account for varying importance and availability of data resources.
- Isolates new construction from existing equipment and buildings and treats purchase decisions for new construction and existing buildings separately.
- Uses a simple logic for appliance and equipment decisions, rather than complex decision choice algorithms or diffusion assumptions which tend to be difficult to estimate or observe and sometimes produce anomalous results that require calibration or manual adjustment.
- Includes appliance and equipment models customized by end use. For example, the logic for lighting is distinct from refrigerators and freezers.
- Accommodates various levels of segmentation. Analysis can be performed at the sector level (e.g., total residential) or for customized segments within sectors (e.g., housing type or income level).
- Provides forecasts of baseline energy use by sector, segment, end use, and technology for existing and new buildings. It also provides forecasts of total energy use and energy-efficiency savings associated with the various types of potential.

The estimated potential was grouped by net cost of capacity of conserved energy and converted to hourly shapes for modeling in the 2023 IRP process. To simplify the inputs for modeling purposes, measures are grouped into 26 bundles for each state. This methodology is the same as what was used for the 2021 IRP bundling methodology which based energy efficiency selections on the net cost of capacity (\$/kw-yr). Net cost of capacity bundles are calculated using the following formula:

$$\text{Net Cost of Capacity } (\$/kw - yr) = \frac{(LCOE - \text{Energy Value}^{15}) * \left(\text{Load Factor} * \frac{\text{Hrs}}{\text{yr}} \right)}{\text{Capacity contribution} * \left(\frac{\text{MW}}{\text{KW}} \right)}$$

Measure cost is characterized as the cost of measure from the perspective of the Total Resource Cost (TRC) test which is then levelized over the lifetime of the measure consistent with methodology used by the Northwest Power and Conservation Council in the 2021 Power Plan.¹⁶ Capacity contributions of measures were calculated for both summer and winter seasons and measures were assessed and binned based on their net cost of capacity in each corresponding season.

Energy Efficiency in the 2023 IRP process

PacifiCorp’s 2023 IRP presents the Company’s plans to provide reliable and reasonably priced service to its customers. The primary objective of the IRP is to identify the best mix of resources to serve customers in the future, identified through analysis that measures cost and risk. The least-cost, least-risk resource portfolio—defined as the “preferred portfolio”—is the portfolio that can be delivered through specific action items at a reasonable cost and with manageable risks, while considering customer demand for clean energy and ensuring compliance with state and federal regulatory obligations.

PacifiCorp relies on three models in the development and evaluation of resource portfolios.¹⁷

1. The Plexos Long-Term planning model (LT model) is used to produce unique resource portfolios across a range of different planning cases.
2. Each portfolio is evaluated in the Short-Term model (ST model) to establish system costs for each portfolio over the entire 20-year planning period. The ST model accounts for resource availability and system requirements at an hourly level, producing reliability and resource value outcomes as well as a present-value revenue requirement (PVRR) which serves as the basis for selecting least-cost least-risk portfolios.

PacifiCorp uses the Plexos Medium-Term schedule (MT model) to perform stochastic risk analysis of the portfolios. A primary function of the MT model is to calculate an optimized risk-adjustment, representing the relative risk of a portfolio under unfavorable stochastic conditions for that portfolio.

PacifiCorp models energy efficiency (also referred to as Class 2 DSM in the IRP) on a comparable basis with supply-side resources in the IRP models, consistent with state IRP standards and

¹⁵ The forecasted energy price is based on marginal resource costs, which include potential fuel and emissions costs using the social cost of carbon for the marginal generator or market transaction in a given hour.

¹⁶ https://www.nwccouncil.org/2021powerplan_cost-effective-methodology

¹⁷ <https://www.pacificorp.com/energy/integrated-resource-plan.html>. See Chapter 8 of the Company’s 2021 IRP for more detailed discussion on how the Plexos LT, ST and MT models are used in the development of PacifiCorp’s IRP.

guidelines. For resource portfolio development, conservation is structured as a supply curve that provides capacity and energy (based on predetermined hourly load shapes) at a given marginal levelized cost. Levelized costs of Washington energy efficiency resources are adjusted, consistent with the Council’s methodology, to account for the following credits:

- Transmission and distribution investment deferral credit
- Stochastic risk reduction credit
- Northwest Power Act 10 percent credit
- NEI credits for applicable measures

Modeling energy efficiency as a resource with hourly impacts and costs levelized over the planning period allows the IRP to directly compare demand-side and supply side options in assessing cost and risk of different portfolio options. The amount of energy efficiency selected by the IRP represents the optimal amount of savings for the Company to pursue based on the best information available at the time of the analysis, recognizing that some savings is likely to be achieved outside of utility incentive programs (e.g., codes and standards, market transformation), as discussed previously in this Plan.

NEIs

NEIs were expanded in the 2024-2033 target setting process. Similar to prior periods, the supply curves from 2023 CPA include NEIs and are a cost credit that lowers the cost of energy efficiency resources in the IRP model. NEI’s used in the 2023 CPA are derived primarily from a literature review study conducted by DNV for PacifiCorp. In conjunction with other Washington investor-owned utilities, PacifiCorp contracted with DNV to do a meta study (study of studies) of NEIs using a data base of approximately 50 studies. The purpose was to expand the number of NEIs and measures they are applied to. The meta study consisted of a review of NEI studies applicable to PacifiCorp program measures. DNV mapped NEI values to PacifiCorp’s measure list and produced values with adjustments to reflect differences in economic, climatic and programmatic conditions. NEIs in the DSM business plan also reflect updates to the original NEI valuation completed in 2022 in consultation with the DSM advisory group. Updates to valuation of NEIs focused on changes to plausibility and confidence adjustment factors, which discount NEIs based on how well they match current measure characteristics. These updated (\$/MWH) NEIs are included in energy efficiency selections to begin the target setting process. In addition to measure level NEIs from the DNV study, NEIs from the Regional Technical Forum were also included in the 2023 CPA.

Adjustments to the Energy Efficiency Potential identified in the 2023 IRP Process used to W10-SC-CETA.

WAC 480-109-100 (2) (b) referring to a utility’s 10-year conservation potential, states “This projection must be derived from the utility’s most recent IRP, including any information learned in its subsequent resource acquisition process, or the utility must document the reasons for any differences.” Accordingly, in developing this projection, the Company assessed the need to adjust IRP energy efficiency selections and identified the following categories of required updates:

- **Energy efficiency opportunities not assessed in the CPA:** Projected savings from existing behavioral programs. The behavioral program forecast is based on the Company’s recent expansion and of the treatment and control groups developed for the 2022-2023

biennial period. Cadmus, a third-party evaluator with experience in evaluating home energy report program provided their recommendation that the existing groups should continue to be treated instead of re-randomized. This information was shared with the DSM Advisory Group as part of the target setting process during 2021. The forecast, and associated cost-effectiveness analysis, assumes a one-year measure life and that the savings repeat every year to ensure projected savings are accurately reflected in the target setting process.

- Updates to CPA measure savings resulting from updated RTF information: The Company’s CPA relied on the most current and applicable data available at the time of the analysis (through 2021). As part of the analysis to identify PacifiCorp’s ten-year conservation potential and biennial conservation target, AEG reviewed updated data sources, including updates to RTF deemed measures. These measure-level updates are described in detail in Appendix 1 to this Plan.

The forecast for energy efficiency (encompassing end-use efficiency, behavioral programs and market transformation), accounting for the above adjustments, is provided in Table 6.

Table 6. 2024-2033 Energy Efficiency Forecast – Summary of Adjustments

Category - MWh at Gen	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2024-2033 Cumulative
Washington first year EE selections from W10-SC-CETA	40,313	47,072	35,018	39,718	45,721	45,802	48,201	47,697	44,313	43,396	437,252
Energy Efficiency Adjustments	(2,393)	(2,509)	(2,489)	(2,319)	(2,213)	(3,079)	(3,660)	(3,567)	(3,512)	(3,352)	(29,094)
Home Energy Reports	4,212	3,742	3,323	2,952	2,622	2,329	2,069	1,838	1,633	1,450	26,169
Adjusted Energy Efficiency	42,132	48,305	35,852	40,352	46,129	45,052	46,611	45,967	42,434	41,493	434,328

High-Efficiency Cogeneration

To support the 2023 IRP process, DNV prepared the Private Generation Long-Term Resource Assessment (2023-2042) on behalf of PacifiCorp. The potential for high-efficiency cogeneration in Washington is from this study, which is an economic assessment providing forecasts of projected penetration levels of private generation resources within PacifiCorp’s service areas through 2042, including a Washington-specific assessment of high-efficiency cogeneration. Inputs and levelized costs specific to Washington high-efficiency cogeneration resources are provided in Appendix C¹⁸.

