BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of PacifiCorp d/b/a Pacific Power & Light Company's 2025 Electric Draft Integrated Resource Plan	**DOCKET UE-230812**

COMMISSION STAFF COMMENTS REGARDING PACIFICORP d/b/a PACIFIC POWER & LIGHT COMPANY 2025 ELECTRIC DRAFT INTEGRATED RESOURCE PLAN

RCW 19.405, 19.280 and WACs 480-100-600 through -630

March 3, 2025

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Introduction

PacifiCorp's d/b/a Pacific Power & Light Company (PacifiCorp or Company) filed with the Washington Utilities and Transportation Commission (Commission) its 2025 Draft Electric Integrated Resource Plan (IRP or Draft) on December 31, 2024.[1] In the same docket, Commission Staff (Staff) posted a Notice of Opportunity to File Written Comments and a Notice of Recessed Open Meeting, noting that written comments are due March 3, 2025, and the recessed open meeting is scheduled for 1 p.m. on Thursday, March 13, 2025. The Company will file its Final 2025 IRP with the Commission by April 1, 2025.

Commission Staff prepared these comments to assess whether PacifiCorp's electric Draft IRP satisfies the rules and statutes governing the Company's IRP filings, highlight areas of strength in the Draft IRP, suggest opportunities for improvement in the final IRP and clean energy action plan (CEAP), and make recommendations for the 2027 IRP Update.

Summary of Draft IRP

Commission Staff submit these comments to highlight key themes or issues identified in our review of the Draft and includes a series of recommendations. This document is not a comprehensive summary of Staff's analysis but rather highlights key issues and themes. Staff emphasize that any planning document is a snapshot in time, and many critical assumptions underlying this Draft IRP may evolve over the coming years. Staff's review focuses on the Draft IRP as presented, and Staff's recommendations in this document are aimed at improvements PacifiCorp should consider in future planning documents.

In December 2020, the Commission adopted new rules governing long-range resource planning, and this Draft IRP marks the second submission under these regulations. As compared to a full IRP, PacifiCorp's Draft IRP is subject to a subset of requirements including *the preferred portfolio, Clean Energy Action Plan (CEAP), and supporting analysis, and to the extent practicable all scenarios, sensitivities, appendices, and attachments.*[2]

As required by rule, Staff notes that this Draft IRP fails to meet certain key requirements mandated by Washington state law. Missing elements include the lowest reasonable cost and maximum consumer benefit scenarios, all preferred portfolio scenarios and sensitivities, state-specific load studies, cumulative impact analysis, and various other supporting analyses. Perhaps most importantly, the Draft lacks a complete Clean Energy Action Plan which is explicitly required by Washington law.[3]

Staff discussed this omission with Company representatives, who asserted that they have submitted an appropriate "draft" CEAP. Staff disagree with this characterization. The submission lacks consideration of economic, health, or environmental burdens and benefits.[4] It does not include CEAP-specific supply and demand-side resource actions, nor does it address customer

[1] Docket UE-230812.
[2] WAC 480-100-625(3).
[3] RCW 19.280.030.
[4] UE-230812 Draft IRP Vol 2 Appendix O at 313.

benefit indicators, non-energy benefits, or efforts to reduce burdens to vulnerable populations and highly impacted communities. In short, the CEAP is merely implied rather than presented with any discernable level of detail available to either Staff or the public. A complete CEAP and supporting analysis are critical for Staff and stakeholders to review and provide feedback on the Company's proposed actions before the final IRP is submitted and the resource planning process concludes. Staff previously raised this concern with PacifiCorp and emphasized the need for its inclusion in future Draft IRPs.[5]

Load Forecast Updates

System load growth is expected to continue, though projections have declined compared to previous forecasts. While most states in PacifiCorp's service territory anticipate lower demand, some regions are seeing increases due to specific commercial developments. Demand-side management (DSM) and distributed energy resources (DER) are included in forecasting, but transparency in how they compare to supply-side options remains a concern. Climate modeling and transportation electrification forecasts require more detailed analysis, particularly for regional variations. Improvements in residential load forecasting are noted, though similar rigor could be applied to other sectors. PacifiCorp acknowledges the potential for data center growth, but it is not currently included in Company forecasts. Staff highlights this gap; further, there is a need for greater clarity in long-term planning in future filings with regard to data center load impacts within its forecasting.

Supply-side Resource Assessment Updates

Future supply-side resource planning emphasizes renewable energy and expanded storage capacity, with significant projected additions of wind, solar, and battery storage. While these investments support decarbonization goals, Staff believe uncertainties remain regarding resource allocation and procurement timelines. Long-duration storage and emerging technologies may help replace natural gas reliance, but Staff believe rapid action is needed to ensure compliance with clean energy mandates.

Demand-side Resource Assessment Updates

Energy efficiency and demand response continue to play a critical role in long-term planning, contributing to system-wide savings on the demand side. While projections remain consistent with previous estimates, uncertainties persist regarding the consideration of non-energy impacts in forecasting. The Company asserts that it plans to expand demand response, including new programs planned for Washington, though its overall share remains modest.[6] Staff believe the Company could improve targeting of programs for vulnerable populations, enhancing participation and overall effectiveness.[7] Transparency in reporting remains valuable, and Staff recommends greater specificity to define those efforts which will improve resource planning and equity in program distribution. Examples include investments researching new rate designs, time-of-use pricing and managed electric vehicle charging pilots.

[5] UE-200420 Staff Comments 02/05/2021 at 16.
[6] UE-230812 PacifiCorp 2025 Draft IRP Vol 1 at 213 Table 9.3.
[7] RCW 19.280.030(1)(k).

Portfolio Analysis and Preferred Portfolio

The long-term resource strategy in the preferred portfolio prioritizes renewable energy expansion, storage capacity growth, and resource adequacy planning. While improvements in modeling and regional coordination enhance forecasting accuracy, uncertainties remain regarding procurement timelines, resource allocation, and reliance on unproven technologies. Staff believes the delayed transition away from coal presents some risks, and evolving allocation methodologies could impact future resource distribution.[8] Staff believes that ensuring compliance with clean energy mandates and maintaining system reliability will require proactive procurement strategies, greater scenario analysis, and a realistic assessment of emerging resource challenges. Demand-side contributions remain steady as compared to PacifiCorp's 2023 IRP Update.[9] Staff commends the Company's comprehensive conservation potential assessment and continuing efforts to expand its program offerings.

