Feedback Report

RPAG Meeting

Meeting details

- Wednesday, January 17, 2024, 12:00 p.m. - 2:00 p.m.
- Virtual webinar hosted by PSE and facilitated by Triangle Associates
- Links to:
  - Presentation
  - Meeting recording
  - Updated draft RPAG charter

Feedback report

The following table records participant questions and PSE responses from the public comment opportunity and comments submitted via online feedback form or irp@pse.com. Meeting materials are available on the IRP website.

Note: PSE aims to provide clarity in responses but subsequent follow-up may be required at times. Please direct any follow-up clarifications to irp@pse.com.

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1	1/15/2024	Virginia Lohr	Feedback form	For this exercise to be of value to the public, it is important to omit abbreviations from slides whenever possible. Slide 4 Of the Jan. 17 slidedeck even asks people to avoid the use of acronyms, yet they occur repeatedly throughout the slidedeck. This is an issue I raised years ago, and for a time PSE provided a separate sheet or slide with the abbreviations and what they stood for, so everyone could more readily follow what was being presented. These are abbreviations I found in this set of slides,	Thank you for your feedback. We will include a definitions and acronyms slide in our future RPAG and public meeting slide decks. PSE will also endeavor to reduce the use of acronyms in public meetings and materials.

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				with a few being spelled out (sometimes after using them multiple times), but most were never explained that I could find: RPAG, IRP, E3, LOLE, LOLP, WRAP, RA, ELCC, PRM, WPCM, DNV. These may be standard to people who deal with this everyday, but they are not common for everyone. Looking them up on-line does not help, for example searching for LOLE turns up links about clothing. I hope PSE will return to being cognizant of this issue. Thank-you	
2	1/17/2024	Don Marsh	Public comment	*Mr. Marsh submitted a duplicate of his public comments in full via email to irp@pse.com. To avoid redundancy, his comments in their entirety are shown below in comment #6.*	
3	1/17/2024	Virginia Lohr	Public comment	This is Virginia Lohr, a PSE customer. When I moved to PSE territory I learned that my utility burned lots of coal and had only the minimum amount of solar energy the law required. I had just retired early to devote time to fighting climate change and helping my utility become one I could be proud of. It seemed like a good place to start after years studying and commenting on integrated resource plans. I wonder if I will ever be proud of PSE. One thing that has been frustrating is PSE's inconsistent use of public participation. Over the years PSE has vacillated between open and closed meetings. For a brief period PSE experimented with the International Association for Public Participation guidelines in a process open to everyone. This had been strongly suggested in comments to the Utilities and Transportation Commission, yet as soon as PSE learned that those guidelines would not become a requirement they stopped. PSE's latest effort to avoid listening to the public is to reinstate a select group, the RPAG, and once again not let the public have a two-way conversation. Before this latest public participation shutdown PSE held an open meeting and broke us into groups for detailed input. One outcome was PSE saying we hear you, no nuclear, yet at the last RPAG meeting we heard the PSE is in fact investing in nuclear. Apparently, PSE ignored public input. Whoops. Yesterday I learned that PSE does not support the proposed community solar bill which would help disadvantaged customers. PSE said that equity is an important part of the RPAG yet there is currently no equity representation on the committee. Once again PSE appears to be ignoring public input. We care about equity for	Thanks for your comments. Puget Sound Energy is continuing to utilize the International Association for Public Participation (IAP2) framework to guide how we structure effective public engagement. As a reminder, during this cycle all members of the public may submit comments or questions in writing as well as ask questions during webinars. The public may also provide comments during designated periods of both public webinars and RPAG meetings. Consistent with previous IRPs, all feedback and questions will be catalogued and addressed in a timely manner and shared with the RPAG as well as PSE's resource planning team. We acknowledge your concerns with small modular nuclear as an emerging resource. The Clean Energy Transformation Act (CETA) set a target to reach 100% renewable and non-emitting resources by 2045. Recognizing the intermittent nature of