WAC 480-109-060 (18) defines high-efficiency cogeneration as “the sequential production of electricity and useful thermal energy from a common fuel source.” Two of the resources included in the DNV study, combined heat and power (CHP) reciprocating engines and CHP micro turbines, meet this definition and were investigated in detail to determine whether any cost-effective, reliable and feasible potential could be identified in Washington for the 2024-2033 period.

When evaluating the levelized costs for CHP they were found to be lower than the highest annual cost used in the selection for energy efficiency resources. Information on the potential, resultant costs and comparison with cost of energy efficiency selections was shared at the June and July

¹⁸ https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/energy/integrated-resource-plan/2023-irp/2023-irp-support-studies/PacifiCorp_Private_Generation_Resource_Assessment.pdf

2023 DSM Advisory Group meetings. As a result, high-efficiency co-generation was added to the 2024-2025 conservation forecast and it was included in the targets for 2024-2025.

Distribution Efficiency

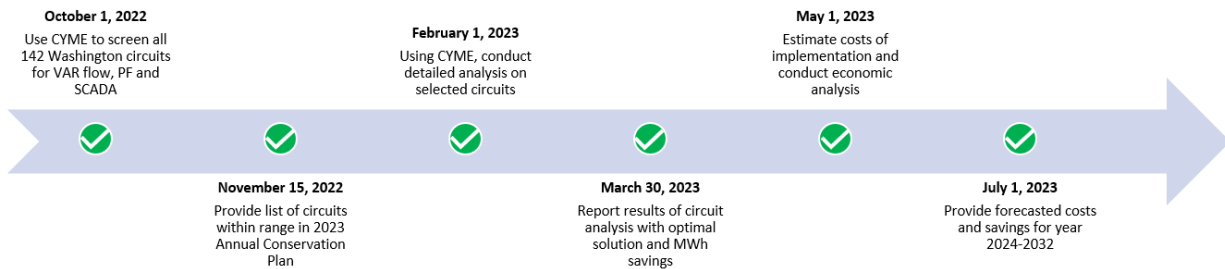
As discussed in previous PacifiCorp Plans, the ability to cost-effectively conserve energy through distribution system initiatives is highly dependent on the characteristics of a given utility’s system.

Distribution efficiency in this plan continues to build upon the Company’s new CYME distribution analysis software, projects completed and the on-going process of updating the CYME distribution analysis model with actual field measurements. Throughout the year, and especially as scheduled planning studies are performed, connectivity corrections and equipment ratings and settings are being researched, verified and input. This process competes for time from engineers performing other routine work. The combination of CYME and updated model information enables more robust analyses of complex scenarios and the assessment of cost-effective, efficiency projects on the distribution system such as VAR reduction.

Two projects identified for the 2022-2023 biennium were completed and a third, the Wiley Substation feeder 5Y164 reconductor and voltage optimization project, was re-scheduled to be complete by end of year 2025. The estimated annual energy savings for this project is 227 MWh and is included in the target in 2025.

The work plan to identify 2024-2025 distribution efficiency conservation potential is summarized in the figure below.

Figure 1 – Process for Review of Distribution Efficiency Conservation Opportunities



The Company used the CYME model to assess energy efficiency opportunities in Washington’s approximately 142 distribution circuits where VAR flow is high enough to cause voltage violations, seasonally high enough to create operational issues, or bring a circuit’s average power factor below 0.95 lagging. Circuits with these characteristics offer the best opportunity for cost effective VAR reduction, although detailed analysis is required. Cost effectiveness for any potential project was assessed with tools consistent with financial analysis used to support recovery of other distribution system investments. None of the potential projects passed economic screening for 2024-2025.

Table 7 – 2024-2025 Biennium Volt/VAR Reduction Economic Screening Results

Circuit	Projected Annual Savings (MWh)	Results of Yakima Local Energy Screening	Results of Washington Schedule 37 Avoided Cost Screening	Project Pass or Fail Economic Screening?
5Y273	86	0.22	0.27	Fail
5Y218	1	0.02	0.02	Fail
5Y351	186	0.15	0.19	Fail
5Y82	2	0.01	0.02	Fail
5Y159	4	0.01	0.01	Fail

The approach was shared with the DSM Advisory Group during the target setting process at the following meetings: March 30, 2023, June 29, 2023, July 27, 2023.

Ahead of the next biennial period (2026-2027), the Company proposes the following approach and schedule to identify opportunities to inform a multi-year forecast.

- Using CYME, screen all circuits with less than 0.95 power factor for volt VAR opportunities by October 1, 2024.
- Provide list of circuits within the range in the 2025 annual conservation plan due in draft by October 15, 2024, and final November 15, 2024.
- Using CYME, conduct detailed analysis on circuits within range in prioritized manner based on circuit total annual MWh usage February 1, 2025.
- Estimate costs of implementation and conduct economic analysis by May 1, 2025.
- Provide forecasted costs and savings by year for 2026 -2034 by July 1, 2025.

Note – the Distribution System Planning team will be forming a Washington Distribution Planning Advisory Group, and this could result in changes to the approach outlined above.

Production Efficiency (in non-hydro generation facilities)

Production Efficiency means “investments and actions that save electric energy from power consuming equipment and fixtures at an electric generating facility.” WAC 480-109-060 (27). Projects need to be in generating facilities allocated to Washington.

The earlier section on Production Efficiency in the Introduction (pages 6-7) contains a summary, and the section below contains the information in the summary plus added details.

Facilities allocated to Washington under WIJAM include:

- Wind: Glenrock/Rolling Hills facilities, Seven Mile Hill 1 and 2, Dunlap, High Plains and McFadden Ridge, Foote Creek Rim, Ekola Flats, TB Flats 1 and 2, Cedar Springs 2, Pryor Mountain, Marengo 1 and 2, Leaning Juniper, Goodnoe Hills
- Thermal: Jim Bridger (coal), Chehalis, Hermiston, and Colstrip (coal)

Detailed studies of opportunities at these plants have been completed in prior periods¹⁹ and were updated as described below for this 2024-2025 Biennial Conservation Plan. Economic screening was performed by generation engineering using the same methodology used to screen investments intended to be recovered in rates. Results and updates were shared with the DSM Advisory Group in June, July, and August 2023.

Production Efficiency – thermal

Opportunities at coal fired plants allocated to Washington, Jim Bridger and Colstrip, were not considered in this period since they will be removed from the allocation at the end of 2025 per CETA. They were not considered in the prior period (2022-2023) either for the same reason.

The engineering studies performed for the two gas fired generation plants, Chehalis and Hermiston, in 2011 were updated recently in 2021 by Cascade Energy Engineering and are included as Appendix 5.

At the time of the 2022-2023 Biennial Conservation Plan, based on the 2021 study, no opportunities existed for Chehalis, and two Hermiston projects passed for proposal to the joint owners – lighting and compressed air. Since this time, the lighting upgrades identified for Hermiston are either complete or projected to be completed in 2023. The company anticipates reporting savings for these projects in 2023, and there are no other lighting savings opportunities at Hermiston. The company revisited the economics of the compressed air opportunity identified for Hermiston and it is still not economic at this time in 2023.

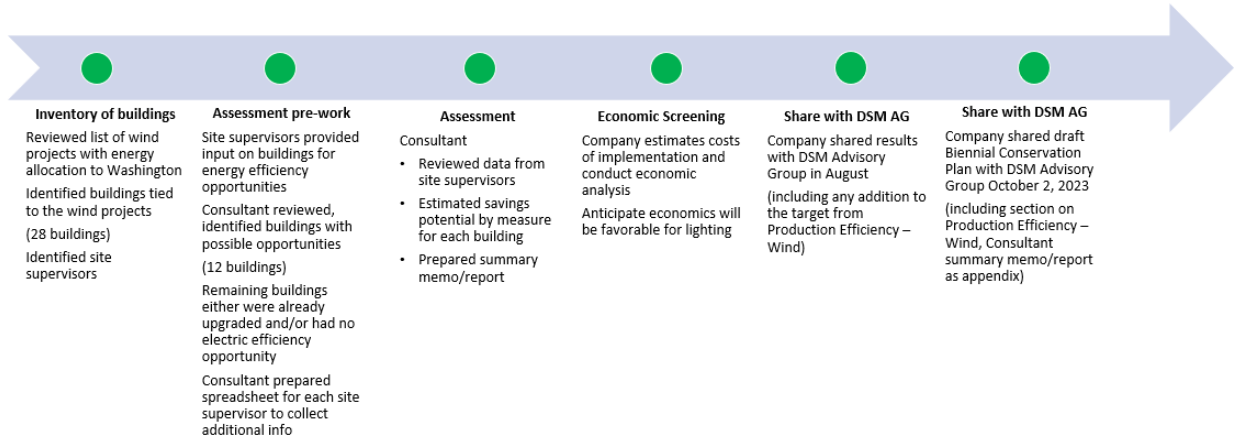
As a result, the Company is not forecasting any cost-effective, reliable and feasible production efficiency from thermal plants during the 2024-2025 period, and thus, no savings from production efficiency (thermal) are included in the Company's 2024-2025 Biennial Conservation Target.

