NW Energy Coalition

May 6, 2021

Mark Johnson
Executive Director/Secretary
Washington Utilities and Transportation Commission
621 Woodland Square Loop SE
Lacey, WA 98503

Re: Puget Sound Energy 2021 Electric Integrated Resource Plan, Dockets UE-200304

Mr. Johnson:

The NW Energy Coalition ("NWEC" or "Coalition") appreciates the opportunity to comment on the Integrated Resource Plan ("IRP") submitted by Puget Sound Energy ("PSE") on April 1, 2021, as provided by the Notice of Opportunity to File Written Comments issued April 6, 2021.

The Coalition is an alliance of more than 100 organizations united around energy efficiency, renewable energy, fish and wildlife preservation and restoration in the Columbia basin, low-income and consumer protections, and informed public involvement in building a clean and affordable energy future.

Overall comments

There are good elements in this IRP, which move PSE's resource portfolio in the right direction compared to past IRPs. Overall, the preferred resource portfolio shows progress in reducing emissions and advancing customer-side resources. Achieving a 70 percent reduction in greenhouse gas emissions by 2030 is noteworthy, and also presents many operational challenges. We appreciate the focus on renewable resources to fill the anticipated energy need, and increased acquisition of demand response and integration of distributed energy resources.

However, there are two key areas in which this IRP falls short in both aspiration and analysis. First, CETA requires that the clean energy targets be met in the lowest reasonable cost manner, considering risk. There are places where the IRP does not adequately explore this balance, and fails to consider a full range of potential solutions. This is especially true of PSE's preferred capacity strategy, which leaves many questions unanswered, and lacks sufficient analytical support. This, in turn, causes significant shortcomings in the Clean Energy Action Plan, where inadequate capacity and market analysis generates unambitious results for demand response and energy storage, and speculative reliance on a 255-MW biodiesel-fired peaker plant for capacity generation as well as up to 1,000 MW of unspecified "firm resource adequacy qualifying capacity contracts" using PSE's Mid-C transmission. When considered in the context of the need to transform our electric system by 2045, these results are rather unambitious, and

the preferred capacity strategy appears quite risky. While we are doubtful that these shortcomings can be remedied in this IRP, they should be addressed before the company commits to procure new capacity and resource adequacy resources.

Second, this IRP is a critical first step in implementation of the Clean Energy Transformation Act (CETA) RCW 19.405, and as such, the Commission must hold PSE to the new standards created by the Act, and CETA rules. While assessing PSE's compliance with the requirements, we also urge the Commission to consider the IRP as a policy document – does it set a new direction in electric system planning in accordance with the transformational policy direction of CETA? We are not convinced that this IRP has met that aim. Instead, it holds fast to traditional methods of least-cost planning, and treats CETA as an add-on compliance obligation, while stopping short of necessary innovation in planning and operations. Because we are doubtful that these issues can be addressed before PSE submits its CEIP, we urge the Commission to take steps to ensure that the CEIP will not be limited by the preferred resource portfolio provided in the IRP.

1. PSE's capacity strategy is not a lowest reasonable cost solution

In reviewing PSE's Final IRP, we find that the company's preferred capacity strategy stands out as both out of sync with the resource preferences provided in CETA, and falling short of the lowest reasonable cost criteria required in the electric utility resource planning statute. In meeting the standards required under CETA, an electric utility must pursue all cost-effective, reliable, and feasible conservation and efficiency resources, and demand response. In making new investments, an electric utility must, to the maximum extent feasible:

> *(i) Achieve targets at the lowest reasonable cost, considering risk; (ii) Consider acquisition of existing renewable resources; and (iii) In the acquisition of new resources constructed after May 7, 2019, rely on renewable resources and energy storage.* (RCW 19.405.040(6)(a))
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> *"Lowest reasonable cost" means the lowest cost mix of generating resources and conservation and efficiency resources determined through a detailed and consistent analysis of a wide range of commercially available resources. At a minimum, this analysis must consider resource cost, market-volatility risks, demand-side resource uncertainties, resource dispatchability, resource effect on system operation, the risks imposed on the utility and its ratepayers, public policies regarding resource preference adopted by Washington state or the federal government, and the cost of risks associated with environmental effects including emissions of carbon dioxide.* (RCW 19.280.020(11))

