

UE-210829

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**RENEWABLE
NORTHWEST**

January 11, 2024

Kathy Hunter
Acting Executive Director and Secretary
Washington Utilities and Transportation Commission
P.O. Box 47250
Olympia, WA 98504-7250

RE: Comments on Behalf of the NW Energy Coalition, Sierra Club, and Renewable Northwest on PacifiCorp's 2023 Biennial CEIP Update (Docket UE-210829)

Dear Ms. Hunter,

We appreciate the opportunity to comment on PacifiCorp's 2023 Clean Energy Implementation Plan ("CEIP") Biennial Update filed pursuant to WAC 480-100-640.

The NW Energy Coalition ("NWEC") is an alliance of over 100 environmental, civic, and human service organizations, progressive utilities, and clean energy businesses. Our mission is to advance clean, equitable, and affordable energy policies in Washington, Oregon, Idaho, and Montana. 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.

Sierra Club is a national nonprofit organization with 67 chapters and about 680,000 members nationwide dedicated to the protection and preservation of the natural and human environment, including protecting public health. Sierra Club's most important current priority is to advance smart, clean energy solutions that address the critical problems of climate change, air pollution, and our nation's dependence on fossil fuels, while reducing costs and alleviating energy burden. The Washington Chapter of the Sierra Club has more than 27,000 members, many of whom are PacifiCorp customers.

Renewable Northwest (“RNW”) is a regional, nonprofit renewable energy advocacy organization with the mission of decarbonizing the Pacific Northwest region by accelerating the transition to renewable electricity. RNW’s vision is for every home, business, and vehicle in the Northwest to be powered by renewable, affordable, carbon-free electricity. The organization’s membership is composed of more than 80 renewable energy businesses and environmental and consumer groups.

Since the passing of the Clean Energy Transformation Act (“CETA”), our organizations have submitted multiple sets of comments on PacifiCorp’s 2021 CEIP (Dkts. UE-210829 and UE-220376).

We appreciate the significant amount of work from the Company and all involved parties that resulted in the Revised Final 2021 CEIP (“Final CEIP”), which was conditionally approved by the Commission on October 25, 2023. Settling parties anticipated that the 2023 Biennial CEIP Update (“Biennial Update”) would be due soon after the CEIP’s approval and, thus, only two of the fifty conditions provided the Company with the opportunity to provide updates within the Biennial Update itself. Both CEIP conditions open to amendment – Conditions 30 and 39 – pertain to PacifiCorp’s interim targets. We discuss these two conditions below with the bulk of the discussion regarding Condition 30 due to the dramatic nature of the Company’s revisions.

I. Condition 39 (Interim Target Condition 10”)

If PacifiCorp does not update in its 2023 Biennial CEIP Update, PacifiCorp will update its demand response target, and the steps it has taken since the filing of the original CEIP to implement demand response programs, and evaluate methods to acquire additional demand response outside of the responses it received in its 2021 request for proposals. Due Date: 2025 CEIP.

PacifiCorp maintained its 37.4 MW demand response (“DR”) target between the Final CEIP and the Biennial Update. At this time, we are satisfied with maintaining this target for the 2022-2025 compliance period. We look forward to reviewing an updated target and the steps that the Company has taken to implement DR programs and evaluate methods to acquire additional DR outside of the 2021 RFP in the 2025 CEIP.

Furthermore, we highlight the complex and cross-cutting effort required within the Company to develop, field test, and scale up the many needed elements of demand response. Just as importantly and integrally related, the Company must develop customer-oriented program designs, outreach and ongoing refinements that are customer and community responsive and lead to an ongoing partnership approach. In so doing, we urge the Commission to direct the Company at the appropriate time to develop and file a demand response strategy and roadmap –

a comprehensive and detailed guidance document similar to the Portland General Electric Flexible Load Plan.¹

II. Condition 30 (“Interim Target Condition 1”)

The parties agree that the Commission should approve PacifiCorp’s 2022-2025 Revised CEIP interim targets that were based on then reasonable information, and permit the Company to update these targets as necessary in the 2023 Biennial CEIP Update. Due Date: N/A