Production Efficiency – Wind

The Goodnoe Hills Wind Project was included in the 2011 production efficiency study, and the estimated savings was very small, so the focus for production efficiency was on thermal plants for the next several biennial periods. The lighting at Goodnoe Hills was updated to LED since the study. Based on questions/interest in revisiting wind production efficiency, the company completed an assessment in 2023. The analysis included an assessment of opportunities and economics for wind generation facilities with an allocation to Washington according to the WIJAM allocation methodology. The work completed in 2023 is outlined in the figure below.

¹⁹ Starting in 2011 and completed in 2012, Cascade Energy completed studies at seven of the eight non-hydro facilities that serve Washington customers. Cascade Energy updated the study for Chehalis and Hermiston in 2021 for the 2022-2023 Biennial Conservation Plan.

Figure 2 - Process for Review of Wind Production Efficiency Opportunities



The updated assessment was completed by Cascade Energy Engineering and is included in Appendix 5. The buildings are typically small offices, shop space, and storage buildings located near groups of wind turbines in Wyoming, Washington, and Oregon. Occupancy is low and intermittent. The primary activities are servicing wind turbines, collecting data, and managing communication equipment. Square footage ranges from approximately 2,500 sf to 8,000 sf (with the exception of a single 20,000 sf unheated storage building). Opportunities identified included lighting and heat pump water heaters. For lighting, many of the buildings were either already updated with LED lighting or were built with LED lighting and have no savings in the LED savings column in the table below. Those that could benefit from a lighting upgrade and/or lighting controls have savings estimates in the table below. For water heating, installing heat pump water heaters is unlikely to be economic given there is minimal hot water use.

Of the buildings with lighting savings potential, the company identified those likely to be completed in 2024-2025 based on the plans for the sites and project economics. Leaning Juniper wasn't included given current staffing plans for the site and can be revisited in the future. The savings potential overall for the wind projects is very limited, especially the Washington allocation, but the company included 1,260 kWh (at the generator) in the target for wind production efficiency (half in 2024 and half in 2025).

Table 8 – Wind Production Efficiency Savings Included in 2024-2025 Target

Project	LED Savings (kWh/yr)	Sensor Savings (kWh/yr)	Total Lighting Savings (kWh/yr)	Include in 2024-2025 Target?	Savings for sites included in target (kWh/yr)	Washington 7.5% Allocation (kWh/yr)
Glenrock/Rolling Hills	644	5,493	6,137			
Seven Mile Hill 1 and 2		4,875	4,875	Yes	4,875	366
Dunlap		2,860	2,860	Yes	2,860	215
High Plains and McFadden Ridge		3,250	3,250	Yes	3,250	244
Foote Creek Rim	283	129	412			
Ekola Flats						
TB Flats 1 and 2						
Cedar Springs 2						
Pryor Mountain		6,141	6,141			
Marengo 1 and 2	2,059	936	2,995	Yes	2,995	225
Leaning Juniper	13,728	6,890	20,618			
Goodnoe Hills		2,824	2,824	Yes	2,824	212
Total	16,714	33,398	50,112		16,804	1,260

kWh @ site = kWh @ gen for Production Efficiency



2024-2025 EIA Target and Penalty Threshold

PacifiCorp’s EIA Penalty Threshold for 2024-2025 is 74,839²⁰ MWH (at site) as shown in the table below. The process of converting the 10-year forecast to a target is described in detail below.

Table 9 – 2024-2025 EIA Target and Penalty Threshold

Category	2024-2025	
	Gross MWh Savings @site	Gross MWh Savings @gen
i. Ten-year potential:	406,486	436,741
ii. Two-year EIA target (includes NEEA):	84,971	91,318
iii. Two-year EIA Penalty Threshold (excludes NEEA):	74,839	80,410
iv. Two-year Decoupling Penalty Threshold (5% of EIA Target):	4,249	4,566
v. Two-Year Utility Conservation Goal (EIA Target + Decoupling):	89,220	95,884
NEEA	10,132	10,908

²⁰ To remain consistent with the Council’s regional power plan, the 10-year potential and two-year target values in this report are shown prior to any net-to-gross adjustment and except for production efficiency.

Cost-Effective, Reliable and Feasible Conservation

As described in WAC 480-109-100 (3), the biennial conservation target must quantify all available conservation that is cost-effective, reliable and feasible, and be no less than a pro-rata share of the 10-year conservation forecast. As shown in Table 9 above, available conservation (at generator) that is cost-effective, reliable and feasible for the 2024-2025 period is 91,318 MWh, and is the two-year sum of the forecast which is greater than the ten-year average share of 87,348 MWh,²¹ and thus satisfies the WAC requirement.

Treatment of NEEA Initiatives

The 2018 Statewide Advisory Group report, which recommended how NEEA is treated in the EIA conservation planning process, was filed in Docket UE-171092 and can be found at: <https://www.utc.wa.gov/casedocket/2017/171092/docsets>. The treatment of NEEA in this plan is consistent with those recommendations.

In preparation for the 2024-2025 biennial target-setting process, PacifiCorp (and the other investor-owned utilities) engaged NEEA to provide a savings forecast for the 2024-2025 period using baselines consistent with the Council's 2021 Plan. NEEA provided a draft forecast on June 14, 2023, which was shared with the DSM Advisory Group during meetings. NEEA outlined the codes and standards that were incorporated into their forecast so that AEG could assess how these codes and standards were treated in the 2023 CPA. This review is similar to prior biennial periods. The review of the current NEEA forecast indicated there was no overlap and no adjustments were necessary. The June 14, 2023, forecast is incorporated into the target.

NEEA outlined their methodology to align their forecast with the regional work, specifically the 2021 Power plan. Specifically, NEEA's forecast:

- Incorporates savings rates and technical assumptions from the RTF approved prior to May 1, 2023.
- In the case where RTF savings rates are not available, the report uses savings rates from the 2021 Power Plan.
- If 2021 Power plan rates are not available, NEEA worked with the Power Council to create a UES based on the original Power Plan baseline assumptions.

Forecasted savings from NEEA, inclusive of programs and codes and standards initiatives (but excluding "trackable measures"), totaled 10,908 MWh (including line losses) for the 2024-2025 period. Consistent with information provided above, these savings are subtracted from the Company's identified EIA target for the purpose of establishing the EIA Penalty Threshold. NEEA's forecast for the 2024-2025 period is described in additional detail in Appendix 3 to this Plan.

Decoupling Commitment

On September 1, 2016, the Commission issued Order 12 in Docket UE-152253. Section (7)(4) of the Order specifies:

Pacific Power must increase its annual conservation targets by 2.5 percent for the current 2016-2017 biennium, and by 5 percent per biennium thereafter through the

²¹ Average annual share of 10 year savings shown in Table 5.

period when decoupling is in effect. The Company's failure to meet its incremental conservation target will be subject to financial penalties.

During development of the 2018-2019 targets, the Company initially applied the five percent adder to the target subject to penalty (after the NEEA deduction). Commission Staff believed it was more appropriate to apply it to the conservation target prior to the NEEA deduction. For the 2024-2025 biennium, the Company is applying the decoupling adjustment, based on five percent of the target prior to the NEEA deduction.