PSE's preferred capacity strategy includes a reduction in short-term market purchases in favor of "firm resource adequacy qualifying capacity contracts," and acquisition of a 255 MW single-cycle combustion turbine fueled with biodiesel. <u>It is not reasonable for the IRP to rely on this strategy over a more dynamic set of flexible load management and energy storage solutions, nor is this approach sufficiently supported by the analysis presented in the IRP or the CEAP</u>. We

therefore cannot reasonably support the inclusion of this strategy in a lowest reasonable cost portfolio compliant with CETA for the following reasons:

- **Failure to consider reasonable alternatives:** The IRP fails to adequately consider the peak capacity credit of renewable + storage hybrid systems, and includes some odd results for renewables. We support the comments submitted by Renewable Northwest on this point. In our February 5th comments on the Draft IRP, we provided ELCC values determined by California utilities for a wider range of resources, which recommended average ELCC values for solar + storage of 98% and wind + storage of 95% in 2026.[1] We also proposed that PSE follow a staged approach to meeting its capacity need, maximizing the availability of so-called "energy limited" clean flexible resources to meet needs during typical peak periods BEFORE considering supplemental resources to meet rare long-duration peaks. Alternatives for supplemental long-duration peak capacity could include increased demand response, storage and hybrid systems, and surplus capacity imports from California. We see no evidence that PSE has considered these alternatives, and the result significantly undervalues the capacity contribution of both renewables and storage. PSE's failure to evaluate the capacity contribution of renewable hybrid resources - which are currently being procured by other Northwest utilities – renders the company's preferred capacity strategy even more unreasonable. We urge the Commission to direct PSE to conduct a more thorough analysis of potential capacity solutions, including renewable hybrid systems, demand-side resources, and California winter capacity imports.
- **Inadequate support for short-term market purchase strategy:** PSE proposes to reduce short-term market purchases by two-thirds in four years - transitioning the historical 1,500 MW limit to a 500 MW limit by the year 2027. While we recognize that the UTC directed PSE to consider its market reliance risk in its acknowledgement of PSE's last IRP, we are not convinced that the need for this significant of a change in market strategy has been adequately expressed, or its potential impacts adequately analyzed in this IRP. PSE did not appear to analyze multiple options for reducing market reliance, or a longer timeframe for doing so, and this leaves us questioning whether this approach is appropriate, since it appears to exacerbate the capacity need. There is also no comparison of the costs or risks of a strategy that relies more on short-term market purchases and a strategy that relies on biodiesel availability. The Commission should question this strategy, and be skeptical of the trade-offs between reliance on electricity markets on one hand, and renewable fuel markets on the other.
- **Insufficient analysis of resource adequacy qualifying capacity contracts:** To replace short-term market purchases, PSE will seek "firm resource adequacy qualifying capacity contracts, compliant with CETA, that meet PSE's resource adequacy requirements and

[1] 2020 Joint IOU ELCC Study. Prepared for California Investor Owned Utilities. (June 26, 2020) https://www.pge.com/tariffs/assets/pdf/adviceletter/ELEC_5868-E.pdf

align with a potential regional resource adequacy program." While we are intrigued by the prospect of CETA-compliant RA capacity contracts, we note that the design and full effect of a regional RA program remain under discussion, and the Commission has not determined whether PSE's participation in a proposed regional RA program is in the public interest. NWEC has been participating in the Stakeholder Advisory Committee for the NW Power Pool RA process. While we are hopeful that this process will deliver clean, flexible capacity resources that enable Washington utilities to comply with CETA and properly value customer-side resources, we note that the initial design of the program does not appear to distinguish between resource fuel type or otherwise recognize CETA eligibility requirements. We also note that the structure and governance of the program remain to be determined, including the role of states in providing oversight, and the process for public participation. We encourage PSE and the Commission to consider these factors as they provide input into the design of the regional RA program. At a minimum, we believe that the IRP should provide more detail about the anticipated nature of these contracts in order to justify their inclusion in a lowest reasonable cost portfolio.

- **Lack of market analysis for biodiesel supply or engineering analysis of using biodiesel as a peaking resource fuel:** PSE states that the limited run-time expected of these biodiesel-fired peaker plants could be met with the existing Washington state biodiesel supply. But, it does not provide enough analysis to demonstrate that burning biodiesel in a SCCT will prove to be a viable and cost-effective strategy, compared to other flexible capacity options in 2026. Further, given that the Washington Legislature recently passed a Clean Fuel Standard, we anticipate that much of the biodiesel production in the state will go toward transportation fuels, which is a higher value use of this limited resource in terms of its energy and emissions reduction benefits. As discussed above, hybrid resources (renewables + storage), combined with demand response and flexible load solutions are likely to be a much more reasonable option for flexible capacity generation in 2026. Finally, we would note that many leading studies on transitioning to a 100 percent clean grid support our conclusion, and that PSE provides no other evidence that burning biodiesel to generate power is a viable or preferred clean energy transformation and decarbonization strategy.
- **The Social Cost of Greenhouse Gases is not properly applied to dispatch of existing natural gas plants:** We continue to have concerns about how PSE has applied the Social Cost of Greenhouse Gases in this IRP. PSE's failure to apply the SCGHG to dispatch will distort these facilities' use in the dispatch model, and will be inconsistent with the method used to determine PSE's compliance obligation under the recently passed Climate Commitment Act. We support the comments of Jim Lazar on this point.

