

# Resource Planning Advisory Group supplemental feedback report

In the September 30, 2025 RPAG meeting PSE asked RPAG members and interested parties to provide feedback on a memorandum created by PSE capturing comprehensive 2027 Integrated System Plan (ISP) feedback PSE received between July 2024 and July 2025. The original document is located on the [clean energy planning website](#).

## Feedback

The following records participant questions and PSE responses from comments submitted via online [feedback form](#) or email to [isp@pse.com](mailto:isp@pse.com).

PSE endeavors to provide clarity in responses but subsequent follow-up may be required at times. Please direct any follow-up clarifications to [isp@pse.com](mailto:isp@pse.com).

*PSE responses are in teal italics.*

## RPAG member feedback

1. Quinn Weber on behalf of Washington Utilities and Transportation Commission (UTC) staff, October 23, 2025 via [isp@pse.com](mailto:isp@pse.com)

Feedback theme:

**Consider a scenario for ramping electrification sooner than 2030**

Staff Comments:

- Given the current legal uncertainty surrounding Initiative 2066, will PSE include a scenario in the ISP that reflects the initiative either is upheld or fails to take effect — and the resulting need to accelerate building electrification and potentially phase down the gas system more rapidly (even if that doesn't necessarily occur before 2030)?

*The current reference case is assuming that HB 1589 is upheld. However, PSE has the ability and data to switch to I-2066 if it is reinstated.*

### **Evaluate a worst case “death spiral” scenario with respect to the gas system**

#### **Staff Comments:**

- PSE notes that the “death spiral” scenario includes electrification being modeled to occur regardless of burnout or available incentives, but does that scenario also include a decline in the natural gas customer count forecast?

*Yes, this scenario includes a decline in natural gas customer count.*

- Staff sees a “death spiral” scenario as not just about how fast customers electrify—it's also about what happens to the gas system and its remaining customers as that transition unfolds unevenly. Will those risks, such as impacts on low-income or rental households, be analyzed in the scenario?

*PSE will consider low-income impacts as part of the rate impact analysis. The information from these scenarios will be too general to apply to rental properties; however, we will be looking at an average rate impacts that may address these concerns.*

- Is PSE ensuring that core modeling cases — not just edge cases — fully reflect the financial and equity risks of declining gas throughput, fixed-cost recovery pressure, and cost shifting to remaining customers? And if so, how?

*PSEs current reference case (HB 1589) includes a small amount of gas growth, per our discussion with staff on 10/15/25. The ISP scenarios will evaluate financial impacts due to the declining gas throughput. This will be examined across all the scenarios and some sensitivities, not just the reference case.*

- Staff is unclear if the “death spiral” mentioned in this theme is the “plausible worst case” scenario that Staff has asked to be modeled in the past, or is this a different scenario?

*PSE takes the definition of “plausible worst case” scenario from Staffs recommendations for all gas utilities in Appendix A of staff’s feedback for Northwest Natural’s Gas IRP. Below are the high-level components of that scenario that were extracted from Appendix A and how PSE plans to incorporate those suggestions into the ISP.*

| <b>Staff Comments 10/16/25<br/>Docket UG-240312 – Plausible Worst Case</b>  | <b>PSEs status on incorporating comments</b>   |
|---|--|
| <ul style="list-style-type: none"> <li>• Less climate change consistent with RCP 4.5 rather than 6.0 or 8.5.</li> </ul> | <ul style="list-style-type: none"> <li>• <i>Not incorporated; this is an underlying assumption that cannot be updated due to the ISP development schedule.</i></li> </ul>  |
| <ul style="list-style-type: none"> <li>• Slower development of non-conventional fuels.</li> </ul>                       | <ul style="list-style-type: none"> <li>• <i>PSE plans to run non-conventional fuels that are not currently commercially available as sensitivities.</i></li> </ul>   |
| <ul style="list-style-type: none"> <li>• Higher than expected natural gas prices.</li> </ul>                            | <ul style="list-style-type: none"> <li>• <i>This is a sensitivity for the gas supply portfolio.</i></li> </ul>   |
| <ul style="list-style-type: none"> <li>• Higher than expected CCA auction prices.</li> </ul>                            | <ul style="list-style-type: none"> <li>• <i>This is not incorporated; per the guidance from the Department of Ecology in the CCA workshop the commission held on 9/23/25, the CCA auction price is capped at the ceiling price.</i></li> </ul> |
| <ul style="list-style-type: none"> <li>• Customers being more sensitive to rising bill impacts.</li> </ul>              | <ul style="list-style-type: none"> <li>• <i>Incorporated in scenario analysis</i></li> </ul>   |
| <ul style="list-style-type: none"> <li>• Greater building stock attrition rates.</li> </ul>                             | <ul style="list-style-type: none"> <li>• <i>Not incorporated; this is an underlying assumption that cannot be updated due to the ISP development schedule.</i></li> </ul>  |