PacifiCorp's 2024-2025 DSM Business Plan

In addition to providing the 10-year conservation potential and the biennial conservation target, WAC rules require utility Biennial Conservation Plans to provide additional detail relating to conservation program implementation outreach, and evaluation. To satisfy the WAC requirements while clearly delineating between target-setting and implementation activities, the Company includes its DSM Business Plan as Appendix 2 to this Plan. The DSM Business Plan includes the following information:

- Biennial program details, biennial program budgets, and cost-effectiveness calculations, consistent with WAC 480-109-120 (1) (b) (iii),
- Information on evaluation, measurement and verification activities for the biennium, consistent with WAC 480-109-120 (1) (b) (vi), and
- Pilot initiatives identified for the 2024-2025 biennium, consistent with WAC 480-109-100 (1) (c)
- Clean Energy Implementation Plan Utility Actions identifying the plan for increasing Named Community customer participation in energy efficiency programs²²

In addition to conservation targets, the CEIP also includes targets for demand response. PacifiCorp launched two programs (Irrigation Load Control and Commercial/Industrial Curtailment) and is currently enrolling customers. PacifiCorp expects to begin enrolling residential customers for a third program (Optimal Time Rewards) in Q4 2023. The Home Energy Savings and Wattsmart Business program descriptions in the DSM Business Plan include co-deployment plans for supporting customer enrollment in the demand response programs. Additional demand response programs are planned²³ and the co-deployment strategies for these will be developed during implementation planning.

The savings, budgets, and cost-effectiveness results presented in the DSM Business Plan represent PacifiCorp's current forecast based on the best information available at the time of this filing. On or before November 15, 2024, PacifiCorp will file an Annual Conservation Plan for 2025, reflecting updated forecasts for savings and budgets for the remainder of this biennial period.

Cost Recovery Mechanism

PacifiCorp recovers costs associated with its demand-side management programs through the System Benefits Charge (SBC), which is administered through Schedule 191. The SBC was

²² These DSM Utility Actions are also in the Clean Energy Implementation Plan Biennial Update (filing 11/1/2023)

²³ Additional demand response programs in the planning stages include EV Managed Charging and a batteries program.

originally approved by the Commission in Docket UE-001457. The SBC was last adjusted in 2022 when it was increased from an annual collection rate of approximately \$10.6 million to the current collection rate of \$18.8 million. The current SBC collection rate was approved in Docket UE-220411 with an effective date of August 1, 2022. The current SBC collection rate represents approximately 4.8 percent of Washington retail electric revenues. A petition for exemption from WAC 480-109-130 and Condition 12(d) in Order 01 in Docket UE-210830 was filed in Docket UE-230293 and allowed to become effective per the Consent Agenda on May 25, 2023.

For the 2024-2025 biennium, PacifiCorp intends to recover through the SBC costs associated with approved conservation programs, planning (including PacifiCorp’s estimated share of NEEA’s end use load research initiative) and program administrative costs, and costs associated with compliance with WAC 480-109 and conditions from Commission’s Order 01 in Docket UE-152072. As specified in condition (9) (d) of that order and also condition 12c of Order 01 in Docket UE-210830, costs associated with distribution and production efficiency will be recovered through a general rate case, rather than through the SBC. Projected costs for the 2024-2025 biennium are provided in the DSM Business Plan, Appendix 2 to this Plan.

Consistent with WAC 480-109-130, related to conservation cost recovery adjustment, PacifiCorp will review the adequacy of Schedule 191 collections each year and make a filing, if necessary, to adjust the collection rate no later than June 1, with an effective date of at least 60 days after the filing. If no adjustment is needed, by no later than May 1 the Company will file a request for exception and supporting documents explaining why an adjustment is not needed. In 2024, the company may revisit the demand response program balancing account and potentially seek amortization of the deferred amount through Schedule 191²⁴.

Plan Compliance Information

Table 10 – 2024-2025 Plan Development Compliance Requirements

DSM Advisory Group	
WAC 480-109-110 (1)	
A utility must maintain and use an external conservation advisory group of stakeholders to advise the utility on conservation issues, including those listed in the above-referenced section of the code.	A list of DSM Advisory Group meetings and topics covered along with a link to meeting slides is provided in the “Stakeholder Engagement” section of this Plan.
WAC 480-109-110 (2)	
A utility must meet with its conservation advisory group at least four times per year.	A list of the relevant 2022 and 2023 DSM Advisory Group meetings and IRP Public Input meetings is provided in the Stakeholder Engagement section of this Plan. The DSM Advisory Group met 5 times in 2023 as of October 2.
WAC 480-109-110 (3)	

²⁴ In Dockets UE-220550 and UE-220848, the company indicated its intent to utilize Schedule 191 (System Benefit Charge Adjustment) for the recovery of costs associated with the demand response programs.

<p>A utility must provide its conservation advisory group an electronic copy of all conservation filings that the utility 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.</p>	<p>A draft version of this Plan was provided to the DSM Advisory Group on October 2, 2023. The Company will continue to comply with this requirement during the 2024-2025 biennium.</p>
<p>Docket UE-210830 Order 01 Attachment A (3) (b)</p>	
<p>PacifiCorp must notify Advisory Group members of all public meetings scheduled to address PacifiCorp’s integrated resource plan.</p>	<p>DSM Advisory Group members are on the IRP email distribution list and receive direct notification of IRP meetings.</p>
<p>Pacific Power 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 Pacific Power’s integrated resource plan as they apply to 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.</p>	<p>The Company distributed the draft workplan for the 2023 CPA to the DSM advisory group and commission staff on January 12, 2022 and the draft measure list on for feedback and comment on April, 7, 2022.</p> <p>CPA overview and DSM modeling were presented to the DSM advisory group throughout the process, highlighting responses to questions raised by the group. Presentations on the CPA and DSM modeling were made on February 28, 2022, April 28, 2022, June, 28, 2022, September 8, 2022, and December, 12, 2022.</p> <p>Additionally, the Company held five CPA workshops in the 2023 public participation process.</p> <p>Company will arrange for presentation of 2025 CPA work plan to DSM Advisory Group for feedback. This meeting is estimated to occur in Q4 2023 or early in Q1 2024.</p>
<p>PacifiCorp 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.</p>	<p>The Company included the DSM advisory group on the email distribution list for the IRP public meetings which highlight forthcoming agenda topics. The forward price forecasts were presented on May 12, 2022 and Sept 1, 2022. The CPA was also discussed at both of these meetings as well.</p>
<p>Docket UE-210830 Order 01 Attachment A (3) (c)</p>	
<p>Pacific Power must consult with the Advisory Groups starting no later than July 1, 2023, to begin to identify achievable conservation</p>	<p>PacifiCorp began discussing the development of its 2024-2033 conservation forecast and 2024-2025 biennial conservation target at the</p>

<p>potential for 2024-2033 and to begin to set annual and biennial targets for the 2024-2025 biennium, including necessary revisions to program details and the quadrennial 2022-2025 CEIP target.</p>	<p>June 29, 2023 DSM Advisory Group meeting. Conversations continued leading up to the filing of this Plan.</p>
<p>Docket UE-210830 Order 01 Attachment A (3) (d)</p>	
<p>Pacific Power must inform the Advisory Group members when its projected expenditures indicate that Pacific Power will spend more than 120 percent or less than 80 percent of its annual conservation budget.</p>	<p>To meet this condition, PacifiCorp provided its 2022-2023 expenditure forecast and requested feedback at the following DSM Advisory Group meetings: 2/28/2022, 4/28/2022, 6/28/2022, 9/8/2022, 12/14/2022, 3/30/2023, 6/29/2023, 7/27/2023, 8/31/2023 and 9/13/2023.</p>
<p>Docket UE-210830 Order 01 Attachment A (3) (e)</p>	
<p>If Pacific Power 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, PacifiCorp will confer with the Advisory Group members as soon as possible to determine a path forward.</p>	<p>PacifiCorp provided its 2022-2023 savings forecast showing a shortfall and discussed reasons related to the lingering effects of the COVID-19 pandemic at the following DSM Advisory Group meetings: 2/28/2022, 4/28/2022, 6/28/2022, 9/8/2022, 12/14/2022, 3/30/2023, 6/29/2023, 7/27/2023, 8/31/2023 and 9/13/2023. PacifiCorp also cited cancellation of significant projects at the following meetings: 6/29/2023, 7/27/2023, 8/31/2023 and 9/13/2023.</p>
<p>Docket UE-210830 Order 01 Attachment A (3) (f)</p>	
<p>Prior to filing the 2024-2025 Biennial Conservation Plan, Pacific Power 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, 2023; draft program details, including budgets, by September 1, 2023; and draft program tariffs by October 2, 2023.</p>	<p>PacifiCorp shared the draft ten-year conservation potential, revised four-year target, and two-year target at the DSM Advisory Group meeting on 7/27/2023. PacifiCorp shared draft program details, including budgets, at the DSM Advisory Group meetings on 8/31/2023 and 9/13/2023. PacifiCorp also shared at those two meetings there were no program tariff revisions needed at this time. On 9/1/2023, PacifiCorp emailed details on planned 2024 Home Energy Savings and Wattsmart Business program changes and requested comments.</p>