Table 1.1 – Comparison of Annual and 4-Year Average 2021 CEIP and 2023 CEIP Update Interim Targets

Interim Targets	2022 Projected	2023 Projected	2024 Projected	2025 Projected	Average Projected
2021 CEIP	31%	31%	40%	60%	41%
2023 CEIP Update	31%	26%	25%	33%*	29%

In alignment with Condition 30, PacifiCorp updated its interim targets as shown in Table 1.1 above.² As can be seen, PacifiCorp has significantly reduced its interim targets for 2023, 2024, and 2025. The Company attributes this drop to a number of factors, including a delay in reaching agreement on a new multi-state cost-allocation methodology, a delay in new resource construction, uncertain short-term contract options in 2025, rate impacts of high energy market prices, and resource repricing during procurement.

We are deeply concerned about the significant drop in PacifiCorp’s interim targets for the remainder of this compliance period. We were aware that the Company intended to reduce its targets prior to the suspension of its 2022 All-Source Request for Proposals (“ASRFP”) and therefore do not believe that the ASRFP suspension was the cause for the Company reducing its targets. Rather, we are concerned that PacifiCorp’s decision to suspend the ASRFP will only exacerbate the issue.

In any case, PacifiCorp has stated that it will still meet the 2030 CETA standard. We question how this will be achieved, as the Company will have to make extreme jumps in renewable and non-emitting energy generation in the next compliance period (2026-2029).

¹ Oregon Public Utility Commission, Docket No. UM 2141, Orders 22-023 and 22-115, available at: <https://apps.puc.state.or.us/edockets/docket.asp?DocketID=22696>

² PacifiCorp, 2023 Biennial CEIP Update, page 6.

PacifiCorp Projected Interim Renewable or Non-emitting Energy Targets			
Source: 2023 IRP, Appendix O, Figure O.1			
2026	2027	2028	2029
40%	39%	53%	62%

These jumps only increase in later years, with an expectation that renewable or non-emitting energy will represent 82% of retail sales by 2030 (an increase of 20% from 2029), drop to 80% in 2031, before shooting up to 114% by 2032 (an increase of 52% from 2029).

Notably, the increase in renewable or non-emitting energy appears to be tied to expected operational dates for nuclear energy and non-emitting peakers, both of which the 2023 Integrated Resource Plan (“IRP”) assumes will be available starting in 2030, with additions in 2032 and later years. Given that both resources are highly speculative in numerous ways (e.g., technologically, financially, regulatorily), PacifiCorp’s assumption that it will meet its clean energy targets with nuclear or non-emitting peakers puts Washington ratepayers at substantial risk.

Moreover, the Company has not provided settling parties with clarity about its procurement plans, including how suspension of the 2022 ASRFP impacts its 2023 IRP projections. As of December 2, 2023, with the filing of stakeholder response comments at the Oregon Public Utility Commission (“OPUC”), it appears PacifiCorp anticipates substantial changes to its resource portfolio in Q1 2024: “PacifiCorp has no revised plan or substantive updates available at this time and is actively working to incorporate a number of updated assumptions as part of portfolio development for its 2023 IRP Update, anticipated to be filed April 1, 2024. The result will be comprehensive changes to the portfolio, and not just specific line items that could be modified in a few figures in the filed 2023 IRP.”³

And while PacifiCorp suggests these portfolio revisions “will tend to support the assessment” informing its deflated renewable energy targets, **we have identified three key issues with the 2023 IRP that, if addressed in the 2023 IRP Update, could strengthen PacifiCorp’s interim targets ahead of 2030.**⁴

1. PacifiCorp should model the potential cost savings of the federal Inflation Reduction Act.

Building off PacifiCorp’s IRP assumptions, the Company could move their entire system much faster towards decarbonization and without unrealistic reliance on highly speculative resources. However, we are seeing tweaks and critical omissions in their IRP that prevent faster

³ PacifiCorp’s Round 1 Response Comments were filed in docket LC 82: PacifiCorp 2023 Integrated Resource Plan (IRP) and Clean Energy Plan (CEP), available at <https://edocs.puc.state.or.us/efdocs/HAC/lc82hac1546.pdf>.

