UE-200420

NW Energy Coalition

for a clean and affordable energy future

September 14, 2023

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Attn: Kathy Hunter, Acting Executive Director and Secretary
Washington Utilities and Transportation Commission
621 Woodland Square Loop SE
P.O. Box 47250
Lacey, WA 98503

Re: NW Energy Coalition's Comments on PacifiCorp's 2023 Electric Integrated Resource Plan Progress Report (**Docket UE-200420**)

Dear Director Hunter:

The NW Energy Coalition ("NWEC") appreciates the opportunity to provide comments on the PacifiCorp 2023 Integrated Resource Plan ("IRP") Progress Report in Utilities and Transportation Commission ("UTC" or "Commission") docket UE-200420, as provided by the Notice of Opportunity to File Written Comments issued August 14, 2023.

NWEC is an alliance of over 100 environmental, civic, and human service organizations, progressive utilities, and businesses. Our mission is to advance clean, equitable, and affordable energy policies in Oregon, Washington, Idaho, Montana and British Columbia. We envision the Northwest comprised of communities that benefit from a carbon-free energy system that equitably meets the needs of people and preserves the region's natural resources.

Overall, NWEC views the 2023 IRP Update as making measured progress across the board on the transition toward a decarbonized and more reliable resource mix for the benefit of PacifiCorp's Washington customers. We also note several areas needing further refinement or a change of direction. We conclude with recommendations for the Commission and PacifiCorp to consider.

1. Achievements

Renewable Energy and Transmission Development. PacifiCorp has achieved much of the clean energy generation and transmission outcomes indicated in previous IRPs and requests for proposals ("RFPs"). While there have been challenges and delays due to external factors, this provides important momentum for the scale-up of new clean energy resource development outlined in the 2023 IRP Update.

Resource Adequacy. PacifiCorp has taken significant steps to address resource adequacy challenges: (1) participating in development and joining the Western Resource Adequacy Program; (2) responding to the WECC Western Assessment of Resource Adequacy (WARA, p. 119 of the 2023 IRP Update); and (3) adjustments to make its Front Office Transaction ("FOT") strategy more flexible and responsive to market opportunities (p. 125).

Climate Adjusted Baseline. The 2023 IRP Update summarizes initial steps taken to adjust weather and demand estimates to reflect recent and future projected effects of climate change (p. 127).

Western Power Market Development. PacifiCorp is the first western Balancing Area Authority to announced its commitment to join the California ISO's Extended Day Ahead Market ("EDAM"), building on top of the very successful Western Energy Imbalance Market ("EIM").

Federal Support. The 2023 IRP Update includes, to the extent feasible given ongoing development of federal criteria, the resource tax credits and other support provided by the Infrastructure Investment and Jobs Act ("IIJA") and Inflation Reduction Act ("IRA").

Endogenous Resource Modeling. In part responding to many requests by stakeholders in previous IRPs, PacifiCorp has enabled endogenous modeling of coal and gas facility retirements as well as new transmission and battery storage resources in the recently available PLEXOS modeling environment (p. 23).

Higher Wholesale Gas and Power Market Price Deck. As illustrated in Fig. 1.9 (p. 17), the 2023 IRP update significantly increases future trend estimates for gas and market pricing, in part responding to NWEC's suggestion for many years to address upside resource and market risk.

2. Improvements Needed

Stakeholder Engagement. For a number of reasons, including difficulties in refining the use of the PLEXOS modeling framework, PacifiCorp has instituted several delays in the IRP review process over the last several years, which have resulted in very reduced time for review of model scenario and sensitivity outputs. This has greatly impeded the ability of Commission staff and stakeholders to engage in full dialogue about the crucial end stage of the IRP review process and also resulted in multiple filing deferrals.

Treatment of Demand Growth. Along with other regional utilities, PacifiCorp has not been immediately responsive to external drivers significantly affecting the magnitude and load shape of system demand. The 2023 IRP update notes that long term forecasted system load and coincident system peak are now anticipated to be 14.9% higher than the 2021 IRP, increasing the annual gross load (not including incremental energy efficiency) by as much as 2% per year (p. 15).

There are multiple drivers including significantly increasing industrial demand at the present moment from new data centers and other loads, and oncoming load from transportation and building decarbonization. While all utilities in the region are engaging with these issues, it may be necessary to move from a single future demand trend line and resource portfolio strategy to one that inherently addresses uncertainty and flexibility.