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				customers. When will PSE become a utility customers can be proud of? I'm still waiting and hoping.	renewable resources like wind and solar are not enough to reach this target, it is important we explore all CETA-eligible options to meet public service and reliability requirements. PSE is supportive of Washington policy that will continue to encourage the growth of Community Solar. You can read more about our community solar programs and how they are benefiting low-income subscribers in the feedback report from our November 15, 2023 meeting. We agree that equity is important to our IRP process; PSE is continuing to develop an approach for addressing equity in the IRP. This work is ongoing.
4	1/17/2024	James Adcock	Public comment	*Mr. Adcock submitted a duplicate of his public comments in full via email to irp@pse.com. To avoid redundancy, his comments in their entirety are shown below in comment #5.*	
5	1/17/2024	James Adcock	irp@pse.com	I am providing this "Feedback" via email, since in my experience the associated online "Feedback" form does not work in practice, either failing entirely to record comments, based on the exact version of the browser being used, or if the browser does work, then that "Feedback" form unreasonably limits the amount of feedback that will be accepted, such that the length of feedback being submitted here will not be accepted. I am disappointed that while Puget included the E3 recommendations in the meeting notes, Puget didn't actually talk about them, just attached them as an Appendix. The E3 recommendations are very good, and Puget should be talking about them here in this meeting, and actually incorporating them into Puget's actions.	PSE shared E3's recommendations for the 2025 IRP for transparency purposes. PSE incorporated E3's recommendations in the 2023 Electric Progress Report process. The IRP examines resource adequacy to ensure PSE has enough capacity supply during those 1 in 20-year events to prevent a power outage caused by lack of energy. The outages you are referring to are related to your local transmission and distribution system. The IRP resource adequacy analysis is not where those outages are resolved. PSE reliably

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				Both Gas and Electric reliability are critically dependent on the reliability of Gas Infrastructure, including Gas Pipelines and Storage, and that Gas Reliability is just not there, are indicated both by recent pipeline outages, and now storage outages. The good news is that Ratepayers stepped up to make up the difference in this Puget Un-Reliability when Puget explicitly asked us for it! But, when Puget has to ask Ratepayers to take extraordinary measures -- then that does represents a Puget Failure. I hope Puget and UTC will formally review what happened during this outage, and what to do different in the future to make sure Puget and other Utilities actually "work" when the weather gets cold -- or hot. We do not want to duplicate Texas' outages! However, I will point out that as a Puget ratepayers we lose power all the time -- not just once in 20 years! Actual unreliable delivery to homes and small businesses needs to be fixed. It is crazy to talk about 1 in 20 reliability, when the customer is experiencing 20 in 1 reliability. Puget needs to further improve their climate models -- what they have done is simply a "first step" -- Puget is not there yet. For example those climate model have terrible "regional downscaling" and "hourly interpolation" modeling problems. Page 21: In the PNW we also automatically get "synergy" between renewables and Hydro -- which is a huge storage capacity. E3 needs to model "Hydro Flexibility" more on the weekly basis, and not just on the daily basis. Page 37: E3 recognizes the need for additional storage -- Now Puget also needs to recognize that need -- and actually build that storage! In general, Puget must actually meet the clearly stated CETA requirement to actually be 80% "clean" -- non-emitting or renewable -- by 2030.	served natural gas to customers throughout the mentioned intermittent supply interruptions. Calling on customers with interruptible rate schedules to curtail consumption per contractual agreement supports system reliability while reducing the need for pipeline investments that would further increase capacity of the natural gas delivery system. With PSE joining other utilities in the region in requesting customers to make incremental reductions in both electric and natural gas consumption, PSE customers who responded to the request helped ensure stability of the energy delivery system throughout the region during a period of record peak demand. Regarding electric reliability, PSE invests annually in a robust portfolio of reliability improvement projects. In 2023 alone, more than 280 local system reliability projects were completed in the communities PSE serves that will save over 9 million minutes of customer interruptions (CMI) annually. These projects included circuit undergrounding, installation of covered overhead conductor to reduce tree-related outages, replacement of aging infrastructure such as underground cable and substation equipment, and automation to limit the extent of interruptions by automatically restoring customers not directly

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				Finally, Quote Puget's Complains about "Representation of the Public" -- historically Puget has had the "IRP Stakeholders Group" -- Ratepayers who were primarily interested in Environmental and Humanity issues. Yet for this IRP Puget has silently killed that group, replacing it by this group of only Puget's Invited Organizations. You cannot complain about limitations in terms of "Representation of the Public" -- if Puget is not even willing to listen to those Ratepayers who care enough to show up.	impacted by outages on the delivery system. As a reminder, during this cycle all members of the public may submit comments or questions in writing as well as ask questions during webinars. The public may also provide comments during designated periods of both public webinars and RPAG meetings. Consistent with previous IRPs, all feedback and questions will be catalogued and addressed in a timely manner and shared with the RPAG as well as PSE's resource planning team.
6	1/17/2024	Don Marsh on behalf of Washington Clean Energy Coalition (WCEC)	irp@pse.com	**1. Melting ice in Greenland** Today I learned of a study that finds Greenland has lost 1 trillion metric tons of ice that was previously unaccounted for (https://www.bloomberg.com/news/articles/2024-01-17/melting-greenland-has-lost-1-trillion-tons-more-ice-than-thought). Although this particular ice melt probably won't contribute much to sea level rise, it raises the risk of other Greenland glaciers melting or slipping into the ocean. That could cause much higher sea levels, which would impact many of PSE's customers. It would certainly impact the new LNG facility in Tacoma. For this reason, PSE has a vested interest in reducing climate changes that cause sea level rise. There must be a more serious evaluation of electrification to substantially reduce methane emissions from natural gas. **2. Electrification & Resource Adequacy** Although today's discussion of Resource Adequacy was interesting, neither PSE nor any of the RPAG members mentioned what effects electrification (transition from gas to electricity) might have on Resource Adequacy. From discussions	1. Thank you for your comments. PSE is planning to examine electrification scenarios, including the impact on emissions, in the 2025 IRP. 2. The focus of this meeting was providing the RPAG with details about the technical resource adequacy analysis PSE will be using in its 2025 IRP. Regional resource adequacy is a concern even before considering a significant increase in the demand for electricity from new policies to convert gas customers to electricity. While there are several such studies that draw similar conclusions, the Northwest Power and Conservation Council's latest regional resource adequacy study (January 2023) may be informative. Given current forecast of loads (before any new building electrification mandates) and forecast