⁴ PacifiCorp 2023 Biennial CEIP Report at 11.

decarbonization. For instance, PacifiCorp’s 2023 IRP did not fully analyze potential benefits of the federal Inflation Reduction Act. Of particular importance, the Company did not factor in cost savings that could be achieved through the Department of Energy’s Energy Infrastructure Reinvestment (“EIR”) loan program. This program authorizes the Department of Energy to guarantee up to \$250 billion in loans for projects that either (1) retool, repower, repurpose, or replace energy infrastructure that has ceased operations, or (2) enable operating energy infrastructure to avoid, reduce, utilize, or sequester air pollutants or anthropogenic emissions of greenhouse gases. In other words, the EIR loan program would significantly reduce the costs of transitioning to clean energy for PacifiCorp’s entire system, which would result in more rapid decarbonization. Preliminary analysis shows that EIR financing used to facilitate the addition of new clean energy resources and the retirement of fossil resources could reduce PacifiCorp’s costs on the order of \$13 billion.⁵

2. PacifiCorp should update its reliability modeling process to incorporate industry best practices related to firm capacity accreditation and probabilistic loss-of-load modeling.

PacifiCorp’s 2023 IRP made “reliability adjustments” that unreasonably favored fossil fuels, nuclear resources, and “non-emitting peakers,” over clean energy solutions like long-duration storage, offshore wind, and advanced geothermal. Reliability adjustments are necessary, and even appropriate, due to the PLEXOS modeling software used in the IRP, which uses three separate models with different temporal forecasting abilities to produce the final IRP. Specifically, PLEXOS uses Long-Term (“LT”), Medium-Term (“MT”), and Short-Term (“ST”) models. The LT model is a capacity expansion model that evaluates resource needs over large blocks of time. The portfolio produced from the LT model is then run through the ST model, which can identify energy shortfalls on an hourly basis that may not have been captured in the LT model.⁶ These gaps, identified in the ST model, must then be filled by PacifiCorp to ensure a reliable final portfolio.

As a result, reliability adjustments are necessary, but, because they occur outside of the model, carry a level of subjectivity. Even when model information is used to justify the reliability changes (such as a calculated reliability benefit), large assumptions are still made, including, for instance, when a new resource (e.g., nuclear) will be commercially available and at what cost or what federal or state regulations may impact the viability of certain resources.⁷ Accordingly,

⁵ Sierra Club Opening Comments on PacifiCorp’s 2023 IRP, available at

<https://pscdocs.utah.gov/electric/23docs/2303510/331222RdctdSierraClubCmnts12-12-2023.pdf>.

⁶ The MT model is used to perform a stochastic risk analysis of the portfolios, but this step is less relevant for the reliability adjustments discussed here.

⁷ One important assumption made regarding federal regulations was PacifiCorp’s assumption that its Utah coal plants could meet federal Clean Air Act requirements with “selective non-catalytic reduction” (“SNCR”) control technology, even though EPA regulations assume that coal plant operators install much more expensive, but more effective, selective catalytic reduction (“SCR”) controls. This flawed assumption led to PacifiCorp manually extending the lives of Hunter and Huntington by installing SNCR.

when PacifiCorp made reliability adjustments in the 2023 IRP, it made certain assumptions about which resources would be most beneficial to its customers.

A review of the Company’s PLEXOS data indicates that when the Company had to make these adjustments, it consistently placed its bets on fossil resources and nuclear energy. Take, for instance, the Jim Bridger coal plant. Whereas the initial modeling portfolio converted Units 1 and 2 to gas in 2024 and retired those units in 2030, PacifiCorp extended the retirement year to 2037 for both units. For Unit 3, the initial portfolio retired the plant in 2025, but PacifiCorp modified this outcome to a gas conversion in 2030 and retirement in 2037. Similarly, at Unit 4, the initial model retired the unit in 2031, but PacifiCorp changed this outcome to a gas conversion in 2030 and retirement in 2037. Similar adjustments were made at PacifiCorp’s other coal plants.