2. PSE's IRP is not transformational in its consideration of demand-side resources

As stated in our February 5th comments on the Draft IRP, the standard for integrated resource planning has changed. IRPs are no longer simply analyzing lowest reasonable cost alternatives, but *lowest reasonable cost alternative pathways that lead to achieving the 2030 and 2045 standards*. Achieving these standards under a lowest reasonable cost framework will require a new approach to integrated resource planning, which properly values the resources that will be necessary to transition to a 100% clean grid.

While we are glad to see the openness to demand-side resources reflected in this IRP, and the accompanying Request for Information concerning DERs, we note that this IRP adheres to a traditional approach to least-cost planning in a number of important ways, which prevent it from being a transformational planning document. For example, Figure 1-3 presents PSE's expected "renewable energy need", without factoring in the benefits of any demand-side resources, which would reduce the need significantly. Presenting CETA requirements in this way is misleading, since the law requires that demand-side resources be considered first before new investments in supply-side resources. Later, the Clean Energy Action Plan states, "the final analysis indicates that although current market power prices are low, accelerating the acquisition of [demand-side resources] (DSR) continues to be a least-cost strategy to meet renewable requirements.... The large amounts of renewable resources needed to meet CETA move higher cost demand-side resources into the portfolio because conservation reduces load, thereby reducing the amount of renewable resources needed to meet requirements." (2-8)

We agree with this statement, and support the basic outcome - that demand-side resources provide a significant contribution to meeting the clean energy targets in the bill. The IRP analysis evaluates the amount of DSRs that are cost-effective to meet the portfolio's capacity and energy needs, compared to CETA-compliant supply-side resources. However, this doesn't tell the whole story. We are concerned that this approach to resource planning stops short of actually recognizing the full value of DSRs, which have benefits beyond their value as a compliance resource under CETA. The demand response additions, in particular, could be much more ambitious.[2] In our February 5th comments on the Draft IRP, we offered a simplified approach for accelerating the acquisition of grid-enabled water heaters as a demand-side resource.

Broadly, NWEC has serious concerns that the tried-and-true power planning models in use in the region are not well-suited for a high-penetration renewables scenario, and are undervaluing demand-side resources. If the shortcomings of our current planning models are not addressed, this trend could have long-term implications for EE and DR programs in the region, reducing their operational capacity and ultimately, their effectiveness. DSRs have many benefits, some of which are not accounted for in current cost-effectiveness criteria:

[2] For example, Portland General Electric's 2019 IRP includes 141 MW winter and 211 MW summer demand response by 2025.

- Unlike many clean energy resources, energy efficiency is available at all hours and provides many ancillary system benefits and non-energy benefits.
- Energy efficiency and demand response bring locational value and time of use value to the grid, which is currently not adequately accounted for in cost-effectiveness calculations.
- The societal benefits of reducing energy burden to overburdened communities and vulnerable populations, and promoting job growth in the region after a period of economic hardship, are not accounted for in cost-effectiveness calculations.
- DSRs are also an essential part of reducing the risk of the overall CETA-compliant portfolio, in the event that supply-side resources are unavailable, construction is delayed, or transmission pathways are constrained.

We encourage PSE and the Commission to evaluate what changes to existing planning models and cost-effectiveness criteria are needed in order to properly value DSRs in a 100% clean grid. This will be an important consideration in ensuring that utilities implement CETA in a lowest reasonable cost manner, supported by analysis in their IRPs. We are encouraged by the potential use of Customer Benefit Indicators to potentially help with this transformation, but we note that these metrics are in a preliminary phase of development in this IRP, and we look forward to further development through the Equity Advisory Groups and the CEIPs.

Conclusion

We appreciate the opportunity to comment on PSE's Final IRP. Due to the shortcomings still present in the IRP at this time, we urge the Commission to take steps to ensure that PSE's CEIP will not be limited by the preferred resource portfolio provided in the IRP.

Respectfully,

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