|   |   |
|---|---|
| <ul style="list-style-type: none"> <li>Utilities install fewer energy efficiency measures than expected.</li> </ul> | <ul style="list-style-type: none"> <li><i>Not incorporated; this is an underlying assumption that cannot be updated due to the ISP development schedule.</i></li> </ul> |
|---|---|

### **Model a maximum customer benefit scenario**

Staff comments:

- Staff continues to believe that to follow best practices, PSE should be modeling this as it was clear that this is both a scenario that PSE would expect to be required in WAC 480-96-020, the ISP rules, and PSE has previously modeled this scenario (per WAC 480-100-620(10)(c)).

*Thank you for the feedback.*

### **Include a scenario in which the gas distribution system is progressively decommissioned by 2050\***

Staff Comments:

- PSE's last General Rate Case proposed accelerated depreciation of gas assets by 2050. Why does PSE not model decommissioning of the gas system but will depreciate all gas system assets by 2050? What are the constraints around modeling this as a scenario?

*Depreciation of the gas assets is a rate case issue and not a part of the ISP. If PSE receives guidance to fully depreciate the gas assets by 2050 through the outcome of its next rate case, this can be incorporated into the next ISP in 2030.*

### **Model a scenario that explores a resource build-out without new gas-fired facilities, and possibly with relaxed build limits**

Staff Comments:

- Staff supports PSE modeling a sensitivity that explores a resource build-out with no new gas-fired facilities.

*PSE will consider this sensitivity option based on prioritization. However, past analysis with similar constraints resulted in the model failing to resolve (i.e., it could not produce a functional portfolio without adding natural gas peaking resources).*

- Staff is unsure about what “relaxed build limits” refers to here. For the purpose of comments, Staff assumes it refers to non-emitting resources, but thinks clarification would be helpful.

*PSE is using the phrase “build limits” to apply to all types of resources. In the next 10 years, it would not be reasonable to expect PSE could build an unlimited amount of any type of resource. This would ignore practical realities such as the time it takes to site, permit and build facilities, as well as the costs to customers. To the extent PSE runs an analysis that ignores such commercial realities, PSE believes it will be important to be clear about the practical limitations and risks of doing so.*

#### **Include a thorough analysis of how new data center interconnections in PSE’s service territory may affect the demand forecast**

Staff Comments:

- Staff is unclear about what part PSE is partially incorporating in this recommendation.

*PSE is evaluating a range of possible interconnection scenarios across different scenarios. Feedback on data centers is wide ranging and “thorough” is not clearly defined. “Partially”, in this case, is meant to convey that we are attempting to address RPAG feedback but may not fully address all concerns given the wide range of feedback and substantial uncertainty with regard to the complexity of attempting to predict the timing, scale, and location of connected data center loads in the future. **Model aggressive electric vehicle adoption where vehicle miles traveled (VMT) assumptions decrease***

Staff Comments:

- If PSE knows what the effect is why can't it be incorporated into a scenario/sensitivity?

*The intent of scenario modeling is to evaluate the range of possible future demand. This sensitivity is within the range of possibilities already being evaluated making it redundant and unnecessary.*

### **Customer strategies should not be examined independently of all other costs and feasibility concerns**

Staff Comments:

- Staff notes that the 2% conservation/10% demand response achievement targets, mandated by RCW 80.86.020, are not subject to the cost-effectiveness used for traditional conservation achievement.

*We understand the 2/10% targets starting in 2030 may go beyond traditional cost-effectiveness evaluations. PSE understands these targets will be decided at the planning level in the Commission's Order for PSE's first ISP to be issued by April 2028. PSE is planning to run a traditional cost-effective conservation run through our gas and electric IRP models in the ISP in order to comply with the Energy Independence Act requirements, which are still in law. PSE's ISP analysis will enable the Commission to determine whether a given amount of incremental cost of conservation and demand response above the cost-effective threshold is reasonable.*

### **Be conservative with uncertainty percentages and costs for capital project modeling**

Staff Comments:

- What resources does electric resource alternatives refer to?