Conservation Forecast and Target Development	
WAC 480-109-100 (2) and (3)	
By January 1, 2010, and every two years thereafter, a utility must project its cumulative ten-year conservation potential and establish a biennial conservation target.	This Plan provides the projection for the 2024-2033 period and the target for the 2024-2025 biennium.
This projection must consider all available conservation resources that are cost-effective, reliable and feasible. This projection must be derived from the utility's most recent IRP, including any information learned in its subsequent resource acquisition process, or the utility must document the reasons for any differences.	The process for identifying cost-effective, reliable and feasible potential, beginning with the results of PacifiCorp's 2023 IRP process (including the use of CETA compliant portfolio and incorporating non-energy impacts discussed with the DSM Advisory group in 2022), is described in the Conservation Potential and Conservation Targets section of this Plan.
When developing this projection, utilities must use methodologies that are consistent with those used in the Northwest Conservation and Electric Power Plan.	The methodology used by the Company to develop its conservation forecast is detailed in Volume 2 of the 2023 CPA ²⁵ and in the Conservation Potential and Conservation Targets section of this Plan. During 2018, the utility members of the Statewide Advisory Group produced an updated matrix comparing their elements of the Total Resource Cost (TRC) test and the Northwest Power and Conservation Council. As described in the August 8 th , 2019 open meeting staff memo, "each utility was similar enough to be considered consistent with the method used by the NWPCC". The matrix updated in 2018 was first developed in 2011 as part of the Methodology Sub-Committee of the Washington Collaborative Working group on Avoided Costs and Total Resource Cost Determinants. An in-depth review of methodologies was also provided as Appendix 3 of PacifiCorp's 2016-2017 Biennial Conservation Plan.
The projection must include a list of each measure used in the potential, its unit energy savings value, and the source of that value.	A list of each measure used in the potential, including the required information, is provided as Appendix H of the 2023 Conservation Potential Assessment.
The biennial conservation target must identify, and quantify in megawatt-hours, all available conservation that is cost-effective, reliable and	The process for developing the 2024-2025 biennial conservation target is detailed in the Conservation Potential and Conservation

²⁵ The 2023 CPA and all previous studies are available on the Company's website: <https://www.pacificorp.com/energy/integrated-resource-plan/support.html>.

feasible and (b) The biennial conservation target must be no lower than a pro rata share of the utility's ten-year conservation potential.	Targets section of this Plan. The identified target, before adjusting for NEEA and decoupling, is the first two years of the ten-year forecast as this is higher than the pro rata share.
Docket UE-210830 Order 01 Attachment A (1) (b)	
The Commission approves targets and thresholds as measured at the customer meter. All planning and reporting must include savings data as measured at the customer meter.	The target and savings forecast data in this 2024-2025 plan are provided both at the customer meter (also referred to as “at site”) and at the generator.

Program Implementation, Management and Evaluation	
WAC 480-109-110 (4)	
A utility must notify its conservation advisory group of company and commission public meetings scheduled to address its conservation programs, its conservation tariffs, or the development of its conservation potential assessment.	“Stakeholder Engagement” section in this Conservation Plan provides the list of meetings where information relevant to the development of the ten-year conservation potential and/or conservation program information was presented. In a prior biennial period, Company confirmed that members of the Company’s DSM Advisory Group were included on the Company’s IRP stakeholder contact/email list.
Docket UE-210830 Order 01 Attachment A (1c)	
As part of PacifiCorp’s biennial conservation acquisition efforts, PacifiCorp 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 PacifiCorp’s energy efficiency programs, planning, services, and measures.	The company continues to invest in regional studies and market transformation including the Regional Technical Forum, Northwest Energy Efficiency Alliance. NEEA cycle 6 Strategic Energy Management infrastructure, NEEA cycle 6 Multifamily Stock Assessment, End Use Load Research.
Docket UE-210830 Order 01 Attachment A (4)	
PacifiCorp 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. PacifiCorp must allocate a reasonable amount of its program budget (as determined through consultation with the Advisory Group) towards pilot programs, research, and data collection.	Projected annual budgets for the 2024-2025 biennium are provided in the DSM Business Plan and supporting workbook.
Docket UE-210830 Order 01 Attachment A (5)	

<p>PacifiCorp 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. PacifiCorp must notify the Advisory Group when it files updated measures, incentives, or eligibility requirements.</p>	<p>This process is described in the DSM Business Plan (Appendix 2 to this Plan).</p>
<p>Docket UE-210830 Order 01 Attachment A (6) (c)</p>	
<p>Pacific Power must spend a reasonable amount of its conservation budget on EM&V.</p>	<p>PacifiCorp’s planned evaluation activities and associated budgets are provided in the DSM Business Plan (Appendix 2 to this Plan).</p>
<p>WAC 480-109-100 (5) (a) & (b)</p>	
<p>Energy savings. A utility must use unit energy savings values and standard protocols approved by the regional technical forum, unless a unit energy savings value or standard protocol is: (a) Based on generally accepted methods, impact evaluation data, or other reliable and relevant data that includes verified savings levels; and (b) Presented to its advisory group for review. The commission retains discretion to determine an appropriate value or protocol.</p>	<p>Data sources used to develop the conservation forecast and biennial target are outlined in Volume I and Volume II of the 2023 CPA. Appendix D of the 2023 CPA provides a direct comparison of unit energy savings values used in that study to those developed by the RTF and by the Council for its 2021 Power Plan. Adjustments to those values, where appropriate, are described in detail in Appendix 1 of this Plan.</p>
<p>WAC 480-109-100 (7)</p>	
<p>A utility 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.</p>	<p>The comprehensive portfolio of programs, available services and incentives described in the DSM Business Plan (Appendix 2 to this Plan) are relevant to all customer sectors, including limited income customers.</p>
<p>Docket UE-210830 Order 01 Attachment A (7) (c)</p>	
<p>PacifiCorp 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. PacifiCorp 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</p>	<p>As described in the Business Plan, the only conservation effort without EM&V is the “Be Wattsmart, Begin at Home” school initiative. There is no savings reporting planned for this initiative. Forecasted expenditures for this effort during the biennial period are \$145,310 and represents 0.29% of the preliminary PacifiCorp conservation budget of \$49,316,013.</p>

<p>behavior change services must be assigned no quantifiable energy savings value without full support of the Advisory Group.</p> <p>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.</p>	
<p>Docket UE-210830 Order 01 Attachment A (8) (a-c) & WAC 480-109-100 (8)</p>	
<p>a) 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, a risk adder, and a 10 percent conservation benefit adder. PacifiCorp’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.</p> <p>b) Pacific Power 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.”</p> <p>c) Conservation-related administrative costs must be included in portfolio level analysis.</p>	<p>PacifiCorp uses the Total Resource Cost test, as modified by the Council, to screen Washington energy efficiency resources in its IRP. Program and portfolio-level cost-effectiveness results for the 2024-2025 biennial period, showing that the portfolio is expected to be cost-effective from the TRC perspective (including conservation-related administrative costs) and Utility Cost Test results are provided in the DSM Business Plan (Appendix 2 to this Plan).</p>
<p>Docket UE-210830 Order 01 Attachment A (10) (a)</p>	
<p>Pacific Power must evaluate opportunities for location-targeted programs that provide non-wires alternatives to eliminate or delay the need for distribution system investments</p>	<p>Circuits with potential for deferral of capital projects for 2024-2025 are listed in the DSM Business Plan in the pilots section.</p>
<p>Docket UE-210830 Order 01 Attachment A (10) (b)</p>	
<p>PacifiCorp is encouraged to promote the adoption of air conditioning with refrigerants not exceeding a global warming potential (GWP) of 750 and the replacement of stationary refrigeration systems that contain ozone-depleting substance or hydrofluorocarbon refrigerants with a high GWP. At a minimum, PacifiCorp must explore the feasibility of determining and</p>	<p>The company discussed condition 10b in 2022 at the following DSM Advisory Group meetings: 6/28/2022, 9/8/2022. NEEA provided the following input at the June 2022 DSM Advisory Group meeting:</p> <ul style="list-style-type: none"> • With federal regulation already in place, and even more stringent WA regulation on the way, Washington is on track for conversion to low GWP refrigerants by 2025.