All-Source Request for Proposals

Because this IRP identifies resource needs within four years, Commission rule requires PacifiCorp to issue an All-Source Request for Proposals (ASRFP) within 120 days of filing a Final IRP.[10] The Company asserts it will be issuing an ASRFP in 2025 to be completed by the fourth quarter of 2025 to address needs identified by the IRP preferred portfolio.[11] Staff is concerned about this proposed timeline as it is significantly shorter than the Company's last ASRFP timeline.[12] Staff recommend action earlier than that required to mitigate risks of procurement delays and market competition. Greater clarity on resource procurement and distribution is essential for long-term reliability and compliance with the Clean Energy Transformation Act (CETA).

Federal Programs and Requirements

Federal funding opportunities through the Infrastructure Investment and Jobs Act (IIJA) and Inflation Reduction Act (IRA) provide significant potential resources to support clean energy deployment, yet utilization remains limited. Staff believe greater engagement is needed to maximize available incentives for renewable energy projects, energy storage, and infrastructure upgrades. Optimizing IRA tax credits could enhance grid reliability, support decarbonization efforts, and drive investments in emerging technologies. Staff believe that proactive alignment with these programs would help ensure Washington benefits from federal funding while advancing clean energy and electrification goals.

Equity and Transparency

Public participation and transparency are critical to equitable energy planning, yet equity considerations were minimally addressed in the planning process. Broader engagement with equity-focused stakeholders and a stronger role for the equity advisory groups would improve inclusivity and representation. While stakeholder feedback processes are well-documented and

[8] UE-230812 PacifiCorp 2025 Draft IRP Vol 1 at 37.
[9] UE-200420 PacifiCorp 2023 IRP Update at 85.
[10] WAC 480-107-009(2).
[11] UE-230812 PacifiCorp 2025 Draft IRP Vol 1 at 74.
[12] UE-210979 PacifiCorp 2022 ASRFP RFP-Main-Document-12-30-21 at 11.

responsive, gaps in the availability of key workpapers limit thorough analysis; the absence of critical supporting materials, including state-specific studies and scenario analyses, hinders meaningful review. Ensuring timely completion and inclusion of these resources would enhance transparency and allow for more comprehensive stakeholder input in future planning cycles.

Summary of Recommendations

Staff's outline summary of targeted recommendations for the Company.

Topic	No.	Recommendation
Load forecasting	1	In 2027 IRP Update - Expand consideration of DERs to include more DG opportunities. For example, consider adding DG to the analysis performed within the conservation potential assessment.
Load forecasting	2	In 2027 IRP Update - Analysis should include a range of modeling inputs to inform climate projections. This may include the Northwest Power and Conservation Council, the International Panel on Climate Change, and others.
	3	In 2025 CEIP - Provide more analytical detail on how the Company's efforts to promote commercial and residential electric vehicle charging programs are being equitably distributed, particularly among low and moderate-income customers and other vulnerable populations.
	4	In 2027 IRP Update - Work within planning groups to utilize the statistically adjusted end-use (SAE) or an analogue approach to modeling commercial and industrial loads. This may lead to increased accuracy in projections and opportunities for energy efficiency measures not otherwise captured.
	5	In 2027 IRP Update - PacifiCorp should show more analytical detail in its climate forecasting to support the use of RCP 4.5 RCP 8.5 or an average.

	6	In the 2027 IRP Update - PacifiCorp should clearly illustrate how it considers data center loads in the final 2025 IRP, as well as in future IRPs.
Supply-Side Resources	7	In 2027 IRP Update - Work within planning group to consider expanding resource options for firm capacity beyond natural gas and coal generation. Examples may include geothermal, and small modular reactors.
	8	In 2025 Final IRP - PacifiCorp should consider filing an ASRFP concurrent with its Final IRP with a detailed prospective timeline that will result from this IRP.
	9	For future filings - PacifiCorp should continue to rely on the ATB to model the costs basis for all applicable supply-side resources and provide a detailed explanation of methodology when the ATB is not applicable.
Demand-Side Resources	10	In 2027 IRP Update - Provide analysis accurately quantifying non energy impacts. Consider incorporating variable effects of non-energy impacts by Washington program and end-use in future conservation potential assessment studies. At minimum, provide a fuller explanation as to how the 10 percent figure is a suitable proxy for planning purposes.
	11	In the 2025 CEIP - Work with distributed system planning group to provide updates and more detail on Washington demand-side pilots and programs, particularly how they are targeted to vulnerable populations and highly impacted communities. Examples may include rate design, managed EV charging pilots, and time-of use pricing.

Preferred Portfolio	12	In the 2025 IRP Final Draft - PacifiCorp should consider conducting a scenario analysis using the upcoming proposed allocation methodology to prevent procurement delays or cancellations due to unforeseen shifts in resource allocation frameworks.
	13	In the 2027 IRP Update - Work with the long-term modeling group to quantify the risks associated with continued operation of existing coal fired plants. Drivers of risk may include fuel availability, technology constraints, future regulation, and equipment age.
	14	Continue proactive involvement in the Western Resource Adequacy Program to strengthen the resource adequacy of the entire region
	15	In the 2025 Final IRP - Consider removing the Natrium demonstration project from the preferred portfolio and instead utilizing the "No Natrium" sensitivity until such time as logistical hurdles are overcome.
Federal Programs and Requirements	16	For the 2027 IRP Update - remain up to date on available federal incentives and incorporate them into the planning and modeling process.
	17	For the 2027 Update - Consider a more thorough assessment of how the Investment Tax Credits offered by the IRA could help spur development of renewable resources.

Equity and Transparency	18	For the 2027 Update - Consider changes to future planning timelines which would allow for a more complete draft at the time of filing
	19	For the 2027 Update - Consider including insights from the Company's Equity Advisory Group in the IRP planning process. Provide a fuller explanation as to how equity considerations are built into long term planning.
	20	In future Draft IRPs - Include a complete, standalone Clean Energy Action Plan with a 10-year planning horizon and all elements required by WAC 480.100.625(3). Staff urge PacifiCorp to initiate its advisory group and IRP development process earlier to ensure that the CEAP is fully developed and included in future IRP planning cycles. Further, to improve situational awareness, Staff also encourages PacifiCorp to review the last Draft IRPs filed by other Washington state investor-owned utilities Avista and Puget Sound Energy, for clarification on those clean energy action plans, which were assessed by Staff as completed by the Draft filing milestone.

