

Puget Sound Energy Resource Planning Advisory Group (RPAG) meeting summary

Tuesday, August 25, 2026 | 1:00 – 4:00 p.m.

Meeting materials

- [Presentation](#)
- [Meeting recording](#)
- [Meeting agenda](#)

Meeting objectives

- Provide an overview of upcoming engagement opportunities for the remainder of the 2027 Integrated System Plan (ISP) cycle
- Provide an overview of emerging technology assumptions, methodology, and sensitivity results
- Discuss gas utility scenario results for customer programs, delivery system, and supply
- Provide an opportunity for public comments

Introduction and agenda review

Follow along: This information is on [slides 1-8](#) of the presentation and [0:01 – 11:02](#) in the meeting recording.

Presenter: Hilary Wilkinson, Facilitator, Maul Foster & Longi (MFA)

Work plan update

Follow along: This information is on [slides 9-10](#) of the presentation and [11:02 - 17:35](#) in the meeting recording.

Presenter: Kara Durbin, Director, Clean Energy Strategy, PSE

Highlights:

- PSE is filing an update to the December 24, 2025 work plan filed in Washington Utilities and Transportation Commission (Commission) [Docket U-240841](#). This update will outline RPAG and public engagement opportunities through the April 2027 ISP filing.

Emerging technology assumptions and methodology

Follow along: This information is on [slides 11-19](#) of the presentation and [17:35 – 49:26](#) in the meeting recording.

Presenter: Steve Schueneman, Manager, Emerging Technology and Sustainability, PSE

Highlights:

- Emerging technologies are evaluated using Technology Readiness Levels (TRLs) and must demonstrate commercial maturity and utility-scale viability before being included as deployable resources.
- Technologies are evaluated based on performance, cost, scalability, supply chain readiness, and interconnection feasibility.
- Emerging technology assumptions will be revisited in future planning cycles as technologies mature.

RPAG members provided the following questions and feedback:

- RPAG member: Where can we find the criteria Black & Veatch (B&V) used to assign Technology Readiness Levels (TRLs)?
 - PSE response: B&V presented this to the RPAG in the [March 25, 2024 meeting](#).
- RPAG member: What can PSE do to accelerate the commercialization timeline for emerging technologies?
 - PSE response: PSE generally cannot directly invest ratepayer funds in early-stage technologies, but we can signal market demand, collaborate through memorandums of understanding (MOU), and support financing opportunities for developers
- RPAG member: Is PSE considering a long-duration storage pilot project?
 - PSE response: We evaluated a Form Energy pilot several years ago but there were siting challenges and high project costs. By the time a site was identified, Form had moved beyond pilot projects and into commercial deployment.
- RPAG member: How are capital costs developed for emerging technologies?

- PSE response: Costs come from sources including the National Laboratory of the Rockies (formerly National Renewable Energy Laboratory) Annual Technology Baseline (ATB), Black & Veatch, current market data, and other industry reports. We are evaluating alternative sources because updated ATB publications may no longer be available.
- RPAG member: Do TRL levels advance over time in the model?
 - PSE response: Yes. Technology maturity can improve over time and future sensitivities may model faster or slower advancement rates.
- RPAG member: Where would sodium-ion batteries fall on the TRL scale?
 - PSE response: They are approximately around TRL 6-7 and could advance quickly if commercial activity expands

Electric supply emerging technology sensitivities results

Follow along: This information is on [slides 20-32](#) of the presentation and [49:26 – 1:09:09](#) in the meeting recording.

Presenter: Elizabeth Hossner, Manager, Resource Planning and Analysis

Highlights:

- PSE is conducting sensitivity analyses of emerging technology with varying modeling assumptions around geothermal, flex fuel peakers, and long-duration energy storage.
- The current reference case remains the lowest-cost portfolio under current assumptions and is a starting point for future scenario analysis.
- Lower geothermal costs reduced portfolio costs by more than \$2 billion and shifted resource selection from nuclear toward geothermal.
- Adding long-duration storage reduced the need for some peaker generation but increased total portfolio costs.
- Eliminating or limiting peaker plants caused the model to select more long-duration storage, nuclear, solar, and batteries, but at higher overall cost.

RPAG members provided the following feedback:

- RPAG member: What technologies are included in short-, mid-, and long-duration storage?