<p>incorporating of the avoided emissions associated with replacing refrigerants exceeding 750 GWP in its cost-effectiveness calculations and discuss the results with its Advisory Group as necessary.</p>	<ul style="list-style-type: none"> • Small window of opportunity to endorse, incentivize low GWP products between now and 2025; <i>but</i> manufacturers are already moving as quickly as they can – product availability may be an issue before 2025. • WA DoE rulemaking continues through 2023 – opportunity to submit comments (NEEA role). <p>The company’s plan proposed at the September 2022 meeting:</p> <ul style="list-style-type: none"> • Investigate possibility of incorporating NEI for refrigerant emissions using refrigerant tool from CA • Work on this jointly with PSE and Avista if possible • Explore uses for cost-effectiveness <p>At this time, there isn’t sufficient market data available to substantiate quantification of an NEI. The company is engaged and monitoring RTF activity regarding GWP accounting.</p>
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Docket UE-210830 Order 01 Attachment A (10) (c)

<p>PacifiCorp should consult with its Advisory Group to determine how it should implement RCWs 80.28.260(2) and 80.28.300. Such consultation should include, but is not limited to: whether and how to research and evaluate opportunities for cool roof and tree planting conservation, with special consideration given to highly impacted communities and vulnerable populations; whether and how to provide information to their customers regarding landscaping that includes tree planting for energy conservation; and what outreach and education efforts should be conducted to inform customers of the energy and nonenergy benefits of cool roofs and strategic tree planting. PacifiCorp should utilize the department of health’s environmental health disparities map and coordinate with the department of natural resources to identify areas within the utility’s service territory that would benefit from heat island mitigation and strategic tree planting programs.</p>	<p>The company discussed condition 10c at the following DSM Advisory Group meetings: 6/28/2022, 9/8/2022, 12/14/2022</p> <p>Cool roofs: Incentives for cool roofs are available in the Wattsmart Business program – WA wattsmart Business Building Envelope Retrofits Incentives.pdf (pacificpower.net)</p> <p>Tree Planting Conservation:</p> <p>NWEC provided important resources and assistance, including convening a meeting with the Washington Department of Natural Resources.</p> <p>With input from Vegetation Management, in November 2022, the company updated its website on tree planting to include conservation messaging - Tree Pruning & Planting (pacificpower.net)</p> <p>AEG refined CPA assumptions for tree planting measure, and it was provided to and selected by the 2023 IRP model.</p> <p>Included Tree Planting Conservation in the Request for Proposals issued 9/1/2023 to reprocure program delivery services for Home Energy Savings.</p> <p>Plan agreed upon with the DSM Advisory Group is to pursue System Benefits Charge funding if a tree planting program is cost-effective.</p>
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Docket UE-210830 Order 01 Attachment A (11) (a-c)	
<p>a) During this biennium, Pacific Power must demonstrate progress towards identifying, researching, and developing a plan to properly value nonenergy impacts that have not previously been quantified. The nonenergy impacts considered must include the costs and risks of long-term and short-term public health benefits, environmental benefits, energy security, and other applicable nonenergy impacts.</p> <p>b) Pacific Power must identify the discrete nonenergy impacts 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 spreadsheets, 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.</p> <p>c) To the extent practicable, Pacific Power must begin to identify the distribution of energy and nonenergy benefits in annual plans and reports. This reporting must use currently quantified nonenergy impacts as well as values and estimates of additional impacts as they become available</p>	<p>PacifiCorp in conjunction with the other investor-owned utilities contracted with DNV to assess and quantify additional non-energy impacts for use in the 2022-2023 planning process. Additional refinements to valuations were made in conjunction with the DSM Advisory Group. The Company also presented on adoption of a newly calculated resiliency benefit for residential weatherization measures applying methods used by a study funded by the RTF. The NEI values are included as appendix 4 in the biennial conservation plan. Non-energy impacts by measure included in AEG cost effectiveness memos included with DSM Business Plan.</p> <p>Non-energy impacts by measure will be included in cost effectiveness provided in the 2024 annual report and the 2025 Annual Conservation Plan.</p>

Low-Income and Named Community Programs	
WAC 480-109-100 (10) (a)	
<p>Low-income conservation. A utility 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 department 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-</p>	<p>The Company plans to continue to fully fund low-income conservation measures through its Low-Income Weatherization program. Projected savings from these efforts are included in the Biennial Conservation Target but excluded from portfolio-level cost-effectiveness analysis. The Low-Income Weatherization program includes funding for repairs associated with low-income conservation measures. Program details, including projected savings and budgets, are provided in the DSM Business Plan (Appendix 2 to this Plan).</p>

<p>effective. In addition, a utility may fully fund repairs, administrative costs, and health and safety improvements associated with cost-effective low-income conservation measures.</p>	
<p>WAC 480-109-100 (10) (b)</p>	
<p>The utility's biennial conservation plan must include low-income conservation programs and mechanisms identified pursuant to RCW 19.405.120. To the extent practicable, a utility must prioritize energy assistance to low-income households with a higher energy burden.</p>	<p>The company's Low Income Weatherization program is included in this plan.</p> <p>PacifiCorp has long-term partnerships in place with local community action agencies to provide weatherization services to income-qualifying households throughout its Washington service areas. Agencies determine participant income eligibility and prioritize eligible weatherization clients based on Washington Department of Commerce guidelines, with priority given to the elderly (60 years of age or older), persons with disabilities, children nineteen year of age or under, high residential energy users, households with high energy burden, and Native American with particular emphasis on households residing on reservations. (Weatherization Policy, Policy 1.2.1)</p>
<p>WAC 480-109-100 (10) (c)</p>	
<p>A utility must exclude low-income conservation from portfolio-level cost-effectiveness calculations. A utility must account for the costs and benefits, including nonenergy impacts, which accrue over the life of each conservation measure.</p>	<p>Low Income Weatherization is excluded from portfolio level cost-effectiveness calculations.</p> <p>Cost-effectiveness calculations include costs and benefits, including nonenergy impacts. Where possible, the Company has made efforts to apply non-energy impacts specific to low-income programs in its accounting. For more information, refer to the cost-effectiveness and NEI sections in this plan (including in the DSM Business Plan and NEI appendices).</p>
<p>WAC 480-109-100 (10) (d)</p>	
<p>A utility must count savings from low-income conservation toward meeting its biennial conservation target. Savings may be those calculated consistent with the procedures in the Weatherization Manual.</p>	<p>Low Income Weatherization projected savings is included in the DSM Business Plan and will be reported in the 2024 and 2025 DSM Annual Reports and the 2024-2025 Biennial Conservation Report.</p>

Docket UE-210830 Order 01 Attachment A (9) (a)	
<p>PacifiCorp must demonstrate progress toward sustained energy burden reductions during the 2022-2023 biennium by, at a minimum, funding all eligible and cost-effective low-income conservation measures.</p> <p>i.) PacifiCorp'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.</p> <p>ii.) Energy savings from low-income conservation measures will be counted toward conservation goals.</p> <p>iii.) PacifiCorp 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. PacifiCorp shall maintain a project cost allowance of up to 30 percent for Administrative/Indirect Rate associated with the delivery of low-income conservation measures.</p>	<p>Company expanded low-income bill assistance as outlined in UE-210533. Changes were approved by Commission and took effect on August 1, 2021. The Company also shared learnings from its energy burden assessment during the June 28, 2022 DSM Advisory Group meeting²⁶.</p> <p>See Appendix G of Conservation Potential Assessment. Low income is a segment.</p> <p>See filing and staff review of UE-210533.</p> <p>DSM Business Plan includes changes to Schedule 114 approved by the Commission to increase repair budget and permit installation of efficient electric heat in an expanded set of baseline conditions.</p>
Docket UE-210830 Order 01 Attachment A (9) (b)	
<p>PacifiCorp must consider how and whether existing conservation programs serve the highly impacted communities and vulnerable populations identified in its CEIP. In addition, PacifiCorp must 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.</p>	<p>For the 2022-2023 biennium, as one part of its CEIP DSM Utility Actions, the company introduced enhanced incentives for customers located in Highly Impacted Communities for select measures. The intent of this change is to increase participation for customers in Highly Impacted Communities. Results are measured by the Customer Benefit Indicator metrics (number of households and businesses participating).</p>

²⁶https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/energy/ceip/DSM_Advisory%20Group_Meeting_June_Energy_Burden_Assessment_Slides.pdf