3. Recommendations

Energy Efficiency ("EE"). With substantial changes on both the supply and demand side, PacifiCorp and the Commission should focus attention on rethinking the role, magnitude and pace of acquisition for energy efficiency. While PacifiCorp continues to maintain a robust EE program, rapid increases in demand and the availability of EE resources to address peak needs makes this a moment when a more expansive view of EE cost-effectiveness is warranted. With Commission guidance, PacifiCorp should engage in a review of assumptions about EE value during the next IRP cycle.

Demand Response ("DR"). PacifiCorp has laudable short-term and long-term goals for DR, but the lack of a coherent roadmap for DR development poses great concern. Action Plan item 4a footnote 2 notes that some of the DR identified by the 2023 IRP Update will be achieved with acquisitions from the previous DR RFP issued as a result of the 2019 IRP. However, NWEC is not aware of any further details, and in addition there is little clarity about the balance of DR programmatic effort between third party and utility managed DR programs, as well as alignment with DR-friendly time of use and/or peak time rebate rate designs.

We recommend that the Commission direct PacifiCorp to develop a flexible load plan that fully describes a comprehensive strategy for developing DR delivery including both program components and rate design. It is especially important to have primary guidance from an effort to identify in detail the interests and preferences of various customer segments potentially participating in DR programs.

Wholesale Gas and Market Scarcity Pricing. The west, especially along the Pacific coast, had a lengthy period of highly elevated wholesale natural gas and power market prices during the winter of 2022-23. NWEC welcomes PacifiCorp's early commitment to the EDAM, which will help mitigate our region's overdependence on gas fired generation, but further action will be needed to prepare for further occurrences of extended scarcity pricing.

We recommend the Commission initiate a review— including the participation of PacifiCorp and the other jurisdictional electric utilities, along with all stakeholders— of the winter 2022-23 event and address the underlying causes, potential for reoccurrence of extended scarcity pricing at any point throughout the year, and potential measures to respond.

Life Cycle Methane Emissions. As noted in the IRP, PacifiCorp currently assesses natural gas generation emissions at a rate of 0.428 metric tons CO_2 equivalent per MWh. This is based solely on direct CO_2 emissions from gas combustion, and therefore does not include the cumulative effect of "upstream" emissions from production and transportation of fossil methane. Substantial new peer reviewed research shows that such precombustion greenhouse gas emissions are considerably larger than has previously been assumed. This is especially important considering PacifiCorp's plans to convert several coal generators to gas over the next few years.

With guidance from the Commission, PacifiCorp should reassess the full life cycle of methane emissions for natural gas used in its gas fired generation as well as market purchases.

Proposed Natrium Nuclear Project. PacifiCorp has not provided sufficient information and justification for inclusion of the proposed Natrium projects in the IRP Preferred Portfolio. No project of this specific type has ever been constructed and operated on any grid. Indeed, the project developer, Terrapower, has yet to submit a formal licensing application to the Nuclear Regulatory Commission, posing additional schedule delay and cost risk.

- PacifiCorp claims the first 500 MW (peak) Natrium generator will be online in 2030, and two additional units for a total of 1500 MW will be available in 2032.

- The fuel supply will be a form of High Assay Low Enrichment Uranium ("HALEU") for which there is no commercially available source at present, and high uncertainty about availability in sufficient quantity by the commissioning date for the first Natrium facility, despite massive and growing federal subsidies to build out the HALEU supply chain and manufacturing capacity.

- PacifiCorp has not disclosed any written, binding development and ownership transfer agreement with Terrapower. The IRP claims that some type of formal agreement will be executed by the end of 2023, but schedule slippage has already occurred and there is no substance for the Commission to review.

- PacifiCorp has no previous experience operating nuclear plants of any kind. Key concerns include underperformance or nonperformance of the multiple Natrium projects now included in the resource portfolio which would be owned and operated by PacifiCorp following construction and transfer by Terrapower.

- While PacifiCorp has said that the net cost of ownership and operation to customers will be limited to the cost-effectiveness ceiling, there are many unknowns on the scope and bindingness of those assurances.

In the context of IRP review by the Commission, therefore, it is not possible to compare the availability, cost, and performance of this resource type with no empirical history to other resources considered for the IRP portfolio which all have demonstrated cost and performance metrics.

PacifiCorp's sensitivity analysis indicates that system net present value revenue requirement ("NPVRR") would rise slightly without the Natrium projects, but that result entirely depends on exceptionally high performance of a first-of-a-kind new technology deployment.

It is not appropriate for PacifiCorp to continue developing a speculative project under the cover of IRP acknowledgement, first and foremost because the implications of a cost shift to customers cannot be resolved with currently available information. NWEC recommends that the Natrium facilities be removed from the Preferred Portfolio.

Thank you for considering our comments.

Respectfully submitted,

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