*This includes all the electric resource alternatives; wind, solar, short duration storage, mid duration storage, long duration storage, peakers, CCCT, nuclear, and geothermal.*

### **Reflect risk in a variety of ways through sensitivities**

Staff Comments:

- Is PSE accounting for natural disaster risk within its sensitivities? What about other risks?

*Building a safe system is PSE's number one priority. All infrastructure is built in compliance with building codes and standards that take into account natural disaster risk. PSE is not evaluating natural disasters risks in the ISP.*

**“Model the renewal/availability of investment tax credit (ITC) and production tax credit (PTC) for the ISP time horizon” & “Do not model the renewal/availability of ITC and PTC for the ISP time horizon.”**

Staff Comment:

- Staff notes that the two themes quoted above are somewhat contradictory. PSE stated that it will incorporate both themes into its electric modeling and assumptions. Staff believes that PSE should use best modeling practices around both the effect of the One Big Beautiful Bill Act and the future estimations of the availability of the ITC and PTC.

*This analysis is correct and highlights the challenge. RPAG member feedback was mixed on this topic. Given this, we are attempting to address the range of opinions through sensitivities. The reference portfolio will now be run with updates on the ITC and PTC from the OBBB. We will consider a sensitivity that includes the original PTC and ITC assumptions from the IRA.*

### **Clearly state IAP2 levels for each meeting**

Staff Comments:

- PSE clearly incorporates this with other advisory groups, such as the Conservation Advisory Group and Equity Advisory Group. Staff finds this inconsistent treatment of the IAP2 levels across advisory groups confusing.

*Per discussion with staff, PSE is working to provide clearer, actionable expectations around engagement levels in meeting materials.*

### **Allow members of the public to utilize the Q&A feature in RPAG meetings**

Staff Comments:

- Staff disagrees with PSE's reasoning for not incorporating this change. While Staff understands the need to create a space for RPAG members to be the principle participants within RPAG meetings, allowing for some public amount of Q&A during

the meeting adds to the record and gives PSE greater public feedback to incorporate. Staff also notes that making the Q&A available to the public during meetings does not necessitate an immediate response from PSE. Staff encourages PSE to find ways to enhance public participation during the RPAG and views experimentation with this process as a positive development.

*Thank you for your feedback.*

### **Hold hybrid meetings to increase participation**

#### **Staff Comments:**

- Staff notes that other PSE advisory groups do meet in person with an option to attend virtually. Staff would be happy to see an in-person option added for a meeting, even if the in-person option was limited to RPAG members only. Staff understands the strain of holding hybrid meetings, but notes that while virtual spaces offers many advantages, an in-person space can also allow for some more informal engagement amongst RPAG members, PSE Staff, and potentially members of the public. Staff encourages PSE to ask RPAG members if this is something they would be open to on occasion.

*PSE plans to survey RPAG members to gauge their interest in in-person or hybrid opportunities. Due to the unique membership base of the RPAG, PSE remains concerned that hybrid events disrupt equal participation because not all parties will have the opportunity to attend in person.*

## **2. Katie Chamberlain on behalf of Renewable Northwest and Megan Larkin on behalf of Climate Solutions, October 30, 2025 via [isp@pse.com](mailto:isp@pse.com)**

### **IV. PSE's RPAG Feedback Memo**

RNW and Climate Solutions have reviewed the October 1, 2025 ISP Modeling Feedback memo and want to use this opportunity to also comment on specific feedback and response items.

#### **c) Resource Costs**



The response to the feedback theme “Be conservative with uncertainty percentages and costs for capital project modeling” states: “The ISP is using conservative cost curves for the electric resource alternatives”. We interpret PSE’s response as the Company planning on using the “conservative” cost curves from NREL’s Annual Technology Baseline (“ATB”), which are the highest cost projections. **Given that uncertainty in resource cost forecasts is particularly high at the moment, PSE should run a scenario with lower cost curves – NREL’s moderate scenario – to test portfolio outcomes under these cost projections.**

Further, the gas turbine market is experiencing dramatic changes. While we agree that NREL ATB values are a good foundation for resource costs, these values may underestimate the costs of gas turbines given that increasing costs and limited supply is a recent trend. Specifically, natural gas turbines have increased in cost and timelines due to increased demand, with new Combined Cycle and Combustion Turbine capacity exceeding \$2,000/kW or \$1,500/kW with wait lists up to 7 years.<sup>1,2</sup> **We urge PSE to use the most up to date cost and availability information available and to thoroughly document any updated inputs.** It is critical that the Company incorporates this updated information and remains flexible to update information at later stages of the ISP as capital costs and timing continue to evolve.