Load Forecast Updates

Systemwide, PacifiCorp's 2025 Draft IRP projects load growth similar to that of the 2023 IRP update. The compounded annual system load growth rate for the next decade (2025 – 2034) is 2.44 percent, reflecting a 3.01 percent decline in projected load compared to previous forecasts by 2034. Load forecasts have decreased in Oregon, California, Wyoming, and Idaho, while the Company's Washington service territory is expected to experience a modest growth in load and slight decline in coincident peak demand.

The changes in PacifiCorp's load forecast are broadly attributed to population trends and economic activity, as informed by the February 2024 S&P Global Market Intelligence economic driver forecast.[13] Additionally, the forecast incorporates historical weather data adjusted for expected climate change impacts. However, Staff believe the Draft IRP provides little specificity on why Washington's load forecast has increased, while much of PacifiCorp's service territory is experiencing declines. The Company has indicated that this increase is likely driven by the

[13] UE-230829 Draft IRP Vol 2 at 9.

addition of a single large commercial customer, but no further analysis or justification is provided.

The load forecast also incorporates adjustments for DSM which may include demand response programs, energy efficiency measures, electrification adjustments and impacts, and private generation. These factors help refine the overall load projection by accounting for potential reductions or shifts in energy demand due to customer-driven initiatives and technological advancements.

PacifiCorp's load forecast has evolved since the 2023 IRP Update. Staff's review of PacifiCorp's last IRP Update focused on a few key issues:

1. Insufficient consideration of distributed generation as a modeled resource option,
2. Lack of future load growth sensitivities that would show the impacts of Washington electric vehicle (EV) adoption at greater granularity.

Distributed Energy Resources

In previous planning cycles, DERs, including distributed generation (DG) and demand response (DR), were considered solely as a decrement to load rather than as a standalone resource available for selection by the preferred portfolio. In this Draft IRP, the Company has shifted its approach, now treating demand response programs as resources that can be selected alongside other supply-side resources.

Staff believe this this more holistic approach to planning represents a step in the right direction but note work papers the Company provided don't clearly show how energy efficiency (EE) or DR resources compete with other supply side resources in PacifiCorp's resource mix on a cost basis. Staff would like to see a more substantial inclusion of DSM resources within this, and future, IRPs. Staff also encourage the Company to study and pursue more load reduction through DG. The proposed impacts on peak load in their western region attributable to DG never exceed 4 MW per year over the entire study horizon.

Recommendation: Expand consideration of DERs to include more distributed generation opportunities. For example, consider adding distributed generation to the analysis performed within the conservation potential assessment.

Climate and weather modeling

In line with the 2023 IRP update, PacifiCorp continues to model the effects of climate change on its base load forecast by utilizing historical data with adjustments informed by a single source, The United States Bureau of Reclamation.[14] The Company applies this methodology by projecting expected annual temperatures and calculating heating and cooling degree days based on an average of the Representative Concentration Pathways (RCP) 4.5 and 8.5 scenarios.

Currently, Staff have taken no position on the appropriateness of either RCP but recommend in

[14] United States Bureau of Reclamation, March 2021, Managing Water in the West, Technical Memorandum No. ENV-2021-001, West-Wide Climate Risk Assessments: Hydroclimate Projections. https://www.usbr.gov/climate/secure/docs/2021secure/westwidesecurereport1-2.pdf.

future IRP cycles the Company show more detailed analysis to support its use of either RCP or an average. Staff note that the Company relies on a single locational study from each state to support these climate assumptions, which may not be representative of statewide conditions. However, for Washington, the selected data source – the Yakima River at Parker – should be largely representative of PacifiCorp's Washington service territory.

Recommendation: PacifiCorp should provide analysis that includes a range of modeling inputs to inform climate projections. This may include the Northwest Power and Conservation Council, the International Panel on Climate Change, and others.

Recommendation: PacifiCorp should show more analytical detail to support the use of RCP 4.5 RCP 8.5 or an average.

Transportation electrification

PacifiCorp's approach to modeling future load growth from EV adoption continues to lack the granularity needed to fully capture the impacts specific to Washington. Staff believe that the 2021 IRP and 2023 IRP Update have underestimated the potential for load growth from EV's and related infrastructure by relying on broad national trends rather than more detailed, state-specific analyses. This is particularly important because the Western region of PacifiCorp's service territory has higher-than-average EV adoption.[15] In this Draft, the Company acknowledges that EV adoption is a significant driver of future load growth and recognizes that the electrification of commercial vehicle fleets will further increase demand.[16]

The Company's analysis makes little mention of the considerable potential for EVs as an asset to grid reliability if they are allowed to participate in managed charging, DR programs, or vehicle to grid capacity stating only that an EV load control program is being planned. Staff believe that more effort should be put into considering EVs as a potential resource rather than only as load particularly with considerable federal funding available for such investments.[17]

To improve its forecasting, the Company now incorporates three national EV projections and monitors state-level EV adoption annually, adjusting its forecasts accordingly. Additionally, the Company states that it actively engages with local, regional, and national stakeholders and participates in state regulatory processes.

Recommendation: Provide more analytical detail on how the Company's efforts to promote commercial and residential electric vehicle charging programs are being equitably distributed, particularly among low-income customers and other vulnerable populations.

End-use modeling

New in this draft IRP, PacifiCorp adopted a statistically adjusted end-use (SAE) approach for modeling its residential customer class. This method integrates both regression analysis and end-

[15] Vehicle registration counts of all-electric vehicles by state as of December 31, 2023. Alternative Fuels Data Center: Maps and Data - Electric Vehicle Registrations by State
[16] UE-230812 Draft IRP Vol 1 at 67
[17] e.g. National Electric Vehicle Infrastructure Formula Program Infrastructure Investment and Jobs Act - National Electric Vehicle Infrastructure (NEVI) Formula Program Fact Sheet | Federal Highway Administration

use trends, incorporating factors such as consumer behavior, appliance efficiency forecasts, current and future regulatory standards, and other real-world considerations. Staff support this proactive step, as it improves the granularity of residential load forecasting. However, given that commercial and industrial customers contribute a larger share of overall load, PacifiCorp may consider applying a similar level of analytical rigor to forecasting for these customer classes in future IRPs.

Recommendation: Work within planning groups to utilize the SAE or an analogue approach to modeling commercial and industrial loads. This may lead to increased accuracy in projections and opportunities for energy efficiency measures not otherwise captured.