Jim Bridger Units	Initial Portfolio	Reliability-Adjusted Portfolio
Unit 1	Gas conversion in 2024 Retirement end of 2030	Gas conversion in 2024 Retirement end of 2037
Unit 2	Gas conversion in 2024 Retirement end of 2030	Gas conversion in 2024 Retirement end of 2037
Unit 3	Retirement end of 2025	Gas conversion in 2030 Retirement end of 2037
Unit 4	Retirement end of 2031	Gas conversion in 2030 Retirement end of 2037.

In addition, reliability adjustments removed wind resources and added non-emitting peakers and nuclear plants that otherwise would not have been included in the portfolio. These non-emitting peakers and nuclear plants were added over other viable options, such as advanced geothermal and offshore wind, without any explanation.

The significant manual adjustments made to the PLEXOS model is indicative of gaps in the Company’s reliability modeling process:⁸

- a. The Company uses the simplified Capacity Factor Method (“CF Method”), which does not capture interannual variability in the load profile or the generation fleet, to estimate the capacity contribution of proxy resources – a method arguably appropriate before the widespread adoption of variable renewable energy resources, but certainly not the current industry best practice. Due to the large scale of planned renewable resources, **we recommend PacifiCorp adopt an ELCC capacity contribution methodology, or something functionally equivalent, to better reflect portfolio and saturation effects over the study period.** A marginal ELCC method should be applied to all resources, not just renewables, because no resource has perfect annual capacity availability.

⁸ Renewable Northwest’s Oct. 25, 2023, comments regarding PacifiCorp’s 2023 IRP, submitted to OPUC docket LC 82, extensively discuss PacifiCorp’s reliability modeling and offers more detailed recommendations. See Section V of the comments, available at <https://edocs.puc.state.or.us/efdocs/HAC/lc82hac17443.pdf>

- b. PacifiCorp uses a simplified temporal resolution to estimate the effective capacity contribution of each proxy resource. But variable renewable resources and energy-limited resources are more impacted by portfolio interactive effects and therefore require a more computationally dynamic accreditation method to accurately set their firm capacity contributions. This is likely another modeling limitation creating the need for manual adjustments to the LT Model. **We recommend PacifiCorp explore solutions to capture the time dynamic aspects of firm capacity calculations**, for example by trialing the temporal resolution parameter in PLEXOS to define a simplified temporal resolution.

Though we recognize that this docket is focused on the Company's CEIP and not its IRP, the CEIP is directly informed by the IRP. And given the number of changes the Company anticipates in its 2023 IRP Update, we cannot comment on PacifiCorp's significantly reduced interim targets without questioning elements of the IRP that may be inaccurately deflating the viability of renewable resources to meet the Company's needs on a least cost, least risk basis. Condition 3 proposed below would require the Company to address these specific gaps in the reliability modeling framework for future IRP filings which inform 2025 CEIP interim targets.

3. PacifiCorp should revise its cost assumptions for wind, solar and storage resources to exclude the escalator applied to NREL's cost projections in 2024 and beyond.

For the 2023 IRP, PacifiCorp sources its resource costs for solar, wind, and storage resources from a third-party analysis by PacifiCorp's consultant WSP, an analysis which is itself primarily informed by the National Renewable Energy Laboratory's (NREL) Annual Technology Baseline (ATB) study. However, while other regional utilities such as PGE and the California Public Utility Commission ("CPUC") sourced the same data to inform renewable and storage resource costs, PacifiCorp included a cost adder in year 2024 and beyond with no supporting documentation to justify the cost adjustments. As a result, PacifiCorp's overnight capital cost estimates are 15-50% higher than the costs used by PGE and the CPUC through the early 2030s.⁹

In comments filed with the Oregon PUC, RNW noted that it "did not identify any major cost components which are included in PacifiCorp's analysis which are not included in comparable analysis from PGE or in the CPUC's Integrated Resource Planning analyses," and that "PacifiCorp's manual adjustments to the NREL ATB cost assumptions likely play a key role in PacifiCorp's resource selection and preferred portfolio economics through the late 2020s and into the early 2030s, a period during which the model selects several gigawatts of [small modular reactors] and non-emitting peaking resources."¹⁰ Given the highly uncertain viability of these future technologies on the timelines the Company projects – timelines which align with the