*Thank you for your feedback and recommendations. PSE is currently in the process of refining our list of sensitivities and will consider this recommendation. Additionally, PSE can confirm that we are using the most up to date cost and availability information available at this time and working on setting up feasible timelines for the first year available of new resources.*

d) Clarification needed on data lock down timing and process

We appreciate and agree with PSE’s statement that “stale data is a constant concern and a difficult issue to mitigate”. Although difficult, stale data also presents a significant risk of invalidating the results of the ISP. Given the current environment that is characterized by significant market, load, and policy uncertainty, the probability of producing an analysis that at the time of filing will no longer be relevant is high. **We recognize that inputs need to be locked down but consistent with our comments on Puget Sound Energy’s September 12, 2024 RPAG meeting we kindly request further details on exactly when the data lock down will occur and if PSE will revise or update any inputs before finalization of the ISP.** A preliminary timeline shared by PSE on 09/12/2024 indicated that inputs would close at the end of Q2 2025, while in the most recent meeting this timeline was slightly delayed. Although we understand that at some point PSE needs to use the data to start the modeling process and provide

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<sup>1</sup> [US gas-fired turbine wait times as much as seven years; costs up sharply | S&P Global](#)

<sup>2</sup> [NextEra Energy CEO John Ketchum at CERAWEEK by S&P Global on May 10, 2025](#)

preliminary results, it remains unclear whether certain inputs could later be updated. Specifically, we reiterate our recommendation that certain impactful, volatile inputs be revisited. Those include but are not limited to, natural gas fuel prices and candidate resource capital costs. We also recommend that the Company implement scenarios and sensitivities in anticipation of any input changes (particularly if data cannot be updated) for at least lower/high load and fuel price forecasts.

*PSE has always intended to incorporate new information wherever possible throughout the analysis. The “inputs close” milestone, which has passed, is intended to convey a point at which ongoing input would not be solicited while remaining cognizant of changing conditions. Given the dynamic nature of modeling, it’s impossible to predict every situation that may or may not offer opportunity for updates. We are starting the modeling with the reference portfolio and needed to finalize the inputs for that scenario. The reference portfolio is intended as a starting point and we will include scenarios and sensitivities to test how sensitive the builds and costs are changing factors. This process will capture a wide range of “what if” factors to understand the changing environment.*

## **V. Conclusions**

We are concerned that if the current RA inputs and assumptions are allowed to remain without additional validation or revision, the 2027 ISP could substantially overstate winter reliability risks and understate the contribution of certain resources. The use of proprietary, non-transparent

E3 models for both PSE and other regional utilities compounds these risks. The Northwest Power and Conservation Council and WRAP were established precisely to foster regional coordination and shared methodologies for resource adequacy planning and further explanations for the use of different assumptions would be useful.

PSE is not alone in needing to take on the challenge of implementing a robust Resource Adequacy planning methodology. We understand that E3 is performing a similar RA analysis for the entire Pacific Northwest region,<sup>3</sup> and will soon be working with WRAP to create forecasts for future ELCC accreditation values. We look forward to engaging on those efforts as well and we hope that regional coordination can result in model enhancements that will address the concerns identified herein and future concerns that may arise.

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<sup>3</sup> See September 22, 2025 presentation by E3 in WA UTC Docket # UE-210096

RNW and Climate Solutions are increasingly concerned that Advisory Group members are being asked to endorse results without adequate access to the data or tools needed to evaluate them. This limits our ability to identify and correct potential issues until late in the process, when meaningful changes are no longer feasible. To avoid this outcome, we strongly urge PSE to provide full transparency of the RA modeling process now—well before the ISP inputs are finalized—and to commit to ongoing coordination with WRAP and other regional efforts to align methodologies and improve model validation.

*Thank you for your comments and documented concerns. Please note PSE has not asked RPAG members to endorse processes or results – we are soliciting feedback on key modeling processes in this time constrained and novel planning environment in order to improve our analysis and deliver outcomes that best meet the needs of our customers.*