

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**
LC 70

In the Matter of
PACIFICORP, dba PACIFIC POWER,
2019 Integrated Resource Plan.

OPENING COMMENTS OF
NW ENERGY COALITION

1. Introduction

The NW Energy Coalition (NWECC) respectfully submits the following opening comments on the 2019 Integrated Resource Plan (IRP) of PacifiCorp, dba Pacific Power.

NWECC appreciates the extent of the materials provided both in the filed IRP and the many workshops throughout the 2019 IRP process. PacifiCorp has made extensive modifications to its planning process and models that provide additional clarity and depth.

We also appreciate the thorough preparation for the many workshops and the Company's willingness to engage in detailed questioning and discussion about all aspects of their analysis, as well as providing access to technical experts. PacifiCorp continues to be generally responsive to requests for additional detail and has scheduled special sessions, particularly on coal analysis and conservation potential assessment, that have proven valuable.

The 2019 IRP marks a turning point, but does not yet reflect the complete and committed strategy that PacifiCorp should embrace to achieve a more reliable, fully clean and affordable electric power system. Notably, the IRP proposes a significant amount of earlier coal plant retirement, and just as importantly, a strong commitment to new renewable generation, much of it combined with battery storage. But just as notably, there is a lack of focus on clearly available demand side resource opportunities for both energy efficiency and demand response.

Overall, there is a strong case that the earlier coal retirements set forth in this IRP are quite modest in the context of the company's entire set of resources, and while the trajectory of greenhouse gas emissions and other environmental impacts is indeed going in the right direction, much more can be achieved while retaining system reliability and affordability.

The question of greenhouse gas emissions is particularly important in light of the rapidly advancing climate crisis. The emissions from PacifiCorp's generation assets in aggregate are near the top of the list for individual entities in the country. A significant fraction of carbon dioxide emissions will remain in the atmosphere for over 1,000 years.¹ We have a duty to minimize those emissions for future generations as well as our own benefit.

Therefore, while NWEC is encouraged by the direction of travel in this proceeding, the pace of that travel is not close to where it should be. While recognizing that many positive advances have been made in modeling, data updates, the preferred resource strategy, the Action Plan and other aspects, NWEC can only provide very qualified support for the 2019 IRP.

2. Coal Fleet Analysis

After years of requests from multiple stakeholders and with direct guidance from this Commission and others, PacifiCorp has finally produced a plant by plant coal resource analysis. Although we have ongoing concerns about some aspects, completion of that process as an input to the main assessment effort has finally resulted in an IRP that begins to adequately examine the least cost/least risk approach to serving customers throughout the Company's service territory.

¹ The millennial atmospheric lifetime of anthropogenic CO₂, D. Archer, V. Brovkin, *Clim Change* 90:283–297 (2008), doi:10.1007/s10584-008-9413-1.; Irreversible climate change due to carbon dioxide emissions, S. Solomon, G.-K. Plattner, R. Knutti, P. Friedlingstein, *Proceedings of the National Academy of Sciences* (2009), 106 (6) 1704-1709; DOI: 10.1073/pnas.0812721106.

Unsurprisingly to NWEC, this analysis provided essential information leading to PacifiCorp's initial steps toward a coordinated phaseout of its coal portfolio.

That noted, NWEC strongly believes that on economic, environmental and climate change grounds, additional analysis and further consideration of accelerating coal fleet retirement should be the highest priority of the next IRP cycle, along with further, careful construction of a clean replacement resource mix to improve overall system value, provide economic benefits to customers, maintain and increase resource adequacy and reliability, and substantially reduce greenhouse gas emissions and other environmentally damaging aspects of the coal life cycle and plant operations.

Along with these resource decisions, NWEC emphasizes the importance of further coordination and support of workers and communities affected by impending coal plant closures. They have served us well and it is our duty to support them as the transition away from coal continues. Almost a decade ago, NWEC was directly involved in developing fully funded transition plans, with informed and meaningful involvement and direction by the affected community, well ahead of the closure of the Centralia coal generating units starting at the end of 2020. That effort has been successful and we believe this should be considered an essential component of the ongoing transformation of the PacifiCorp system.