- PSE response: Short duration generally refers to 2-6-hour batteries (primarily 4-hour systems); mid-duration refers to roughly 8-24-hour batteries; long-duration modeled a 100-hour battery system.
- RPAG member: Would it be useful to separate different battery-duration configurations in future analyses?
 - PSE response: Yes, additional reporting by battery duration may help improve transparency and understanding of model results. Multiple storage technologies and durations are evaluated within the planning process, and additional detail may be provided in future ISP materials.
- RPAG member: Does the renewable peaker assume biodiesel fuel?
 - PSE response: Yes, the peakers assume 120 hours of biodiesel fuel.
 - RPAG member: Is the fuel used in the peaker a B100?
 - PSE response: We are modeling a generic biodiesel and not a specific blend.
- RPAG member: For the reference case, did the model pick up no long-duration energy storage (LDES)?
 - PSE response: No, the model did not select LDES in the reference case.
- RPAG member: Are Eastern Washington transmission costs included in resource comparisons?
 - PSE response: Transmission and interconnection costs are included separately in broader resource cost analyses and will be reflected in final zonal resource comparisons
- RPAG member: Why are ELCC values slightly different between gas peakers and renewable peakers?
 - PSE response: Differences are driven by fuel characteristics, forced outage assumptions, availability, and reduced output when biodiesel is used instead of natural gas.
- RPAG member: Were hybrid renewable-plus-storage resources modeled?
 - PSE response: Yes, we modeled solar-plus-storage, wind-plus-storage, and other hybrid configurations. Many wind, solar, and battery builds selected by the model are hybrids.
- RPAG member: Does the social cost of greenhouse gas increase over time?
 - PSE response: Yes, we start with values provided by the Washington Utilities and Transportation Commission (Commission) and escalate them using inflation assumptions.
- RPAG member: Are geothermal resources assumed to be available in the Pacific Northwest?

- PSE response: Yes, we primarily modeled geothermal opportunities located in Oregon and Nevada, with some Idaho options available.

Scenario analysis refresher

Follow along: This information is on [slides 33-43](#) of the presentation and [1:09:10 – 1:25:21](#) in the meeting recording.

Presenter: Jen Coulson, Director, Resource Planning Analytics, PSE

Highlights:

- PSE is modeling four planning scenarios that vary by:
 - Building electrification rates
 - EV adoption levels
 - Large load growth
 - Policy-driven versus customer-driven electrification
- Scenarios 2 and 4 assume aggressive, policy-driven electrification, including replacement of gas appliances before end of life.
- Scenario 1 reflects customer choice driven primarily by incentives.

RPAG members provided the following feedback:

- RPAG member: Do the illustrative gas rate impacts include elasticity effects from higher rates?
 - PSE response: The rate assumptions used in Scenario 1 came from [PSE's 2023 decarbonization study](#) and were included in the customer-choice analysis.
- RPAG member: Are the gas and electric system rate impacts going to be shown together?
 - PSE response: Yes, we will present a combined gas and electric perspective in the in a future RPAG meeting.
- RPAG member: What does a 50-75% rate increase on the chart represent?
 - PSE response: The percentage reflects increases relative to current gas rates and is intended for comparison among scenarios, not as a forecast of actual future rate increases.
- RPAG member: How should stakeholders interpret these rate charts?
 - PSE response: They are illustrative planning outputs used to compare scenarios and should not be interpreted as expected future customer rates.

Gas scenario results – customer programs

Follow along: This information is on [slides 44-52](#) of the presentation and [1:25:21 – 1:39:13](#) in the meeting recording.

Presenter: Mark Lenssen, Manager, Development and Evaluation, PSE

Highlights:

- Gas conservation opportunities decline significantly after 2030 due to statutory restrictions on certain gas efficiency measures and increasing electrification.
- In aggressive electrification scenarios, gas conservation potential diminishes sharply by the early 2040s because fewer gas customers and appliances remain.
- Conservation program spending and savings opportunities decrease substantially over time in higher-electrification scenarios.

RPAG members provided the following feedback:

- RPAG member So are scenarios 2 and 4 limited to availability and not cost?
 - PSE response: Yes, Scenario 2 and Scenario 4 have significant impacts on gas savings with so many customers moving to electric systems.

Gas scenario results – gas supply

Follow along: This information is on [slides 53-69](#) of the presentation and [1:39:13 – 2:04:05](#) in the meeting recording.

Presenter: Gurvinder Singh, Consulting Resource Planning Analyst, PSE

Highlights:

- Declining gas demand results in increasing amounts of unused pipeline capacity across all scenarios.
- In aggressive electrification scenarios, most pipeline, storage, and peak supply assets become largely unused by 2050.
- Portfolio costs decline as gas demand decreases, although the analysis does not yet include electrification conversion costs, retirement costs, or electric system impacts.
- PSE reviewed sensitivity analyses involving gas prices, Climate Commitment Act (CCA) costs, social cost of greenhouse gases, renewable natural gas (RNG), and conservation levels.