	<p>At the June 2023 DSM and Equity Advisory Group meetings, the company reviewed the results of its 2022-2023 Utility Actions. The presentation included CBI metric results, then the company went through each utility action and summarized the results and reflections on the action. This work fed into the development of updated utility actions and program changes to increase Named Community customer participation. The company reviewed the draft updated utility actions and associated program changes with the DSM and Equity Advisory groups in August and September 2023 to seek their input.</p> <p>The DSM Utility Actions described in this plan are anticipated to continue to improve Named Community customer participation. The company will share progress (e.g., Customer Benefit Indicator metrics) and seek input from the Advisory Groups to adaptively manage its programs.</p>
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Additional Commitments	
Docket UE-210830 Order 01 Attachment A (13)	
<p>a) PacifiCorp 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. PacifiCorp’s Annual Report must include updates regarding production efficiency activities in power production facilities operated by PacifiCorp and, to the extent practicable, facilities wholly or partially owned by PacifiCorp that are not operated by the Company.</p> <p>b) To avoid double-counting of efficiency savings achieved at electric power production facilities owned in whole or in part by PacifiCorp, the Company must consult with the Advisory Group when developing or modifying its protocol for how savings will be claimed.</p>	<p>See section in this plan on Production efficiency savings potential (both thermal plants and wind projects).</p>

List of Appendices

- 1) Conservation Forecast Adjustments made to PacifiCorp's Ten-Year Conservation Forecast
- 2) PacifiCorp's Washington 2024-2025 Demand-side Management Business Plan
- 3) Northwest Energy Efficiency Alliance 2024-2025 Forecast for PacifiCorp's Washington service area
- 4) Non-energy impacts report and NEI values (three files)
- 5) Production Efficiency Studies (three files)
- 6) Competitive Procurement Framework

Appendix 1 - Conservation Forecast Adjustments

WAC 480-109-100 (2) (b) referring to a utility's ten-year conservation potential, states "This projection must be derived from the utility's most recent IRP, including any information learned in its subsequent resource acquisition process, or the utility must document the reasons for any differences." Accordingly, in developing this projection, the Company assessed the need to adjust IRP energy efficiency selections and identified the categories of required updates described below.

The general methodology for updating the 2023 IRP energy efficiency selections found in the W10-SC CETA portfolio for the 2024-2033 forecast period is summarized in the main body of this Biennial Conservation Plan. This process updated Unit Energy Savings (UES) assumptions from PacifiCorp's 2023 CPA, performed by Applied Energy Group (AEG), to the most current and applicable available data. A summary of the adjustment amounts by technology and year can be found in Table 6 in the main body of this Plan.

PacifiCorp and AEG identified two types of updates to incorporate into the adjustment analysis:

- 1. Material updates to measures based on updated RTF UES values since the time of the CPA analysis.** The RTF regularly reviews UES measures and publishes updated workbooks. AEG reviewed all recent RTF measure updates as of June 15, 2023, to identify any measures with new analysis since the time of the CPA analysis. Once all measure updates were identified, AEG determined whether changes were material by reviewing:
 - a. Whether the measure was deemed economic in PacifiCorp's IRP modeling,
 - b. The relative change in the RTF UES value, and
 - c. The total amount of potential associated with the measure.
- 2. Updates to key measures to improve alignment between target and business plan.** The major updates included:
 - a. Removal of all general service and exterior lighting potential from moderate- and regular-income residential segments to reflect the transformed market assumed by the RTF while leaving a modicum of low-income savings on the table. Whether the low-income savings come from retail or direct install, there is still space for some program activity expected in these segments.
 - b. Reduction of non-residential linear lighting potential to reflect the higher base saturations and purchase shares of linear LEDs assumed by the RTF in the latest non-residential lighting analysis.
 - c. Irrigation measure updates to reflect that PacifiCorp will be claiming program savings using the "Eastern Washington and Oregon" region from the RTF's analysis.

A summary of adjusted measures is provided in Table A1-1, including the version of the RTF UES workbook used to make the adjustment. The notes column indicates if an adjustment is required and the updated information primarily responsible for the change. The adjustment methodology focuses on the unit energy savings of the affected equipment and most adjustments are performed utilizing a ratio between the prior and the updated unit energy savings. Table A1-2 provides the magnitude of the adjustment by year over the forecast period.

Table A1-1 RTF Adjustment Summary

Workbook to be Updated	Last Updated	Version	Notes
Residential Duct Sealing	2/27/2023	7.2	Slight reduction in savings for duct sealing
Residential Lighting	4/4/2023	11.1	Removal of all retail installation options for residential lighting.
Residential Line-Voltage Thermostats	6/14/2022	5.2	Decrease in thermostat savings.
Irrigation Hardware Upgrades	5/26/2022	2.2	Adjustment in region for program reporting.
Irrigation Hardware Maintenance	4/18/2022	6.0	Adjustment in region for program reporting.
Non-Residential Pumps	6/14/2023	4.1	Adjustment in savings approach and overall reduction in savings
Display Case - LED Lighting	4/18/2022	6.0	Adjustment to use RTF instead of 2021 Plan.
On-Demand Overwrappers	4/26/2023	3.1	Update to efficient overwrapper measure.
Thermostatically Controlled Outlets	3/29/2023	3.1	Update to outlet measure.

Table A1-2 RTF Adjustment by Year (MWh at Generator)

Measure	Sector	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2024-33
IRP Adjustment Total	All	(2,393)	(2,509)	(2,489)	(2,319)	(2,213)	(3,079)	(3,660)	(3,567)	(3,512)	(3,352)	(29,094)
Ducting - Repair and Sealing	Res	(7)	(14)	(23)	(36)	(50)	(63)	(73)	(78)	(77)	(71)	(492)
Connected Thermostat - Line-Voltage	Res	(1)	(3)	(4)	(6)	(9)	(11)	(15)	(18)	(21)	(23)	(111)
General Service Lighting	Res	(268)	(283)	(162)	-	(0)	-	-	-	(1)	(1)	(715)
Exempted Lighting	Res	(1)	(2)	(0)	(0)	-	-	-	-	-	-	(3)
Grocery - Display Case - LED Lighting	Com	(1)	(2)	(2)	(2)	(3)	(3)	(3)	(3)	(2)	(2)	(22)
Grocery - On-Demand Overwrappers	Com	(1)	(1)	(1)	(1)	(1)	(2)	(1)	-	-	-	(8)
Agriculture - Thermostatically Controlled Outlets	Ind	0	0	0	0	0	0	0	0	0	0	2
Agriculture - Efficient Stock Watering Tanks	Ind	(0)	(0)	(0)	-	-	-	-	-	-	-	(0)
General Service Lighting	Non-Res	(519)	(144)	(158)	(74)	-	(0)	(3)	(5)	(6)	(5)	(913)
Exempted Lighting	Non-Res	(4)	(1)	(1)	(1)	-	-	(0)	(0)	(0)	-	(7)
Linear Lighting	Non-Res	(886)	(1,363)	(1,434)	(1,496)	(1,537)	(2,541)	(3,226)	(3,220)	(3,234)	(3,136)	(22,073)
Motors - Variable Frequency Drive	Irr	(855)	(853)	(851)	(848)	(761)	(606)	(483)	(384)	(306)	(244)	(6,190)
Wheel/Hand - Leveler Maintenance	Irr	4	4	4	4	4	4	4	3	3	3	37
Wheel/Hand - Drain Replacement	Irr	11	11	11	10	10	10	10	10	9	9	101
Wheel/Hand - Gasket Replacement	Irr	15	15	15	15	15	14	14	14	14	14	145
Wheel/Hand - Nozzle Replacement	Irr	24	24	24	24	24	23	23	23	23	23	235
Wheel/Hand - New or Rebuilt Impact Sprinkler	Irr	2	2	2	2	2	2	2	2	2	2	19
Center Pivot/Linear - Sprinkler Package Replacement	Irr	72	72	71	70	69	68	64	64	63	62	674
Center Pivot/Linear - Sprinkler Package Upgrade	Irr	22	27	20	20	24	26	26	25	21	16	227
Total Residential Adjustments	Res	(278)	(301)	(190)	(42)	(59)	(74)	(87)	(96)	(99)	(96)	(1,322)
Total Non-Residential Adjustments	Non-Res	(2,115)	(2,208)	(2,299)	(2,277)	(2,155)	(3,005)	(3,573)	(3,472)	(3,412)	(3,256)	(27,772)