Data center forecasting

The rapid expansion of data centers and the strain they are expected to place on the nation's electrical grid have been widely reported.[18] In this Draft IRP, PacifiCorp states that such facilities are "expected to provide or pay for their necessary resources and transmission."[19]However, elsewhere PacifiCorp acknowledges that "[data] center load potential is emerging as a key driver to incremental resource and transmission needs across the industry."[20] Staff recommend that PacifiCorp more clearly illustrate how it considers data center loads in this and future IRP filings. This could ensure transparency, validate the baseline scenario, and satisfy regulatory requirements.[21]

The Company also plans to perform what it calls a High Data Center Scenario alongside its baseline scenario, which will analyze the impact of demand from all active data center requests. As this scenario was not available for Staff's review, we look forward to evaluating its findings.

Recommendation: PacifiCorp should clearly illustrate how it considers data center loads in the final 2025 IRP, as well as in future IRPs.

Supply-side Resource Assessment Updates

PacifiCorp considered a comprehensive list of supply-side options for generation and storage in its modeling. The Company's strategy in this IRP cycle is to invest in renewable resources, while significantly building out its storage capacity to provide reliability and arbitrage. Many resources were considered including natural gas with carbon capture, hydrogen peaking units, hydro and gravity storage, and nuclear, among others. The modeling software employed by PacifiCorp resoundingly selected for solar, wind, and battery storage. New to this IRP, PacifiCorp is modeling for the inclusion of long-duration battery storage, classified as any battery with a discharge capacity of greater than 8-hours but more often modeled by the 100-hour iron-air battery. Staff support the inclusion of these battery technologies while noting that this technology is novel and has yet to be installed at the scale called for in this plan.

Costs for future supply-side resource options reflect the latest information from the National

[18] Pacific Northwest Power Supply Adequacy Assessment for 2029. Northwest Power and Conservation Council document #2024-04 08/09/2024. Pacific Northwest Power Supply Adequacy Assessment for 2029.
[19] UE-230812 2025 Draft IRP Vol 2 at 7.
[20] UE-230812 2025 Draft IRP Vol 2 at 13.
[21] WAC 480-100-620(6)(a-b).

Renewable Energy Laboratory (NREL) annual technology baseline (ATB) where available.[22]This is a departure from a previous planning methodology[23] which favored bids received by the Company over ATB projections. Staff appreciate this change which is believed to be best practice. For technologies without ATB projections, PacifiCorp relies on U.S. Energy Administration reporting, original equipment manufacturer capital and operations estimates, publicly available estimates, actual electric utility installations, and other strategies which Staff find appropriate and thorough.

PacifiCorp's 2025 Draft IRP proposes significant renewable resource additions, namely 6,379 MW of wind, 5,492 MW of solar, and 7,668 MW of battery storage by 2045.[24] However, the allocation of these resources for Washington customers remains somewhat uncertain, as many are designated as system-wide rather than specifically situs allocated to Washington. This is particularly important because the allocation methodology PacifiCorp uses is in flux. This creates uncertainty as to whether Washington will receive a sufficient share of these resources to meet state-specific clean energy requirements under CETA. The expansion or implementation of a host of situs resources considered by PacifiCorp's model could help improve the path to compliance. However, Staff note that transmission constraints may limit the accessibility to these renewable additions due to the lack of transmission projects proposed in the state of Washington.[25] Exploring transmission planning beyond current efforts may be a prudent step toward achieving resource equity and compliance.

Recommendation: PacifiCorp should continue to rely on the ATB to model the costs basis for all applicable supply-side resources and provide a detailed explanation of methodology when the ATB is not applicable.

CETA considerations

According to the Draft IRP, Washington customers will remain partially dependent on the Chehalis and Hermiston natural gas plants through 2044, prior to the CETA 2045 carbon-free mandate.[26] Although natural gas provides reliability benefits through firm capacity, it presents a significant obstacle in achieving 100 percent carbon-free generation by 2045. The Company should continue to explore alternative firm capacity solutions such as long-duration storage, small modular nuclear reactors (SMRs), and geothermal to replace these gas units and ensure compliance with CETA's decarbonization pathway.

PacifiCorp states that while it will pursue unbundled renewable energy credits (REC) and purchases to meet state compliance requirements, its model projects that it will be CETA compliant without them. Staff are heartened by this assertion but stresses that it depends greatly on the outcome of both its proposed allocation methodology and the execution of a successful Request for Proposals (RFP), both of which are unknown at this point. Staff was concerned by PacifiCorp's cancellation of its 2022 ASRFP. That cancellation has introduced uncertainty as to

[22] 2024 NREL ATB is publicly available and may be found here: Data | Electricity | 2024 | ATB | NREL
[23] UE-210829 2023 Clean Energy Implementation Plan Biennial Report workpapers 200420-PAC-IRP2023DevelopEscalation(NRELhardcoded)Update2020ASRFP%20(R).
[24] UE-230812 2025 Draft IRP Vol 1 at 221.
[25] UE-230812 2025 Draft IRP Vol 1 at 77.
[26] UE-230812 2025 Draft IRP Vol 2 at 316.

whether PacifiCorp could do that again going forward, thus risking its compliance with CETA.

Future resource need

PacifiCorp's most recent RFP, issued in 2022 under docket UE-210979, was an all-source RFP, aligning with the Company's 2021 IRP process. The decision to issue this RFP was driven by resource needs identified, namely 1,345 MW of proxy wind and solar generation, 600 MW of energy storage, and 274 MW of proxy demand-side resources.[27] However, this ASRFP was ultimately canceled due to evolving planning considerations, primarily the effects post-pandemic supply chain disruptions and evolving EPA regulations which favored the continued reliance on fossil energy production.

The 2025 Draft IRP also identifies a continuing resource need, which will prompt an ASRFP within 120 days of filing the final draft.[28] PacifiCorp states that this ASRFP will be aimed at acquiring resources with commercial operation dates (COD) by the end of 2029. The specific forecasted requirements by that time include 1,671 MW of wind generation, 427 MW of solar generation, 2,449 MW of battery capacity, and 1,189 MW of demand-side resources.[29] According to Washington law,[30] resource need is defined as any current or projected deficit that hinders a utility's ability to reliably meet electricity demand, which may result from changes in system demand, regulatory compliance, generation retirements, or capacity constraints. Staff is concerned by nearness of the 2030 CETA mandates and the risks associated with procurement delays and increased competition for resources. Staff further note the Company already cancelled one RFP while it had an acknowledged resource need. That cancellation undermined Staff's confidence in the Company's commitment to the RFP process especially as it relates to meeting CETA requirements.