3. New Resource Investment

A. Renewables

We commend PacifiCorp for recognizing and starting to embrace the rapidly falling cost of new renewable generation resources and battery storage. These extensive solar and wind resources, separately and with codevelopment battery storage, are a defining new feature of the

2019 IRP, reflecting not only public policy but also new innovation, rapid maturation in the clean energy industries, and cost decreases that have surprised even longtime renewable energy advocates.

B. Demand-Side Resources

However, enthusiasm regarding the renewable resource analysis portion of the IRP must be tempered by a high level of disappointment about the lack of similar progress on demand side resources. First, the complete lack of sufficient detail in the IRP regarding the preferred portfolio selection and specifically the discussion and explanation of DSM resource analysis makes it impossible to recommend acknowledgement of DSM action items. For example, it is not possible to tell just how much Class 2 DSM the Company expects to acquire in Oregon. Further, underlying this lack of information is the fact that the Company continues to underdevelop energy efficiency (Class 2 DSM), especially outside Oregon. And system-wide distribution efficiency efforts are non-existent; in the seven sentences devoted to distribution efficiency in the IRP, we learn that PacifiCorp “continues to evaluate distribution efficiency.” IRP at 167. NWEC asks just how long and how much evaluation is needed prior to the Company taking action to acquire these cost saving measures?

The foundation of the preferred portfolio in the IRP should be the acquisition of all cost-effective energy efficiency. Energy efficiency is still the least cost resource. NWEC has expressed concerns in previous IRP cycles regarding this trend of PacifiCorp acquiring significantly more energy efficiency in Oregon compared to other states.² Although there is, for some unexplained reason, no information regarding state-wide acquisition plans contained in the

² LC 52, NW Energy Coalition Final Comments (2011); LC 57, NW Energy Coalition Final Comments (2013); LC 67, NW Energy Coalition Opening Comments (2017).

IRP as was found in previous filed IRPs, through knowledge gained in our participation during the workshop stage, including reviewing PacifiCorp's conservation potential assessment, we continue to be concerned that Oregon ratepayers are funding higher levels of cost effective conservation relative to energy efficiency achieved in other states. If Oregon ratepayers are funding an abundance of cost effective conservation and other states are not achieving their share, Oregon ratepayers are subsidizing ratepayers in all other states throughout the PacifiCorp service area. This effectively raises rates in Oregon, requiring more expensive alternatives.

It is important that energy efficiency be acquired in a consistent manner across all parts of the Company's service territory, recognizing differences, for example, in building stock and climate zone, so that shortfalls in acquiring all cost effective energy efficiency do not occur, resulting in higher system costs that must be paid for by all PacifiCorp customers.

More information is needed in this IRP process in order to fully evaluate PacifiCorp's DSM resource plans. Additionally, for the 2021 IRP we encourage PacifiCorp to reexamine its energy efficiency analysis, with an emphasis on the technical aspects such as avoided cost calculations, ramp rates and other factors that could be erroneously influencing the energy efficiency analysis. We also encourage immediate action to implement distribution efficiency measures.

PacifiCorp should be held accountable to acquire the maximum feasible cost effective conservation available in all states throughout its service territory (IRP Guideline 6.b.). We recommend not acknowledging Action Item 4a, Class 2 DSM. Chronic underestimation of cost-effective Class 2 DSM has been such an ongoing problem that we are quite honestly at a loss as to what to recommend at this point other than, once again, non-acknowledgement of this Class 2 DSM Action Item.

Regarding DSM Class 1 (demand response) and DSM Class 3 (price response and load shifting), there is no coherent approach at all. Given the rapid change in the supply side mix; the increasing value of flexibility in managing anticipated demand fluctuations; renewable resource variability; market changes; potential new demand sources including transportation and building electrification; and emerging climate, wildfire and seismic risk, the lack of a consistent development strategy for flexible demand is a serious disservice to customers.

While there are small gains in direct load control programs (DSM Class 1) for Utah over the next several years -- and the Company rightly hails its recent automation of the Cool Keeper program in the Salt Lake City area -- the IRP indicates no new Class 1 DSM in Oregon until 2029. Only in the second decade of the IRP planning horizon does Class 1 and 3 DSM start to reach more substantial levels, well after coal retirements, peak load reduction and other flexible demand needs have shown up in the analysis. Yet much of DSM Class 1 and 3 resources are less expensive, just as quick to acquire as new gas power plants or battery storage, and just as dependable.