⁹ Oct. 25, 2023, Comments of Renewable Northwest re: PacifiCorp's 2023 IRP, pp. 33-38. For more detail, see RNW's comparative analyses of the resource overnight capital cost assumptions (for solar photovoltaic, land-based wind, offshore wind, and battery energy storage systems) incorporated in PacifiCorp's 2023 IRP versus those published by the NREL ATB study and incorporated in the 2023 IRPs for PGE and the CPUC.

¹⁰ Oct. 25, 2023, Comments of Renewable Northwest re: PacifiCorp's 2023 IRP, pp. 32.

significant 20%+ jumps in renewable and non-emitting interim targets around year 2030 – we are concerned that the Company’s preferred portfolio is skewed toward future technologies and is undervaluing viable clean technologies.

Because the Company’s escalator increases costs well beyond those used by other reliable views of the market for energy generation resources, we recommend PacifiCorp eliminate the price escalations to the NREL cost data. We acknowledge that a revised model run may continue to select some level of future technologies, but with solar, wind, and storage costs that are more realistic, we anticipate that the capacity expansion model would likely select additional renewables, resulting in more optimistic interim targets in the 2023 Biennial CEIP Update.

We hoped that more light would have been shed on this issue in the Biennial Update and are very disappointed that the Company is seemingly attempting to delay this conversation until after the Biennial Update has been reviewed by the Commission.

Our Recommendations

Ideally, the Company would have continued to move forward with its 2022 ASRFP and maintained its original renewable energy interim targets for 2022-2025. Our organizations remain concerned that the Company unilaterally altered its targets so significantly, and urge the Commission to maintain its strict oversight. We offer the following solutions that will enable the Company to equitably achieve its 2030 mandate, despite the current setbacks.

The Company should convene discussions with the 2021 CEIP settling parties to explain its procurement plans and determine achievable and higher interim targets for this compliance period. Higher interim targets in this compliance period are necessary to avoid an unachievable ramp rate in the next compliance period.

Alongside discussions with settling parties, we propose the conditions described and listed in the remainder of these comments that we believe will help the Company identify and achieve higher and more equitable interim targets.

First and foremost, the Company must have a transparent plan to procure clean generating resources with enough time to maintain an achievable ramp up rate in the next compliance period. We agree with comments from Public Counsel submitted in response to the Biennial Update that the Utilities and Transportation Commission should require that PacifiCorp provide a schedule and status update to their ASRFP by March 31, 2024. We recommend that the schedule include a date by which the Company will present its resource selections to the Commission. Additionally, if the Company again chooses to forego any resource selections, it should be required to document its justifications for its decision. Please see Proposed Condition 1 below.

Second, the Commission should order PacifiCorp to re-run its 2023 IRP preferred portfolio adjusting cost inputs to 1) recognize the likely availability of financing from the federal EIR loan program and 2) align resource costs for renewable and storage resources with the NREL ATB study. For future IRP filings, the Commission should order PacifiCorp to update its capacity accreditation to reflect modern best practices, as this will likely reduce the need for the Company to make manual reliability adjustments that do not support a least cost, least risk portfolio. Please see Proposed Conditions 2 and 3 below.

Finally, it is necessary that the Company invest in community projects or projects that deliver clean energy benefits to Named Communities *in this compliance period*. If the company delays its clean energy procurement to the next implementation period, it is likely that PacifiCorp will aim to procure utility-scale resources to meet the 2030 target and, thus, may lose sight of community-based clean energy. This would wrongly exclude communities from participating in and benefitting from the transition. To prevent this, the Commission should order PacifiCorp to adopt Puget Sound Energy's 2021 CEIP conditions 20 and 21, with a due date set for the 2024 filing.¹¹ Please see Proposed Conditions 4 and 5 below.