Recommendation: PacifiCorp should consider filing an ASRFP concurrent with its Final IRP with a detailed prospective timeline that will result from this IRP.

Recommendation: Work within planning group to consider expanding resource options for firm capacity beyond natural gas and coal generation. Examples may include geothermal, small modular reactors.

Demand-side Resource Assessment Updates

For this Draft IRP, PacifiCorp contracted the consulting firm Applied Energy Group (AEG) to produce a demand-side conservation potential assessment (CPA) which examined EE and DR potential for PacifiCorp's six-state service territory, including Washington.

The Company's technically achievable potential EE supply curves over the 20-year planning horizon yield total cumulative savings of 17.2 million MWh. This is largely in keeping with the 16.7 million MWh projected by the previous IRP update.[31] Of the total system-wide cumulative EE savings, 1.2 million MWh is attributable to the state of Washington.

[27] Docket UE-210979.
[28] WAC 480.107.017(1).
[29] UE-230812 2025 Draft IRP Vol 1 at 213.
[30] WAC 480-107-009.
[31] Summation of EE technical achievable potential from 2023 PacifiCorp CPA efforts.

In the 2023 IRP Update, at Staff's recommendation, the Company attempted to better understand the effects of non-energy impacts (NEI) on DER forecasting by mapping these impacts as cost variances to specific end-use cases (i.e., heating, cooling, exterior lighting). In this Draft IRP, there is little specificity to be found in exactly how NEIs are considered by the CPA. The AEG report states that a key difference from the previous study to this is "expanded integration of non-energy impacts in applicable states"[32] for both EE and DR forecasts but the only detailed description is that PacifiCorp directed AEG to apply a blanket 10 percent cost reduction to all DR program costs.[33] This seems to be because no new data could be found to quantify these impacts.

Recommendation: Staff recommend the Company redouble its efforts to accurately quantify NEIs or at minimum provide a fuller explanation as to how the 10 percent figure is a suitable proxy for planning purposes.

PacifiCorp's 2025 CPA includes an assessment of DR potential that focuses on measure-based programs under the Company's control. The preferred portfolio calls for a cumulative 1,052 MW of DR by the end of 2045, of which 67 MW is apportioned to Washington. PacifiCorp forecasts DR as a necessary and growing part of the preferred portfolio and has a number of efforts in effect or planned for expansion to the state of Washington in the near term. These include HVAC, residential battery, and EV direct load control which have seen adoption in other states within PacifiCorp's service territory. PacifiCorp continues to model DR directly in competition with other resources and models summer and winter levelized capital costs ($/kW) to determine the cost effectiveness of DR during model optimization. Staff appreciates the consistent submission of PacifiCorp's annual DR report provided to the Commission[34] as it allows for the transparent assessment of progress between other filings.

Staff commend PacifiCorp for the efforts it has undertaken in developing and optimizing its DER programs but would like to see the total projected cumulative potential increase, particularly for the state of Washington, as those programs mature. There are narrative descriptions but few details about Company investments researching new rate designs, time-of-use pricing and managed EV charging pilots. Future planning documents should include more analytical information about such programs, including benefits or burdens, especially as they relate to vulnerable populations and highly impacted communities.

Recommendation: Work with distributed system planning group to provide updates and more detail on Washington demand-side pilots and programs, particularly how they are targeted to vulnerable populations and highly impacted communities. Examples may include rate design, managed EV charging pilots, and time-of use pricing.

Portfolio Analysis and Preferred Portfolio

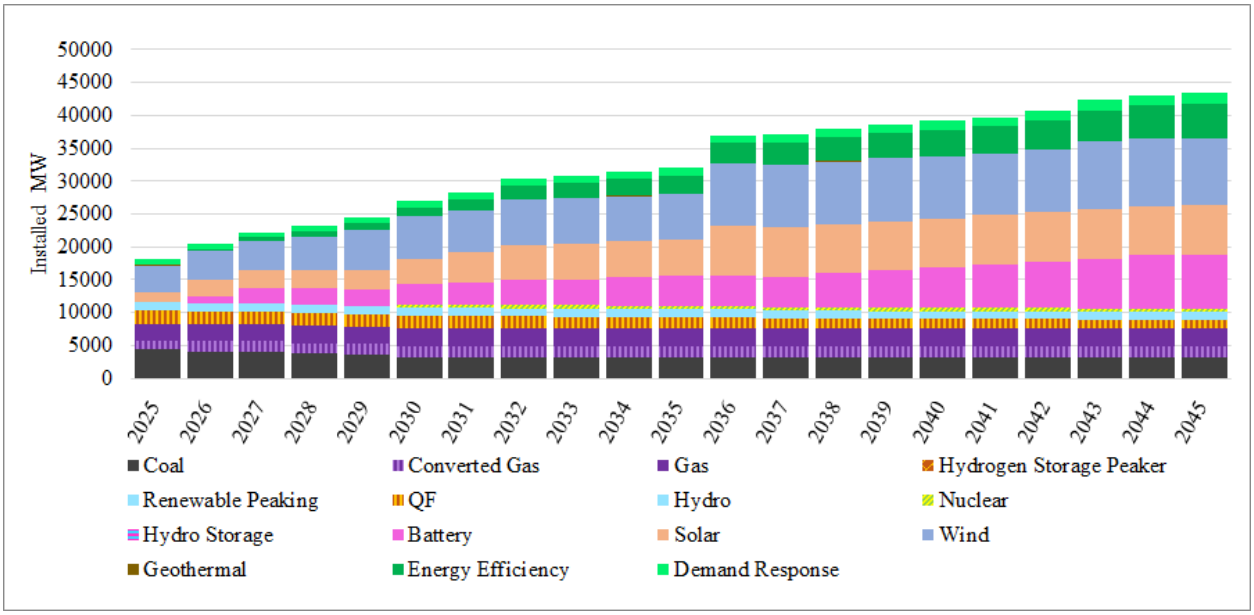
The Company's portfolio analysis – particularly the modeling which informs the preferred portfolio – is fundamental to developing the 20-year forecast. This analysis plays a crucial role in

[32] The 2025 Conservation Potential Study is available on PacifiCorp's IRP Support & Studies web page: www.pacificorp.com/energy/integrated-resource-plan/support.html. Quote at 7.1.1.
[33] The 2025 Conservation Potential Study is available on PacifiCorp's IRP Support & Studies web page: www.pacificorp.com/energy/integrated-resource-plan/support.html. At 32.
[34] See Docket UE-220550 for latest submission Dated 06/27/2024.

ensuring reliable operations, adapting to evolving demand, and maintaining regulatory compliance while accounting for various constraints.[35]

Across PacifiCorp's six-state service territory, the preferred portfolio outlined in this Draft IRP differs significantly from previous plans in several key ways. As can be seen in Figure 1 below, the preferred portfolio calls for an aggressive expansion of renewable energy procurement, including 1,275 MW of solar and 2,175 MW of wind by 2030, along with 2,716 MW of storage resources within the same time frame. The addition of storage is intended to maximize the benefits of intermittent renewable generation and to act as arbitrage between periods of high and low-value production.