We note here just a few observations from review of the IRP and the detailed AEG study³ of DSM Class 1 and Class 3 resource potential:

- Oregon accounts for 25% of system summer peak load (over 10,000 MW) and 32% of winter peak load (over 8000 MW). AEG Study, Fig. 1-2. A common rule of thumb is that demand response can amount to at least 10% of system coincident peak, yet those levels are not approached for Oregon until the late 2030s.
- Only two of 11 standard DSM Class 1 program options are currently offered by PacifiCorp, and only in Utah and Idaho. AEG Study, Table 1-2.

³ AEG, PacifiCorp Conservation Potential Assessment for 2019-2038, Volume 5: Class 1 & 3 DSM Analysis Appendix, June 30, 2019.

- AEG ruled out certain categories in the analysis. For example: "Battery Energy Storage. This program provides the ability to shift peak loads using stored electrochemical energy. There are many utilities looking into customer-sited pilots, and cost and performance are projected to improve in the coming years, but at this time estimates of cost, lifetime, and performance of full-scale efforts are not sufficient and reliable enough to quantify as a resource at the level of reliability required for IRP planning." AEG Study at 18.

- The system-weighted average levelized cost of many DSM Class 1 resource categories is under \$150/kW-year, a reasonable level for comparing to other new resources for peak needs including combustion turbine gas plants and battery storage. AEG Study, Table D-7.

Overall, the IRP notes, "More Class 1 DSM resources are accelerated into the mid-term among those cases that have higher levels of accelerated coal and gas retirements." IRP at 214. Yet very little incremental DSM Class 1 resources are added to the system in the next decade, and those are only in Utah, and none on the west side of the system including Oregon.

NWEC believes that the AEG report and other analytical work by the Company provides a useful starter set of data, but that an overhaul of the DSM Class 1 and 3 assessment is in order.

NWEC proposes that PacifiCorp add a new Action Plan item, designated 4b or as otherwise appropriate, to undertake such a renovation for the next IRP cycle. This should include a new outside expert study, and a full stakeholder workshop. The outcome should be a full and coherent approach to the broad set of flexible demand resources included in DSM Class 1 and 3, in order to address needs for peak load reduction, system balancing and ramping, and ancillary services that can be provided by these resources. This is essential to maximizing the overall

economic value and reliability of a rapidly decarbonized resource mix to serve all PacifiCorp customers.

An overhauled DSM Class 1 and 3 study will also be able to take advantage of new data and field performance from similar resources in other utilities around the country, including the Portland General Electric DR Testbed, which is an integrated approach under the Commission's auspices that combines elements similar to PacifiCorp's DSM Class 1 and 3 resources. Those types of insights into the synergy available from well coordinated program and rate design will be valuable for a reassessment of PacifiCorp's flexible demand opportunities.

Further new and relevant studies will include the forthcoming 2021 Regional Power Plan of the Northwest Power and Conservation Council. The Council's staff and Demand Response Advisory Committee have already assembled and reviewed detailed, up-to-date cost and resource potential data for both programmatic and rate design driven flexible demand.

Alongside the revised study process for DSM Class 1 and 3 resources that we propose to add to the 2019 IRP Action Plan, we recommend that the Company and the Commission consider a separate RFP for DSM Class 1 resources so as to fully test the market for readiness, pricing and range of program offerings, as well as a detailed assessment of potential Company-managed program options to acquire these resources and complement third-party providers of demand flexibility.

C. Capital Expenditure

Turning to the preferred resource portfolio, in assessing the 20-year planning horizon, PacifiCorp anticipates over \$17 billion in capital expenditure for new resources. IRP, Table 1.2. While a very substantial aggregate figure, NWEC does not consider this out of range for a major multi-state utility.

If anything, the capex profile going forward should be considerably larger. First of all, we believe the economics supports a considerably faster coal phaseout strategy, which will require additional capital expenditure for new clean resources. Because of the company's strong financial position we anticipate additional capital for new clean resources to be quite accessible and affordable. An enhanced level of investment will help stabilize and eventually decrease ongoing revenue requirements as older, less efficient thermal plants with significant environmental impacts, greenhouse gas constraints, O&M and end-of-cycle costs are retired in favor of a newer, more efficient and less costly clean energy portfolio. That will be an attractive proposition to both the capital markets and the Company's customers.