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				with many PSE customers in Bellevue, this is a primary concern for customers. Lacking the terminology to name their concern as Resource Adequacy, customers nonetheless worry that we would "run out of electricity" if we start using electricity instead of gas for heating, cooking, and hot water. It would be very helpful if PSE could provide some guidance on this question. All we know right now from the 2023 Gas IRP is that electrification might cost an extra billion dollars. However, the calculations are not well documented, so we don't know whether we can trust them. Please remedy this. **3. Notification of emergencies** Because the gas supply from the Jackson Prairie Storage facility was temporarily curtailed during an extended cold snap, PSE and its customers experienced our most recent Resource Adequacy test. PSE responded by sending emails to customers, one shortly after the incident occurred, and another the following morning. PSE asked customers to reduce demand by lowering thermostats, postponing dish washing and laundry, and other measures. However, PSE did not mention the actual cause of the problem. PSE's follow-up email said, "While temperatures are expected to moderate today, the cold weather throughout the Pacific Northwest continues to strain energy resources." Even when temperatures rose above freezing, PSE sent no "all clear" message to let people know the emergency was over. Our concern is that this lack of specificity and unbounded time period will harm the effectiveness of emergency communications. Customers will be less inclined to reduce loads if they don't know why they are doing it or when the emergency is over. **4. Historical context** The Resource Adequacy meeting did not give any historical context that would have been useful to understand what the real-	of resources in operation and those permitted and under construction to come online as of 2027, the report estimates the region will be at 46.1% loss of load probability by 2027. See table 3, page 21 at Pacific Northwest Power Supply Adequacy Assessment for 2027 (nwcouncil.org) 3. Thank you for your feedback. 4. PSE has not experienced a "loss of load event" caused by a regional shortage for at least the last two decades. However, the probabilistic nature of RA analysis does not mean we should see an outage one time in 20 years. It means there is a likelihood in any given year that there could be a loss of load event, and the year-to-year probabilities are not correlated. This process is more like deciding how much car insurance to carry in case you are in an accident. Just because one has not been in an accident for 20 years, it does not mean one should drive without insurance, because there is always a small chance of a very costly adverse event. 5. Thank you for your comment.

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				world causes and effects of loss-of-load are. When was the last time PSE experienced a LOL event? What was the cause, how long did it last, and how many customers were affected? How has PSE performed on its 5% LOLP target over time? Obviously, it's great to outperform the target, but consistently doing so might mean that we are paying too much. Or if we want that level of service, maybe the target should be adjusted to reflect what we have been doing. Having a theoretical target that is not based on historical performance makes it difficult to evaluate these discussions. **5. WCEC participation** Do you think any of these questions would have been useful in today's discussion? Perhaps to help the group lean into uncomfortable topics, as the convening document recommends? The public continues to be deprived of interactive participation at a substantive level of technical detail beyond the high-level public webinars. We are very disappointed that PSE continues to exclude us from these meetings. The public is not well served by this policy, and ultimately, neither is the company.	
30	1/17/2024	Fredd Huette	In meeting	Regarding the Jackson Prairie outage, were there any gas power plant curtailments during the outage? Can you provide additional information about the outage, cause, and impacts on resource planning?	The outage at Jackson Prairie was caused by failed fiber optic cables. The facility went offline early afternoon and was back online by the evening. The plant still delivered a significant amount of energy between the initial outage and when it came online throughout the day, ranging approximately between 50% and 70% of full capacity. There were no outages in PSE's service territory related to the Jackson Prairie outage.
31	1/26/2024	Joel Nightingale (RPAG member) on	irp@pse.com	**Triangle Associates – Convening Assessment** 1. Staff appreciates the report back from Triangle Associates related to the input they received from RPAG members. Slide 12 identifies a desire among RPAG members for PSE to fill the	1. PSE and Triangle Associates are currently conducting a participation assessment with equity organizations to identify major barriers to