Figure 1 – 2025 IRP Preferred Portfolio (All Resources)



While this Draft demonstrates ambition in resource acquisition, Staff note that projections for solar, wind, nuclear, and storage fall well below those outlined in PacifiCorp's previous IRP[36] put the Company in a procurement deficit compared to previous plans, further impacting its ability to meet previously forecasted resource needs.

New to this Draft IRP, PacifiCorp significantly improved its approach to modeling wind and solar generation profiles compared to the 2023 IRP update. Previously, the Company grouped these variable energy resources into a single wind and solar profile for four of its jurisdictions. In the 2025 IRP, PacifiCorp refined its methodology by segmenting renewable resource modeling into 13 distinct transmission zones across its system.[37] Staff believe this enhanced granularity should provide more accurate planning values, better aligning modeled resource availability with

[35] RCW 19.280.030(1).
[36] UE-230812 2025 Draft IRP Chapter 9, Figures 9.2 - 9.5.
[37] UE-230812 2025 Draft IRP Vol 1 at 144.

actual generation performance as new projects come online.

Staff acknowledge the inherent limitations of all models, particularly when forecasting over a 20-year time horizon, as projections must continually adapt to evolving market conditions and regulatory requirements. However, several aspects of the Company's proposed procurement strategy warrant closer examination.

First, the proposed resourced additions in the preferred portfolio are generated by the modeling software itself and do not represent contracted projects. In practice, resources are typically acquired through a lengthy ASRFP process. Staff acknowledge that this is how IRP modeling works across all companies and is not usually cause for concern. However, due to the Company's history of RFP cancellation coupled with the fact that the Company has yet to initiate or provide Staff with a proposed timeline for its upcoming RFP, we again highlight this point. Without an active RFP, there is significant uncertainty whether the necessary resources will be available as projected in the model before they are required for CETA compliance in 2030. Staff raise this concern due to the Company's recent history of RFP cancellation and its stated assertion that there is a "a material benefit to scaling down and delaying resource acquisition until after 2030."[38] Further, as recently as November 2024, the Company expressed concern about possibility of negative credit impacts if it was forced to acquire additional resources.[39]

Second, this IRP is based on PacifiCorp's currently approved methodology, the Western Interjurisdictional Allocation Methodology (WIJAM) for allocating resources among states in the Company's service territory. However, PacifiCorp has indicated that it plans to propose a new allocation methodology in the coming months, with a target of adoption in 2026.[40] If implemented, this change could fundamentally alter key assumptions underlying the preferred portfolio, potentially invalidating much of its current framework. This was of particular concern in the 2023 Biennial CEIP Update,[41] wherein the Company decreased its interim targets by 29.3 percent based in large part on a premature assumption of its allocation methodology.

Recommendations: PacifiCorp should consider conducting a scenario analysis using the upcoming proposed allocation methodology to prevent procurement delays or cancellations due to unforeseen shifts in resource allocation frameworks.

Future of coal-fired assets

The Company asserts that "coal will continue to play a pivotal role in following fluctuations in renewable energy."[42] However, while coal-generated electricity will no longer serve Washington customers after December 31, 2025, this position represents a departure from previous Company plans, observed below in Table 2.

[38] Docket UE-210979 210979-PAC-Notice-of-Cancellation-of-2022AS-RFP-4-3-2024.
[39] Docket UE-210829 Reply Brief, on behalf of PacifiCorp d/b/a Pacific Power & Light Company, from Matthew McVee.
[40] UE-230812 2025 Draft IRP Vol 1 at 38.
[41] Docket UE-210829.
[42] UE-230812 2025 Draft IRP Vol 1 at 9.

Table 2 – PacifiCorp's 2025 IRP Coal Resources Summary

Majority-Owned Coal		
Unit	2023 IRP Update Retirement Year	2025 IRP Retirement Year
	As Selected	As Selected
Dave Johnston 1 & 2	2028 (Coal ash compliance)	Not retired (Gas conversion 2029)
Dave Johnston 3	2027 (Clean air compliance)	2027 (Clean air compliance)
Dave Johnston 4	2039 (Assumed end of life)	Not retired
Hunter 1-3	2042 (Assumed end of life)	Not retired
Huntington 1 & 2	2036 (Assumed end of life)	Not retired
Jim Bridger 1 & 2	2037 (Gas conversion 2024/Assumed end of life)	Not retired (Gas conversion 2024)
Jim Bridger 3 & 4	2039 (CCS/Assumed end of life)	Not retired (CCS)
Naughton 1 & 2	2036 (Gas conversion 2026/Assumed end of life)	Not retired (Gas conversion 2026)
Wyodak	2039 (Assumed end of life)	Not retired (Coal)
Minority-Owned Coal		
Unit	2023 IRP Update Retirement Year	2025 IRP Retirement Year
	As Input	As Input
Colstrip 3	2025 (Transfer capacity to unit 4)	2025 (Transfer capacity to unit 4)
Colstrip 4	2029 (PacifiCorp exit)	2029 (PacifiCorp exit)
Craig 1	2025 (Assumed end of life)	2025 (Assumed end of life)
Craig 2	2028 (Assumed end of life)	2028 (Assumed end of life)
Hayden 1	2028 (Assumed end of life)	2028 (Assumed end of life)
Hayden 2	2027 (Assumed end of life)	2027 (Assumed end of life)

The primary drivers behind PacifiCorp's continued reliance on coal include ongoing legal challenges to Environmental Protection Agency mandates – such as regional haze regulations and the Ozone Transport Rule (OTR) – as well as the perceived need for "low-cost firm capacity" to stabilize supply against the variability of renewable generation.