We estimate that nearly half of the \$17 billion estimated capex for 2020-2038 will be incurred by 2025, within the 5-year Action Plan period. More than half of that interim amount (on the order of \$5 billion) will be for solar+battery resources in Utah, and nearly a third (over \$3 billion) for Wyoming wind, all ahead of the next wave of coal retirements. After that, it appears capex commitment falls dramatically in 2025-30, then comes up somewhat in the subsequent decade. Overall there appears to be significant headroom to increase capital expenditure on new clean resources as an accelerated and carefully planned coal retirement strategy emerges.

D. Transmission

For transmission, the story is more complex and multi-layered. We recognize that some transmission expansion will be necessary to accommodate the development of new, dispersed renewable generation which captures more system economic value and supports and improves overall reliability.

But in addition to the risk of the very high capital cost of new transmission, the potential for delay during siting review and regulatory approvals, and the importance of consultation with local communities affected by new transmission lines, we must also recognize that the financial advantage to the Company of placing new transmission assets in rate base is considerable and this may put nonwires strategies at a disadvantage, including in-system upgrades, changes to resource dispatch (especially the coal fleet), and the combined portfolio of new renewable supply, storage and flexible demand resources coming in to replace coal.

On a positive note, we recognize the importance of the modeling modifications PacifiCorp has made to fully incorporate transmission assessment and expansion into the IRP process. This is making a true co-optimization approach for power and transmission more achievable.

Considering all these aspects, NWEC continues to have basic questions about the IRP's current assessment of the need, location and extent of new transmission, all with a view to retaining system security and adherence to the mandatory reliability standards. An important question still on the table is whether careful portfolio development and sequencing of new renewable acquisition, coal retirement and enhanced demand side management can defer or avoid new transmission builds.

All this underscores our ongoing concerns about three major Energy Gateway transmission segments. The Company is making a strong case for completion of Gateway South, in part for reliability purposes and in part to support new Wyoming wind. We believe there is a credible case for this segment but there continue to be questions about both need and timing. If more coal is retired earlier in Wyoming, and more demand response is initiated in load centers both in Wyoming and Utah, would the apparent necessity of Gateway South in the mid-2020s be deferred or diminished?

For Boardman-to-Hemingway (B2H), we have three areas of concern. First, there are similar questions about timing and need relating to coal plant retirement, the location and extent of renewable development, and as noted above, the lack of significant flexible demand development on the west side.

Second, the anticipated tripartite ownership arrangement for B2H is not clearly defined, yet apparently significant assurances have been made and Idaho Power Company, the B2H project sponsor, refers to formal contractual arrangements under development in its recent IRP.⁴

Third, the complementary role of B2H and Gateway West has never been directly addressed. It appears that for all three of the B2H co-developers – Idaho Power, PacifiCorp and the Bonneville Power Administration – full value from B2H cannot be achieved without also developing Gateway West.

As for Gateway West, other than Segment D-2 which is now under construction in central Wyoming, it does not play a direct role in the 2019 IRP, yet it will clearly be a major focus in the next IRP cycle.

In addition to the resource development sequencing concerns and the complementary aspects with B2H already mentioned, a major issue for Gateway West is the potential effect of the proposed small modular reactor project in southeast Idaho. This project, being developed by NuScale with a consortium including other industrial companies and Energy Northwest as potential plant operator, is also engaged in seeking offtaker commitments from members of

⁴ “The funders have not yet entered into construction and operating agreements, but they commenced negotiations on those agreements following the Oregon Department of Energy’s Draft Proposed Order on May 22, 2019. Per the Amended and Restated Joint Funding Agreement, the funders are allotted up to two 120-day negotiation periods to finalize the construction and operating agreements.” Idaho Power Company, 2019 Integrated Resource Plan, Appendix D at 57.

UAMPS, which is within the PAC-E balancing authority area, and possibly with federal agencies outside of the PacifiCorp footprint.

The NuScale project would likely need wheeling for a large portion of its 720 MW projected output, which in turn may constrain the availability of incremental transmission capacity enabled by Gateway West for other purposes including PacifiCorp resources serving native load. In addition, it appears that for BPA to directly serve its southeast Idaho utility customer load, its proposed investment in B2H would also necessitate access to Gateway West.