RPAG members provided the following feedback:

- RPAG member: Why were North American renewable thermal credits (RTCs) not selected in the model?
 - PSE response: Based on the best available data, RTC pricing appears more expensive than CCA allowances, which is why RTCs were not selected in the model. That said, this is a developing market, and we will continue to monitor it and update our analysis in subsequent ISPs as more price forecasts become available.
- RPAG member: What happens when additional conservation is allowed in the benchmark demand-side resource sensitivity?
 - PSE response: The model selected more conservation, reducing pipeline usage, emissions, and overall portfolio costs.
- RPAG member: How do lower CCA prices affect results?
 - PSE response: Lower CCA costs significantly reduce gas portfolio costs, though emissions change very little because no additional emissions-reducing resources were introduced in those sensitivities
- RPAG member: How sensitive is the portfolio to gas prices?
 - PSE response: High and low gas price sensitivities affected costs but less significantly than changes in CCA or greenhouse gas cost assumptions.
- RPAG member: When will the decision be made on whether to renew the Plymouth contract?
 - PSE response: The model was offered renewal in 2031.

Gas scenario results – gas delivery system

Follow along: This information is on [slides 54-81](#) of the presentation and [2:04:05 – 2:31:10](#) in the meeting recording.

Presenter: Niece Weatherby, Manager, Gas Systems Integrity, PSE

Highlights:

- Even under declining gas demand scenarios, safety, integrity, and compliance obligations remain.
- Aggressive electrification scenarios reduce future capital needs but create significant asset retirement and decommissioning requirements.
- Targeted electrification may create opportunities to avoid some future infrastructure investments.

RPAG members provided the following feedback:

- RPAG member: What is the difference between "Reliability & Resiliency" and "Customer & Public Safety"?
 - PSE response: Reliability and resiliency investments focus on ensuring gas supply reaches customers under all conditions. Customer and public safety investments focus on preventing failures, mitigating integrity risks, and protecting the public.
- RPAG member: Could future reports provide examples of projects within each investment category?
 - PSE response: Yes, we can provide examples in the feedback report for this meeting. [See August 2026 Feedback Report for additional information.]

Next steps and public comment opportunity

Follow along: This information is on [slides 82-88](#) of the presentation and [2:31:10 – 2:47:35](#) in the meeting recording.

Presenter: Hilary Wilkinson, Facilitator, MFA

Highlights:

- September 1, 2026: Feedback form for the August 25, 2026 meeting closes
- September 23, 2026: RPAG meeting
- Two members of the public participated in the public comment opportunity.
- Participants were invited to complete a post-meeting feedback poll to share their insights and help improve future sessions.

RPAG members provided the following feedback:

- Will the January RPAG drop-in session be limited to RPAG members?
 - PSE response: There will be separate sessions for the public.

Attendees

Attendees are listed alphabetically by first name. This list does not include viewers on [PSE's YouTube channel](#).

RPAG members

1. Aliza Seelig
2. Callie Moriyasu
3. Dan Kirschner

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|----------------------|-------------------|-----------------|
| 4. Dennis Suarez | 8. Katie Ware | 12. Quinn Weber |
| 5. Donald Williams | 9. Kelly Fukai | |
| 6. Froylan Sifuentes | 10. Lauren McCloy | |
| 7. JP Carvallo | 11. Megan Larkin | |

Presenters

- | | |
|--------------------------|---------------------------|
| 1. David Landers, PSE | 5. Mark Lenssen, PSE |
| 2. Gurvinder Singh, PSE | 6. Niece Weatherby, PSE |
| 3. Jennifer Coulson, PSE | 7. Steven Schueneman, PSE |
| 4. Kara Durbin, PSE | |

Support staff and facilitators

- | | | |
|--|---|-------------------------|
| 1. Ashley King, PSE | 4. Hilary Wilkinson, Maul Foster & Alongi (MFA) | 7. Ray Outlaw, PSE |
| 2. Ben Relampagos, Triangle Associates | 5. Jack Donahue, MFA | 8. Sam Humphreys, MFA |
| 3. Elizabeth Hossner, PSE | 6. Meredith Mathis, PSE | 9. Stephen Collins, PSE |

Members of the public

- | | | |
|----------------------|---------------------|--------------------|
| 1. Anna Edwards | 7. Jack Zeigler | 13. Rebecca See |
| 2. Aubrey Young | 8. Kelsey Hefner | 14. Scott Morgan |
| 3. David Meyer | 9. Lian Arnst | 15. Shirley Huang |
| 4. Don Marsh | 10. Mark Rohde | 16. Taylor Toews |
| 5. Francisco Humaran | 11. Nathaniel Short | 17. Wesley Franks |
| 6. Hanna Boyer | 12. Oneida McMann | 18. Willard Westre |