While Staff acknowledge the importance of reliable firm capacity, several concerns remain unaddressed in the Company's modeling. Carbon capture technology is both costly and difficult to implement, making it an uncertain long-term solution. Additionally, coal markets have experienced significant price volatility, with forecasts suggesting elevated costs in the future. Furthermore, all of the coal-fired units referenced in the Company's plan are already at or beyond the average operational lifespan for such facilities.

Given these factors, Staff contend that the risks associated with coal reliance are not adequately assessed in the model and should be further scrutinized to ensure a realistic and sustainable resource strategy. Although coal power will not serve Washington load after December 31, 2025, risk to system-wide base load could impact procurement in the preferred portfolio and future Washington allocation.

Recommendation: Work with the long-term modeling group to quantify the risks associated with continued operation of existing coal fired plants.

Reliability

In the Draft IRP, PacifiCorp meets the resource adequacy requirements as defined by the North American Electric Reliability Corporation (NERC)[43], specifically by maintaining compliance reserves based on a sub-hourly 30-minute rolling interval and planning around a loss of load probability of not more than 0.5 hours per year.

New to this filing, PacifiCorp is also aligning with the recommendations of the Western Resource Adequacy Program (WRAP), resulting in planning reserve margins of 14.4 percent in the summer and 16.8 percent in the winter. This shift reflects the Company's efforts to enhance regional reliability and better integrate with broader resource adequacy initiatives across the Western grid. WRAP is designed to enhance resource adequacy for participants by facilitating resource and information sharing, enabling access to load balancing across a broader region than any individual utility could achieve on its own. While WRAP is not scheduled to take effect until 2027, all indications suggest that PacifiCorp is already incorporating its eventual implementation into its planning framework. This proactive approach demonstrates the Company's recognition of WRAP's potential benefits and its intention to align resource adequacy strategies with the program's requirements ahead of its formal launch.

Recommendation: Continue proactive involvement in the Western Resource Adequacy Program to strengthen the resource adequacy of the entire region

Natrium demonstration project

As noted in previous comments,[44] Staff continue to have concerns regarding the Company's inclusion of the Natrium demonstration project within the preferred portfolio. While this project is promising, it has faced chronic delays, including by an additional two-years not reflected in this Draft IRP, as well as uncertainty surrounding Nuclear Regulatory Commission permitting and fuel availability.[45]

Given these challenges, PacifiCorp's continued reliance on this unproven technology as a core component of its preferred portfolio could jeopardize the reliability and resource adequacy requirements the Company must meet.[46] The Company plans to perform an alternative sensitivity where the Natrium demonstration project is not available as a resource. This approach would help ensure a more resilient and realistic planning framework. Further, the Company must continue to demonstrate how and if the continuation of the Natrium project is the most expected case going forward to justify its inclusion in the preferred portfolio. If anything were to introduce a deviation from this being the most expected case, the Company must proactively discuss this with the IRP advisory group and within the IRP itself.

Recommendation: Remove the Natrium demonstration project from consideration by the preferred portfolio in this IRP. Instead utilize the "No Natrium" sensitivity until such time as logistical hurdles are overcome.

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[43] NERC Standard BAL-001-2, https://www.nerc.com/pa/Stand/Reliability%20Standards/BAL-001-2.pdf.
[44] UE-200420 Staff comments on 2023 IRP Update at 17.
[45] HALEU Fuel Availability Delays Natrium Reactor Project. World Nuclear News. HALEU fuel availability delays Natrium reactor project - World Nuclear News.
[46] Per WAC 480-100-620(11)(f).

Energy efficiency and demand response

Energy efficiency projections in the 2025 Draft IRP remain largely consistent with those from the 2023 IRP update, with a cumulative projected savings of just over 5,000 MW by 2045. The contribution of demand response programs to the preferred portfolio has been reduced by 6.3 percent relative to the 2023 IRP update. According to the preferred portfolio, Washington's share of these programs is 233 MW and 67 MW respectively.

The Company notes that it is expanding its distributed energy program offerings and has been transparent about the breakdown of certain assumptions, such as customer adoption figures, which have proven unreliable. To refine its projections, PacifiCorp conducted a CPA through a third-party consultant AEG,[47] and incorporated the findings into the preferred portfolio in alignment with best practices.

Social Cost of Greenhouse Gasses

According to Washington law,[48] all resources allocated to serve Washington customers must incorporate the social cost of greenhouse gas emissions (SCGHG) as an input to the preferred portfolio. PacifiCorp states that the SCGHG is reflected in market prices and dispatch costs for the purpose of developing each.[49] Additionally, the Company confirms that all resources serving Washington customers are optimized.[50] In alignment with Commission guidance, PacifiCorp has also begun attributing SCGHG costs to system operations after the portfolios are determined.

Staff recognize the Company's position that this required operational assumption may not fully align with actual market forces. However, Staff maintain that applying the SCGHG in this manner is essential to ensuring the most accurate resource selection mix for Washington, as it aligns with the state's climate policy objectives and long-term planning requirements.

Federal Programs and Requirements

Due to its large footprint across six western states, PacifiCorp plays a crucial leadership role in aiding Washington in its pursuit of a future where clean energy is the standard and no longer something to aspire to. With the passage of the IIJA and the IRA, significant federal funding was made available to accelerate clean energy deployment and infrastructure modernization. In this Draft, PacifiCorp acknowledges the new Federal administration's differing perspective adds some uncertainty to the future of these programs due to slowing payments of grants or modifications to regulations and guidance. The IRA is included by PacifiCorp in all modeling studies as certain non-emitting resources may select either production tax credits or investment tax credits associated with the IRA. The single largest impact related to the IRA in this draft is the utilization of production tax credits for existing or proxy resources. Staff recommend that PacifiCorp explore ways to incorporate the investment tax credits into the RFP bidding process. Staff maintain that it is in the public interest to allocate approved funding towards projects that support progress towards a clean energy future.

[47] The 2025 Conservation Potential Study is available on PacifiCorp's IRP Support & Studies web page: www.pacificorp.com/energy/integrated-resource-plan/support.html.
[48] RCW 19.280.030(3)(iii).
[49] UE-230812 2025 Draft IRP Vol 1 at 190.
[50] UE-230812 2025 Draft IRP Vol 1 at 255.

