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

Tuesday, September, 30 2025 | 1:00 – 4:00 p.m.

# Meeting objectives

- Provide 2027 Integrated System Plan (ISP) development updates
- Provide an overview of Puget Sound Energy's (PSE) clean energy customer survey results
- Discuss resource adequacy results for the 2027 ISP
- Provide an opportunity for public comment

Time	Agenda Item	Presenter
1:00 p.m. – 1:05 p.m. 5 min	Introduction and agenda review	Annie Kilburg Smith, Facilitator, Triangle Associates
1:05 p.m. – 1:20 p.m. 15 min	ISP development updates	Jennifer Coulson, Manager, Operations and Gas Analysis, PSE Kara Durbin, Director, Clean Energy Strategy, PSE
1:20 p.m. – 2:00 p.m. 40 minutes	Clean energy survey results	Ray Outlaw, Manager, Communications Initiatives, PSE Kara Durbin, Director, Clean Energy Strategy, PSE
2:00 p.m. – 2:10 p.m. 10 min	Break	
2:10 p.m. – 3:45 p.m. 95 min	Resource adequacy results	Elizabeth Hossner, Manager, Resource Planning and Analysis, PSE Michaela Levine, Senior Managing Consultant, E3
3:45 p.m. – 4:00 p.m. 4:00 p.m.	Next steps and public comment opportunity  Adjourn	Annie Kilburg Smith, Facilitator, Triangle Associates
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The full meeting materials, including the agenda, and presentation are available online under the September 30, 2025 meeting heading on the <u>ISP website</u>.

### Introduction and agenda review

Annie Kilburg Smith, facilitator, provided an overview of the meeting agenda and welcomed RPAG members. See <u>RPAG members in attendance</u> at the end of this document for a list of RPAG members who joined the meeting.

• During the opening, staff from the Washington Utilities and Transportation Commission (WUTC) provided a <u>link to the final ISP rules</u> in Docket UE-240281.

# ISP development updates

Annie introduced Jennifer Coulson, Manager, Operations and Gas Analysis. Jennifer provided an overview of upcoming engagement topics through 2027. Since February 2025, PSE has updated its 2027 ISP scenarios based on Initiative 2066 (I-2066) rulings. House Bill 1589 (HB 1589) is now the reference case for the 2027 ISP scenarios.

An RPAG member asked a question as follows:

- RPAG member: How does the inputs close date compare to the Integrated Resource Plan (IRP)?
  - PSE response: There has not been a formally established close date. The ISP is a longer process, and PSE will need to align analyses and data before confirming a close date.

Kara Durbin, Director, Clean Energy Strategy, PSE shared that PSE will send a feedback memo to RPAG members that will include documented feedback from the 2027 ISP cycle and other previous IRP engagement. The memo will be available on PSE's website.

# Clean energy survey results

Kara provided an overview of PSE's Clean Energy survey results.

Ray Outlaw, Manager, Communications Initiatives, PSE presented the methodologies and results of PSE's Clean Energy Survey. Surveys were primarily conducted online through Edelman.

RPAG members asked questions and provided feedback throughout this section as outlined below.

- RPAG member: Over the next five years will an annual utility bill increase in total of 25%?
  - o PSE response: That is one of the scenarios offered in the question.



- RPAG member: I have some concerns about the framing here. What we're dealing with is a
  utility transitioning to clean energy and your costs are going up regardless. Customers might
  think their bills are only going up if they go to clean energy. I think it's kind of like a false
  choice a little bit.
  - PSE response: Thank you for the feedback, this is clearly a challenging question to develop.
- RPAG member: It is a good sign that people are willing to pay more. The willingness to increasingly pay more for clean energy might be a positive takeaway from the survey results.
  - o PSE response: Thank you for that feedback.
- RPAG member: The framing of clean energy, the order of questions, and the wording in the
  questions is problematic and seems to lead the participants to answer a specific way after
  the survey essentially tells customers their costs are going to go up with the clean energy
  transition.
  - PSE response: That is helpful to hear. Please note that the presentation of the results is not the order in which questions were asked in the survey.
- RPAG member: It would be great to see a copy of the survey and hear if the order of the questions was randomized.
  - PSE response: Thank you for that suggestion. Following the September 30, 2025 meeting, PSE distributed the survey questions to the RPAG members.
- RPAG member: Did PSE explain emerging technologies and resources in the survey?
  - PSE response: Yes, PSE defined emerging technologies and resources, as well as other key terms used in the survey, for participants.
- RPAG member: How actionable is this survey? How is this information useful to PSE?
  - PSE response: Surveys help us understand actual customer priorities and help to validate the qualitative data and our assumptions about customer opinions. The survey results align with anecdotal and qualitative feedback PSE has received.

## Resource adequacy results

Elizabeth Hossner, Manager, Resource Planning and Analysis, PSE introduced Michaela Levine, Senior Managing Consultant at E3 to provide an overview of PSE's resource adequacy analysis results. The presentation included background on resource adequacy, changes in the 2027 ISP and the planning reserve margin (PRM), capacity shortfall, and electric load carrying capability (ELCC).

