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Commissioner David Danner, Chair
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Washington Utilities and Transportation Commission
P.O. Box 47250
Olympia, WA 98504-7250

RE: Puget Sound Energy's 2023 Electric Integrated Resource Plan Progress Report (UE-200304)

To the Commissioners:

The Washington Clean Energy Coalition (WCEC) is a non-profit organization comprised of environmental and civic organizations involved in Puget Sound Energy (PSE) planning efforts for many years. We appreciate this opportunity to comment on PSE's 2023 Electric Integrated Resource Plan Progress Report.

We are encouraged by positive changes in PSE's long-range plans to comply with Washington State's Clean Energy Transformation Act, heralded as "one of the strongest 100 percent clean electricity bills in the country."[1] However, given our state's leading role in the clean energy revolution, the WCEC is disappointed to find PSE's current Progress Report lacks detail regarding cost-effective policies and technologies that would deliver lower costs, cleaner energy, and improved reliability to ratepayers.

Virtual Power Plants

The Electric IRP Progress Report contains almost no detail regarding PSE's plan to incorporate Virtual Power Plants (VPPs) to meet occasional peak demand for electricity. A recent study by the Brattle Group found that VPPs could provide resource adequacy for 40% to 60% of the cost of a gas peaker plant.[2] The savings might be even more pronounced compared to the "CETA-qualifying peaking capacity" that PSE mentions in the Progress Report, given uncertainty over the cost and availability of alternative fuels. [3] Investing in VPPs could be a win-win-win for ratepayers, the environment, and system reliability.

The WCEC expected that we would hear more about VPPs after the Commission issued Order 05 on March 25, 2021. In that order, the Commission allowed PSE to delay an RFP for Demand Response Programs to give PSE time to develop its VPP platform. As stated in the order: "The Company contends that developing requirements for a virtual power plant (VPP) platform prior to issuing its targeted RFP will allow bidders to better tailor their bids to fit the Company's system operations."

What exactly is a VPP? In the minds of WCEC members, it's something like the software-coordinated collection of thousands of residential batteries operating in South Australia, providing improved reliability and lower costs to many homeowners, including low-income customers.[4] We imagine a modern energy platform that incorporates residential and commercial battery storage, solar panels, and

[1] https://www.newsecuritybeat.org/2022/09/powerful-policy-ripples-washington-states-ceta/
[2] https://www.utilitydive.com/news/vpps-provide-same-resource-adequacy-as-gas-peakers-large-batteries-at-up-t/649570/
[3] Electric Progress Report, p. 1.6 (footnote 3)
[4] https://electrek.co/2023/05/23/tesla-expands-massive-virtual-power-plant-homes/

other Distributed Energy Resources. A VPP might even use mobile batteries in electric school buses or privately owned electric vehicles.

It is not yet clear whether PSE agrees with this vision. The Electric IRP Progress Report provides no insights about how significant VPPs might be in PSE's long-term plan, or when VPPs will become part of a clean energy strategy that customers can participate in. During the two years since the UTC granted PSE extra time to develop its VPP platform, several major VPP pilot programs have been implemented by leading public and private utilities in the state of Washington.[5]

When will PSE start its own VPP pilots?

Vehicle to Grid

Some years ago, during the development of the 2019 Electric IRP, PSE asked Advisory Group members to vote on several sensitivities the company could study. After tallying the votes, the most popular option was a study of Vehicle-To-Grid (V2G) technology, which would incorporate the largest storage resource in PSE's service territory (aside from hydro storage)—namely, a two-way charging connection that would allow car batteries to provide electricity to the grid during hours of peak demand. PSE said it ran out of time to study any of the sensitivities, so V2G was not studied.

Four years later, we are still waiting for PSE to study the feasibility of V2G for our region in coming decades. Although V2G has not yet achieved a broad rollout in the US, utility pilot programs are underway in California, Colorado, New York, and North Carolina. These utilities are exploring ways to make electric vehicles part of a clean energy solution rather than an added stress factor for electric grids.[6]

Time Varying Rates

Given the urgency of the climate issues we face, we are puzzled why there isn't more detail in the Electric IRP Progress Report regarding Demand Response Programs like Time Varying Rates. Table 2.4 in the report shows optional "Time of Day Rates" would deliver a high Achievable Technical Potential during summer peaks, a growing concern as climate change increases the risk of future Heat Dome events. PSE provided no other details on Time Varying Rates pilot programs or implementation dates in the report.

Distributed Energy Resources

The Electric IRP Progress Report shows sporadic progress in Distributed Energy Resources (DERs) over the planning period. For example, Figure 3.3 shows rapid growth in DER Solar, DER Storage, and Demand Response for the first seven years (2023 to 2030). During the following 15 years (2030 to 2045), the amount of DER Solar nearly quadruples (385% growth). However, the pace of investment in Community Solar, DER Storage, and Demand Response wanes dramatically, growing only 0%, 43%, and 33%, respectively. To achieve more steady growth over the whole planning period, PSE could offer incentives that would be motivating and cost effective for all ratepayers.

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[5] "Redefining Demand Response for Winter Peaks: Lessons Learned from Snohomish PUD," and Avista's award from the Department of Energy for connected communities called EDO, "Edo, a startup with ties to McKinstry and Avista, launches to create grid-interactive efficient buildings," The Spokesman-Review, Sept 26, 2021.

[6] https://www.greenbiz.com/article/vehicle-grid-pilots-soar-where-will-they-land

The WCEC believes DERs should have a more prominent role in PSE's electric portfolio because DERs relieve congestion on transmission lines and defer transmission/distribution investments, improve local reliability and resiliency, and reduce impacts on fragile environments and rural communities. Recent studies have raised concerns that large solar farms may disrupt fragile desert ecosystems and reduce significant amounts of carbon sequestration beneath the surface of the desert.[7] Solar panels installed on rooftops, commercial buildings, and over parking lots do less harm to valuable ecosystems and stored carbon. DERs also reduce the societal costs of locating emitting resources near disadvantaged populations. We do not see any recognition of these costs in the Electric IRP Progress Report.

Request for relief

The WCEC applauds progress toward a cleaner electric grid in PSE's 2023 Electric IRP Progress Report. However, it appears that PSE continues to favor options that maximize financial returns for the company and its investors. Safeguards must be adopted to protect ratepayers, the environment, and future generations.

PSE is taking small steps along a somewhat uncertain path. The urgent need to mitigate the worst effects of climate change requires us to take deliberate strides towards our clean energy goals. We ask the Commission to engage an independent auditor to review the assumptions and analysis in PSE's long-term electric plans. An auditor that is not subject to PSE's influence can verify that everyone's interests are being served.

Don Marsh
Washington Clean Energy Coalition

[7] https://www.theguardian.com/us-news/2023/may/21/solar-farms-energy-power-california-mojave-desert