Appendix 2 - Demand-Side Management Business Plan For 2024-2025

(Appendix 2 is voluminous and therefore provided in a separate file)

Appendix 3 - Northwest Energy Efficiency Alliance 2024-2025 Forecast

2024-2025 NEEA Forecast.pdf

Appendix 4 - Non-energy impacts report and values (three files)

BCP Appendix 4 NEI Values Updated Adjustment Factors.xlsx

BAP Appendix 4 DNV_Final_Report_Pacificpower_NonEnergyImpacts_211025.pdf

BCP Appendix 4 NEI Resilience Valuation Tool_Final 2022_WA.xlsx

Appendix 5 – Production Efficiency Studies (three files)

BCP Appendix 5 – Hermiston I-937 Sep 2021 Revision.pdf

BCP Appendix 5 – Chehalis I-937 Sep 2021 Revision.pdf

BCP Appendix 5 – PacifiCorp Wind Farm Building Energy Survey 2023 08 18.pdf

Appendix 6 – Competitive Procurement Framework

Appendix 6 - Competitive procurement framework for Washington Conservation and Efficiency Resources

**Provided for review and comment to DSM AG in July 2023
Final version filed as appendix to 2024-2025 Biennial Conservation Plan**

Background:

This framework is provided as required by [WAC 480-107-065](#), Acquisition of conservation and efficiency resources, and is consistent with the rule. The rule text is included for reference below following the framework.

Acquisition of Washington conservation and efficiency resource(s) in sufficient quantities to achieve EIA targets and the specific targets for energy efficiency described in PacifiCorp's Clean Energy Implementation Plan requires on-going relationships with customers, trade allies, distributors, contractors, professional associations and other market actors. Third party delivery contractors performing this work for the company in Washington (in addition to other Pacific Power states) benefit from a reasonable level of contractual continuity as they develop and maintain these relationships. Contractual continuity enables adaptive management of program delivery. Most importantly, continuity is critical for customers who require knowledgeable and timely response to project related needs. Both customers and implementation team rely on trusted relationships to maintain implementation schedules and continued participation.

Contractual continuity needs to be proactively balanced with the need for innovation, best pricing and opportunities for new providers. The company has a robust procurement process that provides services to ensure business units such as Customer Solutions can effectively manage these multiple objectives. In some cases, pricing, delivery and innovation may be enhanced by contracting for delivery across multiple Pacific Power states. A robust and competitive procurement process typically requires nine months from RFP & bidder list development to contract execution.

This framework is specific to delivery contracts with reportable energy savings and does not include support services including but not limited to marketing, energy education, on bill repayment services, or advisory group facilitation/support.

Frequency of competitive bidding for conservation and efficiency resource programs, in whole or part:

Third party delivery contracts for conservation and efficiency resources in Washington follow company guidance for duration; they are typically, five-year contracts with a three-year minimum term and an option for one two-year extension provided performance is acceptable during the first three years. Delivery contracts are intended to be re-bid no less frequently than every five years. They may be re-bid more often. Start/end dates for contracts are staggered when possible to minimize potential delivery disruption. The current delivery contracts and end dates are listed below.

- Bidgely - Home Energy Reports - December 31, 2027

- Resource Innovations - Home Energy Savings, Wattsmart Business commercial trade ally engagement/incentive processing, small business - March 31, 2024 (re-procurement in progress)
- Cascade Energy - Wattsmart Business industrial/ag trade ally management/incentive processing - March 31, 2024 (re-procurement in progress)
- Cascade Energy - Wattsmart Business managed accounts – December 31, 2028 (used master service agreement competitively procured by Rocky Mountain Power)

Further detail on the scope of these contracts is provided in our annual reports²⁷.

Re-procurement for current contracts will commence ahead of and is intended to be complete prior to the end dates listed. As part of the biennial framework update, current contracts and end dates will be reviewed and updated as required.

Unsolicited proposals received outside of a conservation Request for Proposals (RFP)

Proposals received by the company outside of a conservation RFP process, including through an all-source RFP, will be evaluated provided, at a minimum they a) are additive to (not duplicative of or displace) current delivery activities; b) contain an integration plan with existing offers and c) are economic or cost-effective additions to the current program portfolio.

Public participation, outreach, and communication of evaluation and selection criteria

The company established a web page²⁸ for public engagement and will post a notice prior to releasing competitive procurement solicitations seeking public comment on general proposal evaluation and selection criteria. The company will review and incorporate comments as appropriate.

Respondents to a conservation RFP must be registered in the company procurement system. Public participation and outreach prior to the release of RFP will be focused on having new bidders register in this system. DSM AG members may encourage bidders to register in the system.

Company outreach may include queries to third parties such as ESource for a current list of providers delivering similar services. This information will be compared with current list in the procurement system and non-listed firms may be invited to register.

Company outreach may also include providing the DSM AG with the key components of an upcoming RFP for review and comment ahead of the formal release of the RFP.

The RFP will describe bid evaluation and selection criteria and information related to these criteria will be requested from bidders to ensure the best possible responses. Criteria weighting or additional metrics with the potential to reduce competitiveness of proposals (as determined by the company's DSM group and procurement group) will not be provided in the RFP.

Support from DSM Advisory Group:

This framework will be provided to the DSM AG during the biennial planning process (odd numbered years) with a request for comment. Comments will be reviewed by the company and incorporated into the version filed as part of the biennial conservation plan. Comments received

²⁷ See Program Administration for Washington available at [Demand-Side Management \(pacificorp.com\)](https://www.pacificcorp.com/suppliers/rfps/energy-efficiency-rfp.html)

²⁸ <https://www.pacificcorp.com/suppliers/rfps/energy-efficiency-rfp.html>

and their disposition in an easily trackable (comments, responses and redlines in MS word) will be provided to demonstrate DSM AG participation and support.

Current and Planned Exemptions:

Recognizing the unique nature of services provided and the absence of alternative providers, the company will continue their current practice of exempting a) contracts with community action agencies delivering low-income services, b) Northwest Energy Efficiency Alliance’s delivery of market transformation services and c) contract with Craft3 for energy efficiency project financing for residential customers with on-bill repayment²⁹. The practice of exempting these providers will be reviewed with each biennial procurement framework update. The default will be to continue these exemptions for additional biennial periods UNLESS changed in consultation with the DSM AG.

End of framework

Reference language below

WAC 480-107-065

Acquisition of conservation and efficiency resources.

(1) A conservation and efficiency resource supplier may participate in the bidding process for any resource need. A utility or its subsidiary or affiliate may participate as a conservation resource supplier subject to the conditions described in WAC [480-107-024](#).

(2) All conservation and efficiency measures within a bid must produce savings that can be reliably measured or estimated with accepted engineering, statistical, or meter-based methods.

(3) A utility must acquire conservation and efficiency resources through a competitive procurement process as described in this rule unless the utility is implementing a competitive procurement framework for conservation and efficiency resources as approved by the commission.

(a) As part of that process, a utility may develop, and update each biennium, a competitive procurement framework for conservation and efficiency resources in consultation with its conservation advisory group, as described in WAC [480-109-110](#). The utility may file its first competitive procurement framework for conservation and efficiency resources with the utility's 2022-2023 biennial conservation plan.

(b) The competitive procurement framework for conservation and efficiency resources must:

(i) Define the specific criteria that the utility will use to determine the frequency of competitive bidding for conservation and efficiency resource programs, in whole or part;

(ii) Address appropriate public participation, outreach, and communication of evaluation and selection criteria;

(iii) Enhance or, at minimum, not interfere with the adaptive management of programs;

(iv) Include documentation of support by the advisory group; and

(v) Be filed as an appendix to the utility's biennial conservation plan, as described in WAC [480-109-120](#).

(c) The competitive procurement framework for conservation and efficiency resources may:

²⁹ [Financing | Wattsmart Savings](#)

(i) Exempt particular programs from competitive procurement, such as low-income, market transformation, or self-directed programs; and

(ii) Consider if and when to use an independent evaluator.

[Statutory Authority: RCW [80.01.040](#), [80.04.160](#), and chapters [80.28](#), 19.280, and [19.405](#) RCW. WSR 21-02-023 (Docket UE-190837, General Order R-602), § 480-107-065, filed 12/28/20, effective 12/31/20. Statutory Authority: RCW [80.01.040](#) and [80.04.160](#). WSR 06-08-025 (Docket No. UE-030423, General Order No. R-530), § 480-107-065, filed 3/28/06, effective 4/28/06.]