RPAG members asked questions and provided the following feedback:



- RPAG member: What is the difference between the 2025 analysis data and the 2027 ISP data?
  - PSE response: The switch over from GENYSIS to an E3 regional RA model was needed to ensure PSE was evaluating statistically relevant volume of data. This transition preserves alignment with the region through the Public Generating Pool (PGP) regional RA analysis.
  - Additional context provided after the meeting: PSE moved away from GENESYS for several reasons, which include the number of draws used to determine the metrics.
     GENESYS uses a reduced number of draws than it has in the past, which PSE believes is not enough draws to evaluate statistically significant results.
- RPAG member: Is there a reason why PSE cannot use a new GENESYS?
  - E3 and PSE response: Across the industry, methods for these climate models are still emerging. Some climate models do not have the same details for the tail event conditions for temperature datasets.
- RPAG member: Is PSE settling on the PGP data and methodology for the ISP? The more
  we can follow the regional models, the more we can plan for the region.
  - PSE response: PSE did not use the Council's model and instead used the climate models from the Council as an input into E3's regional model. The results are generally consistent with Council's most recent RA analysis.
  - Additional context provided after the meeting: GENESYS only uses the three climate change models from the 2021 Power Plan, and as noted in the May 15, 2025 RPAG meeting, we have moved to a blending of historical data and the climate change models. By using E3's model, we are able to capture both the historical data and the climate change data for the analysis. By using this method to blend current trends in temperature with the climate change future projections, this allows for a more robust analysis.
- RPAG member: Is the electrification assumption grounded in actual data?
  - o PSE response: Yes.
- RPAG member: The Council currently uses a GENESYS model for adequacy which is
  available to license from PSR U.S. I will note that it would likely need to be tuned for PSE's
  usage, but the data to run the model is available from the Council if members are interested.
  Public Council would be happy to engage if there are more questions.
- RPAG member: Why is the winter peak worse than the summer?
  - o E3 response: There are a lot of weather dependent loads in the winter; PSE is a winter peaking utility. The highest system peak occurs in the winter, not the summer.
- RPAG member: Why have weather profiles changed in the 2027 ISP model?



- E3 response: There are back-to-back days with extreme weather conditions. The change helps meet new load profiles.
- RPAG member: Can you clarify the variable of the expiration of current contracts for the 2027 ISP?
  - PSE response: This is the view of what we expect in 2031 and considers the loss of contracts and other changes.
- RPAG member: The data shows a high PRM in winter. Can you clarify what that means?
   What's the geographic spread of the wind projects used in the effective load carry capacity (ELCC) analysis? ELCC analysis?
  - E3 Response: Based on historical temperature and load data there was about a 15-20% higher than median peak. Most extreme winter tail event conditions drive the modeling of high winter PRM.
- RPAG member: Regarding ELCCs, what does E3 attribute to the cratering of the 100-hour iron-air battery storage?
  - E3 Response: This was due to market limitations. Past analyses showed limitations on how much energy is available. The limit showed that after a certain point there was degradation. At higher penetrations of the 100-hour storage, there were energy insufficiency issues.
- RPAG member: If there are more resources for iron air batteries, would the ELCC improve?
  - E3 response: If the battery were not in an energy-constrained system, the ELCC would look better. However, even with 4-hour and 100-hour storage, we still see saturation effects. In theory, a fully charged 100-hour system could deliver a lot of ELCC, but with a 60% energy loss, the low round-trip efficiency really cuts into its effectiveness.
- RPAG member: Can you say why the ELCC declines over 1,000 MW, since you modeled a wide geographic spread?
  - o E3 response: E3 includes a similar profile to the Washington East Wind profile.
- RPAG member: When E3 runs the ELCC analysis, it is based on a system that is already close to being resource-adequate. Can you share more details on how that assumption is applied?
  - E3 response: The analysis is performed on a system that is close to being resourceadequate and calibrated to PSE's reliability target.

Elizabeth Hossner, Manager, Resource Planning and Analysis, PSE provided an overview on how PSE will incorporate the Resource Adequacy Study (RAS) into the ISP process. The RA analysis produced a PRM and ELCC. These factors will become part of the portfolio.



#### Next steps

Annie previewed upcoming activities.

October 7, 2025: Feedback form from September 30, 2025 meeting closes

October 28, 2025: RPAG meeting

November 13, 2025: RPAG meeting

November 18, 2025: Public webinars

December 2025: No RPAG meeting

Annie invited comments and questions from public attendees. Please visit PSE's <u>recording of the September 30 meeting</u>. At the conclusion of the meeting, participants were invited to complete a post-meeting feedback poll to share their insights and help improve future sessions.

## Public comment opportunity

There were no public comments provided at the end of the September 30, 2025 RPAG meeting. The feedback report for this meeting is available on PSE's <u>clean energy planning website</u>.

#### **Attendees**

Attendees are listed alphabetically by first name. These numbers do not include viewers on <u>PSE's YouTube channel</u>.

#### **RPAG** members

- 1. Aliza Seelig
- 2. Callie Moriyasu
- 3. Dan Kirschner
- 4. Dennis Suarez
- 5. Donald Williams
- 6. Ezra Hausman

- 7. Froylan Sifuentes
- 8. Jaime McGovern
- 9. John Ollis
- 10. Lauren McCloy
- 11. Lisa Schwartz
- 12. Quinn Weber

#### **Presenters**

- 1. Aaron Burdick, E3
- 2. Elizabeth Hossner. PSE
- 3. Jennifer Coulson, PSE

- 4. Kara Durbin, PSE
- 5. Michaela Levine. E3
- 6. Ray Outlaw, PSE

#### Support staff

- 1. Meredith Mathis, PSE
- 2. Phillip Popoff, PSE

#### Facilitation staff

- 1. Annie Kilburg Smith, Triangle Associates
- 2. Ben Relampagos, Triangle Associates
- 3. Sam Humphreys, MFA

#### Members of the public

- 1. Amy Wheeless
- 2. Eli Quinnett
- 3. Lisa Anderson
- 4. Maxwell Albertson
- 5. Philip Jones
- 6. Maxwell Albertson
- 7. Scott Morgan
- 8. Sophie Major

- 3. Roxana Vilchis, PSE
- 4. Wendy Gerlitz, PSE

9. Teun Deuling

10. Victor Yagi

11. Wesley Franks