While PacifiCorp has contributed to EV infrastructure development in Washington through its grant programs – supporting both residential transition to EVs[51] and non-residential customers via its EV grant program[52] – the Draft IRP does not clearly indicate that the Company is fully utilizing the opportunities available for outside funding and partnerships.

Recommendation: Remain up to date on available federal incentives and incorporate them into the planning, modeling, and acquisition process.

Recommendation: Consider a more thorough assessment of how the Investment Tax Credits offered by the IRA could help spur development of renewable resources.

Effects of the Ozone Transport Rule Stay

The Ozone Transport rule (OTR), issued by the Environmental Protection Agency (EPA) in 2015 modified standards for ground level ozone and required states to monitor cross-state air pollution to determine if emissions from one state had a significant impact on neighboring states. Utah and Wyoming were affected by this rule due to impacts of ozone levels crossing into the state of Colorado. The impact of this rule for PacifiCorp broadly was to drive investment in renewable resources and plan for the early retirement of coal generation in Wyoming and Utah.[53] In December 2023, Wyoming was given approval of a state implementation plan that removed them from the obligations of the OTR. The state of Utah and PacifiCorp filed petitions to the EPA for a stay of the denial of Utah's state implementation plan and that stay has been in place since July of 2023.

In this Draft, PacifiCorp indicates[54] that their argument is likely to succeed on its merits and has reverted to a planning model which includes a significant amount of coal fired generation. However, the outcome of litigation remains uncertain, and if compliance obligations are reinstated, the company may be required to make significant investments in emissions control technologies such as selective non-catalytic reduction retrofits at facilities like Huntington, Hunter and Wyodak.[55] Additionally, the impact of the OTR on regional power markets could increase wholesale electricity prices and influence power flows across the Western Interconnection.

While the stay of the rule offers temporary regulatory relief, it does not eliminate long-term risks for PacifiCorp. The stay also prevents the EPA from enforcing the federal implementation plan in Utah while litigation continues, introducing regulatory uncertainty and potential future compliance obligations for the Company.

Staff contend that the Company must remain adaptive in its investment strategy, balancing near-term regulatory flexibility with long-term clean energy commitments as federal and state air quality regulations continue to evolve.

[51] New Pacific Power grants available to help electric mobility projects in Washington.
[52] Pacific Power Electric Generation Grant opportunities.
[53] Docket UE-200420 PacifiCorp's 2021 IRP.
[54] UE-230812 2025 Draft IRP Vol 1 at 43.
[55] UE-230812 2025 PacifiCorp Draft IRP Vol 2 at 93.

Equity and Transparency

In the development of this Draft IRP, PacifiCorp facilitated nine total public input meetings, seven of which occurred prior to filing the Draft. Throughout these meetings, equity considerations were addressed as an agenda item only once. Perhaps as a result, equity in terms of the four tenets of social justice is not mentioned in this Draft IRP. Central to energy justice is the understanding that interested parties, especially those who have been historically marginalized, should have the opportunity to participate in and have a meaningful impact on decision-making processes.[56] In its final order on Avista Corporation's 2022 GRC[57] the Commission stressed that *"The issue of equity, broadly, and the need to consider distributional equity in planning processes affects all utility companies regulated by the Commission. The development of a plan for distributional equity requires input, collaboration, and buy-in from persons and parties not included or represented in Avista's general rate case."* Staff recommends that PacifiCorp's present to its equity advisory group about the equity implications of the IRP process and empower that group to take on a larger role in the IRP planning process and that the Company strives to include a broader coalition of equity-related interest groups in its IRP public input process.

Staff would like to commend PacifiCorp on its transparent inclusion of the stakeholder feedback forms received. The stakeholder feedback process is robust and has generated many responses from interested parties. Further, representatives of the Company provide detailed responses in a timely manner.

PacifiCorp provided accompanying workpapers with the Draft IRP which Staff reviewed and found to be named intuitively, and relatively easy to navigate. Most of the workpapers included, however, were data files used as the inputs for various plots and tables in the Draft IRP. Since few scenarios had been run at the time of filing, there was little practical data for stakeholders to view which would give insight into economic, risk based, or environmental considerations the Company used to make its choices. Examples include state-specific load studies, most counterfactual scenarios and sensitivities to the preferred portfolio, reserve requirements, and most all of the Washington specific CEAP supporting workpapers mentioned previously. In conversations with Company representatives, they stressed repeatedly that it would be less valuable to include information that was unfinished or known to be inaccurate. Staff respectfully reminds PacifiCorp that the filing date for the Draft IRP is known years in advance. Stakeholders' ability to properly analyze and provide comment on the draft is an essential step in the development of a final IRP. If these essential portions cannot be completed in the proscribed timeline, as is consistently accomplished by other Washington investor-owned utilities, perhaps PacifiCorp should adjust its internal schedule accordingly.

Recommendation: Consider changes to future planning timelines which would allow for a more complete draft at the time of filing

Recommendation: Consider including insights from the Company's Equity Advisory

[56] In Washington Utilities and Transportation Commission versus Cascade Natural Gas Corporation, Docket UG-210755, Final Order 09, at 18, ¶ 56 (2021 Cascade GRC Final Order) (Aug. 23, 2022).
[57] Wash. Utils. & Transp. Comm'n v. Avista Corp., Dockets UE-220053, UG-220054, UE-210854 (Consolidated), Final Order 10/04, ¶¶ 77 (December 12, 2022).

Group in the IRP planning process. Provide a fuller explanation as to how equity considerations are built into long term planning.

Recommendation: Include a complete, standalone Clean Energy Action Plan with a 10-year planning horizon and all elements required by Washington state law.

Summary of Public Comments

As of this date, no public comments have been received on Docket UE-230812.

Conclusion

PacifiCorp submitted a commendable Draft IRP which is thorough and contains a high level of technical detail. Staff appreciated PacifiCorp's public input process and monthly meetings with Staff. The Company consistently provides the time and expertise of knowledgeable representatives, highlighting the Company's commitment to engaging with Staff and other parties' feedback throughout the process.

Staff appreciate the continuous improvement the Company has undergone refining its modeling methodology, climate modeling, and comprehensive conservation potential assessment. Staff also appreciates PacifiCorp's inclusion of previous recommendations regarding distributed energy resources and the social cost of greenhouse gasses, among others. PacifiCorp has committed to complying with the Clean Energy Transformation Act, but there are significant steps the Company must take to ensure that happens and quick action is essential. There are several areas the Company can improve upon, and Staff presented several recommendations throughout these comments to address them.