Proposed Conditions

1. All-Source Request for proposal (ASRFP): PacifiCorp must provide a schedule and status update to their ASRFP by March 31, 2024. If PacifiCorp decides to forego any resource selections, it must document for the Commission the justifications for this decision including what needs PacifiCorp originally anticipated fulfilling through the ASRFP, how those needs will otherwise will be filled and at what cost, ASRFP bid information (including cost), and an analysis of how the decision to forego resource acquisitions through the 2022 ASRFP will impact the forecasted operational lives of PacifiCorp's current resources, GHG emission reductions and PacifiCorp's other requirements under CETA.
2. 2023 Integrated Resource Plan (IRP) Update: PacifiCorp must make two adjustments to its portfolio modeling ahead of filing the 2023 IRP Update on April 1, 2024. First, the Company must incorporate the cost savings opportunities offered by the Energy Infrastructure Reinvestment (EIR) Loan Program, adjusting the 2023 IRP preferred portfolio so that transmission network upgrade costs in Cluster Areas 1, 2, 4, 12, and 14 are reduced by 10% and EIR financing is assumed for early retirement and replacement of Jim Bridger Units 3 and 4, Huntington, Hunter, and Wyodak. Second, the Company must revise its input resource cost assumptions for solar, wind, and storage resources to exclude an escalator to NREL cost projections in year 2024 and beyond unless the Company can provide a rigorous basis for the upward adjustments. The Company should

¹¹ Puget Sound Energy Final Order 08 Approving Clean Energy Implementation Plan Subject to Conditions. Docket U3-210795. Conditions 20 and 21, pages 6-7.

provide a draft of its adjusted 2023 IRP preferred portfolio to stakeholders no later than February 15, 2024, and a final to the Commission by April 1, 2024.

3. Reliability modeling improvements to future IRP filings: To reduce manual adjustments to the reliability modeling framework, PacifiCorp will adopt a modern capacity accreditation methodology by (1) transitioning to the Effective Load Carrying Capability (ELCC) method or something functionally equivalent, and (2) improving the time dynamic aspects of its firm capacity calculations. The Company will make these modeling improvements no later than the filing of the draft 2025 IRP, with the changes also reflected in the 2025 CEIP.
4. Minimum Designations: PacifiCorp will designate for Named Communities a minimum of 30% of the energy benefits of its DER solar, DER storage, DR, and EE programs, with benefits measured across each tranche of resources. PacifiCorp will commit to developing a targeting approach to identify the customers and communities with deepest need within the broader category of Named Communities in consultation with interested persons and advisory groups. By the 2025 CEIP, PacifiCorp will designate a minimum percentage of energy benefits that will flow to Named Communities with deepest need.¹²
5. DER Program Design: To implement the 30% energy benefit minimum designations for Named Communities discussed above, PacifiCorp will develop mechanisms for intentionally serving customers in Named Communities in each of its individual DER programs, including carve-outs for program costs (including outreach/education) and minimum participation thresholds. PacifiCorp will also modify its program design for solar and storage DER programs to better ensure benefits flow to Named Communities, including by developing targeting for Named Communities beyond using income as the sole criterion for program eligibility; offering higher incentives for low-income customers and Named Communities; ensuring benefits flow to tenants in affordable multifamily housing; and targeting storage programs.

Conclusion

We look forward to working with the Company, Commission staff, and other interested parties to resolve our concerns and further implement the CEIP through the remainder of this implementation period. Thank you for considering our comments.

Respectfully submitted,

¹² Proposed Conditions 3 and 4 in these comments are duplicative of Conditions 20 and 21 in PSE's 2021 CEIP Order 08 (UE-210795), approved by the Commission on June 6, 2022.

/s/ Charlee Thompson
Policy Associate
NW Energy Coalition
811 1st Ave, Suite 305
Seattle, WA 98104
(618) 315-7775
charlee@nwenergy.org

/s/ Rose Monahan
Staff Attorney
Sierra Club
2101 Webster St, Suite 1300
Oakland, California 94612
(415) 977-5704
rose.monahan@sierraclub.org

/s/ Katie Ware
Consultant
Renewable Northwest
421 SW 6th Ave, Suite 1400
Portland, OR 97204
(503) 223-4544
katie@renewablenw.org