4. IRP Development and Stakeholder Process

On the 2019 IRP process, NWEC has observations on a few points. First, the Company consistently provides workshop materials only a few hours, or even just before the starting hour of each workshop. We reiterate a longstanding request to provide workshop materials at least 24 hours in advance. While we recognize and commend the IRP team's desire to present the most up to date and accurate results from their work, the inability to review dozens of very detailed slides ahead of each meeting is reducing the ability of stakeholders to engage effectively and does not enable all participants, including Company staff, to get the most out of the time, cost and effort of preparing for workshop sessions.

Second, the often expressed willingness of the Company to accommodate requests from stakeholders for additional scenarios or sensitivity analyses continues to be thwarted by the time crunch of actually accomplishing the Company's own analytical program as already laid out and then extended during the IRP process. We think further focus on this issue would help clarify the advance notice actually needed to enable a greater amount of stakeholder-driven analysis while not opening the doors to frivolous requests or overburdening the IRP team.

Third, an area that has significantly improved is the stakeholder form submission and feedback process. This has been refined significantly in the 2019 IRP cycle, and we appreciate that both the Company and many stakeholders are taking it seriously and providing a substantive and timely exchange alongside the workshop process. But improvements can still be made. In many instances, stakeholders submitting comments received responses and documents that were not also readily available to other participants in the IRP. Posting the replies to every submission on the stakeholder comment web page would ensure all stakeholders have access to the complete set of materials.

2019 Action Plan

Summary of initial positions of NW Energy Coalition on 2019 IRP Action Plan elements:

1. Existing Resource Actions

- 1a. Naughton Unit 3 gas conversion: no position
- 1b. Cholla Unit 4: request retirement by end of 2020: support
- 1c. Jim Bridger Unit 1: retirement by December 2023: support
- 1d. Naughton Units 1-2: retirement by December 2025: support
- 1e. Craig Unit 1: request retirement by December 2025: support

2. New Resource Actions

- 2a. Customer Preference Request for Proposals: no position
- 2b. All Source Request for Proposals: NWEC considers the proposal to issue an all-source RFP and additional steps to procure resources achieving commercial operation by December 23 as a starting point. However, we encourage the Company and the Commission to give serious consideration to developing a separate RFP for flexible demand resources to begin the process of building up this important resource category. This can be accomplished alongside our recommendation for an Action Plan item for a renovated study, in-depth stakeholder process and comprehensive plan for DSM Class 1 and 3 resources in the next IRP cycle.

NWEC does not support interconnection queue reform filing with FERC and subsequent steps at this time, pending resolution of concerns expressed by Renewable Northwest and other intervenors.

NWEC supports filings and additional steps to secure an independent evaluator.

3. Transmission Action Items

3a. Energy Gateway South: no position

3b. Utah Valley Reinforcements: no position

3c. Northern Utah Reinforcements: no position

3d. Utah South Reinforcements: no position

3e. Yakima Washington Reinforcements: support

3f. Boardman to Hemingway (B2H): no position

3g. Energy Gateway West

NWEC supports completion of Segment D.2.

NWEC does not have a position on continued preparation for Segments D.3 and E at this time, but cautions that these segments should receive close scrutiny in the 2021 IRP.

4. Demand Side Management (DSM) Actions

4a. Energy Efficiency Targets: oppose. NWEC believes these targets are too low, so we recommend not acknowledging the energy efficiency targets unless PacifiCorp agrees to raise the targets commensurate with the higher levels of Class 2 DSM selected across model runs in the IRP.

Energy Efficiency Bundling: support. It is unfortunate that PacifiCorp was not able to successfully complete this work in the 2019 IRP.

Direct-Load Control: NWEC opposes this item as stated insofar as the analysis presented in the 2019 IRP is clearly insufficient in characterizing the potential for demand response. Instead, NWEC recommends that PacifiCorp create a separate action item, designated 4b or as otherwise appropriate, to conduct a new study of the resource potential and cost range for DSM Class 1 (demand response) and DSM Class 3 (price response and load shifting), including a full stakeholder workshop, and to submit a completely new DSM Class 1 and 3 strategy in the next

IRP cycle.

5. Front Office Transactions

5a. Market Purchases: no position

6. Renewable Energy Credit Actions

6a. Renewable Portfolio Standards: support

6b. Renewable Energy Credit Sales: support

Thank you for your consideration of NW Energy Coalition's Opening Comments.

Submitted: January 10, 2020



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