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		behalf of Commission Staff		vacancy of an equity/energy justice-focused organization. Staff understands that, so far, PSE has been unable to find a group with the time and interest to commit to RPAG membership. How does PSE plan to ensure that an equity/energy justice perspective is represented in and can influence the development of its 2025 IRP? **E3 – Resource Adequacy** 2. Staff appreciates PSE and E3's work to create a Resource Adequacy analysis that is more compatible/comparable with that of the WRAP. 3. How did PSE decide on using 2030 and 2035 as its test years for the purposes of its Resource Adequacy analysis? 4. Can PSE/E3 elaborate on the how it came to the decision to use the Classic GENESYS as opposed to the New GENESYS model to inform its resource adequacy modeling? 5. Electric vehicles: • Based on the January 12 RPAG meeting, EVs represent a large part of PSE's anticipated electric load and demand growth. What assumptions does PSE and/or Guidehouse make about the unmanaged shape of those loads? How is PSE/Guidehouse using real-world data to inform/improve those assumptions? • How is PSE planning to account for the wide range of possible EV load futures? What methods is PSE planning to use to assess the risks of over- or under-planning for this relatively new load? Staff agrees that a quickly growing fleet of EVs with no charging management presents risks, but also notes that in another potential future, EVs could represent a reliable capacity resource for the system rather than a driver of capacity need. • Is PSE planning to model vehicle-to-grid/bidirectional charging programs in its 2025 IRP?	participation in PSE's resource planning. The RPAG is just one way to participate in the process. Our dual track engagement approach is intended to broaden our audience and reach going forward. Additionally, PSE is developing a plan to engage the EAG, RPAG and public participants to discuss equity during the June meetings, as described in our work plan. 2. Thank you for your comment. 3. When PSE started using the LOLP analysis for capacity planning, we started with the 5-year target to match the Northwest Power and Conservation Council's Resource Adequacy Assessment. The 10-year target was added after the passage of CETA. Under WAC 480-100-620(12), the utility must develop a 10-year clean energy action plan (CEAP). Under section (d), the utility must develop a resource adequacy requirement, so we added the 10-year metric to meet that requirement. The first year of the 2025 IRP planning horizon is 2026 – five years is 2030 and 10 years is 2035. 4. PSE considered using the New GENESYS model for its Resource Adequacy analysis but ultimately decided to use the Classic GENESYS due to a significant reduction of simulations being run in the redeveloped GENESYS for each climate change model. The classic

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					GENESYS model runs 300 simulations per climate scenario for a total of 900 per study, while at the time PSE was discussing the redeveloped GENESYS model with the council, it had the ability of running 60 simulations per climate scenario for a total of 180 per study. As a result, E3 and PSE expressed a need for a higher number of simulations for a more accurate prediction and opted to use Classic GENESYS over the New GENESYS. 5.Guidehouse uses load shapes from a variety of sources for each use case that comprises the total forecasted EV load shape. Guidehouse will present their methodology and assumptions at the April 17, 2024 RPAG meeting and will provide more detail at that time. The 2025 IRP CPA analysis includes the demand response potential for both the higher/older EV forecast presented at the Jan. 12, 2024 RPAG meeting, as well as the demand response potential for the new/lower EV forecast as presented at that meeting. The demand forecast stochastics used for the portfolio model include high and low EV forecasts. We will be considering distributed energy storage as a resource option in the 2025 IRP. The distributed energy storage resource in the IRP is

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					a generic resource placeholder. This DER storage could represent customer programs, a PSE owned resource, or a combination of the two. The exact breakdown of the resources will be identified through the Distributed Storage and Solar (DSS) RFP. PSE is developing a strategy to conduct Vehicle-to-Everything ("V2X") technology demonstrations, which it will deploy in consultation with Commission Staff under Electric Schedule 557 no later than 2025. The desired outcomes of such demonstrations are to identify and evaluate the technical feasibility, operational requirements, interconnection protocols, benefits, barriers and market readiness for V2X. As V2X technology is still relatively nascent, and the bi-directional interoperability standards between the EV, EVSE, and EVSP networks are rapidly evolving, many vehicles and chargers on the market today are not technically capable of V2G. Given these factors, PSE believes that 2027 would be a more appropriate timeframe to begin modeling V2G programs in the IRP.