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Mr. Steven King
Executive Director and Secretary
Washington Utilities and Transportation Commission
P.O. Box 47250
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COMMISSION

Re: Dockets UE-160918 & UG-160919, PSE 2017 Integrated Resource Plan

Dear Mr. King:

These comments are submitted on behalf of Puget Sound Energy (“PSE”) in response to the (i) Commission Staff Comments Regarding PSE’s 2017 Electric and Gas Integrated Resource Plans (the “Staff Overview Comments”) and (ii) the Staff Detailed Comments on PSE’s Final 2017 IRP (the “Staff Detailed Comments”) attached as Appendix 1 to the Staff Overview Comments. PSE appreciates the opportunity to respond to Staff’s comments, and PSE’s responses are set forth below.

A. PSE Response to Staff Overview Comments

PSE responds to Staff Overview Comments as follows:

1. Staff Request for Supplemental Information

Staff requests that PSE provide supplemental information regarding policy issues and additional time-sensitive issues. (Staff Overview Comments at 7-8.) PSE respectfully requests that the Commission reject Staff’s request. Staff does not claim that PSE has failed to meet its regulatory burden under the IRP rules. In fact, Staff affirmatively states that “Figures B-1 and B-2 in Appendix B summarize how the IRP satisfies the electric and natural gas IRP regulatory requirements.” (*Id.* at 1.) After a year and a half, it is time to close the books on PSE’s 2017 IRP. PSE will consider Staff’s comments regarding supplemental information in PSE’s 2019 IRP, and PSE looks forward to collaborating with Staff and all stakeholders in that process.

2. Potential Expansion of IRP Requirements

PSE is concerned that Staff’s comments generally demonstrate an effort to significantly expand environmental policy through the IRP process. Staff’s suggestions and

comments are addressed herein and will be considered in future IRPs, but to the extent Staff is attempting to expand the IRP process or affect environmental policy, Staff should focus such efforts in the pending IRP rulemaking docket or the legislative process.

3. General Staff Comments on the 2017 IRP

PSE disagrees with Staff's comment that the level of review of transmission and distribution planning within the IRP advisory group was "limited and did not satisfy all members' requests for full public process." (Staff Overview Comments at 5.) PSE included a robust, 60-page infrastructure chapter (*see, e.g. Chapter 8*) in response to requests from Staff late in the IRP cycle. Formal stakeholder comments do not suggest dissatisfaction with the broader transmission and distribution discussion in chapter 8 and only focus narrowly on the Energize Eastside discussion. Throughout the 2017 IRP process, PSE maintained that project implementation, such as Energize Eastside, is not, and should not be, a part of PSE's 2017 IRP. PSE's position is consistent with current IRP law and underscores the distinction between the IRP's *planning* processes and project *implementation*. Notwithstanding the fact that project implementation is separate from, and not a part of, planning processes, PSE included 23 pages on Energize Eastside with references and links to many reports and studies in this IRP in response to staff and stakeholder requests.

Staff contemplates opportunities to fine-tune power demand forecasts in future IRPs through systematic and routine modeling of distributed energy resources. (Staff Overview Comments at 5.) PSE will consider localized demand forecasting in the 2019 IRP. The implementation, operation, and testing of PSE smart grid and distributed energy resource pilot projects should allow for better modeling and analyses with respect to such resources in the next IRP and provide insight into the potential cumulative benefits and costs that may meet least cost solution objectives. PSE disagrees with any implication that there is a lack of integration between the IRP team and transmission and distribution planners, or the implication that there has been a potential missed opportunity to avoid unnecessary or premature long-term capital solutions to date. Coordination between these groups exists today with respect to load forecasting and conservation assumptions and will only deepen as distributed energy resource technologies begin to mature in PSE's footprint.

Additionally, Staff suggests that PSE should convene an advisory group to increase the level of public involvement in distributed energy resources planning. (Staff Overview Comments at 5-6.) PSE values Staff's suggestion and is considering implementing a delivery infrastructure planning advisory group.

PSE notes that the existing IRP rule, WAC 480-100-238, does not provide much guidance with respect to the level of transmission and distribution analyses that an electric company should include in an IRP. WAC 480-100-238(d) requires an "assessment of

transmission system capability and reliability, to the extent such information can be provided consistent with applicable laws,” and WAC 480-100-238(e) requires a “comparative evaluation of energy supply resources (including transmission and distribution) and improvements in conservation using the criteria specified in WAC 480-100-238 (2)(b), Lowest reasonable cost.” PSE looks forward to Commission guidance with respect to the level of transmission and distribution analyses that an electric company should include in an IRP in Docket A-130355, and PSE suggests scheduling a workshop in that rulemaking docket to address this issue more fully.

B. PSE Response to Staff Detailed Comments

PSE responds to Staff Detailed Comments as follows:

1. Prudence of Distributed Energy Resources

Staff states as follows with respect to prudence of distributed resources:

Prudence determinations go well outside of the IRP context by considering decisions and actions of utilities after the IRP is completed. Therefore, while prudence is a relevant topic, it cannot be fully explored in the forward-looking IRP process because prudence determination is made retrospectively.

(Staff Detailed Comments at 2.) PSE is not clear if Staff is making a specific request in the quote above. Nonetheless, PSE agrees with and supports Staff’s comment that prudence is a separate, retrospective determination.

2. Potential Tacoma LNG Facility Delays

Staff states as follows with respect to potential delays to the Tacoma LNG Facility:

Staff requests a supplement to this IRP in which the Company describes what it will do in the event that the LNG plant or pipeline upgrades are significantly delayed, or does not become operational at all.

(Staff Detailed Comments at 2.) PSE disagrees with Staff’s characterizations about PSE’s assumptions for gas supply risk analysis. In addition to the 2017 IRP, PSE has presented the Commission with analyses of the Tacoma LNG Facility and gas supply alternatives and risks in several prior dockets. For example, PSE performed a significant analyses of gas supply and alternatives in the 2015 IRP (*see, e.g.*, 2015 IRP at pages 2-23, 2-24, 7-38, 7-39, and 7-40) and in Docket UG-151663. These analyses demonstrate that shorter-term pipeline capacity is available to address any potential delay in the Tacoma LNG Facility’s

commercial operation date. In short, if the Tacoma LNG Facility were significantly delayed or canceled, PSE would most likely purchase additional pipeline capacity—most likely from Northwest Pipeline and Westcoast to Station 2.

PSE respectfully requests that the Commission decline Staff's request that PSE supplement the 2017 IRP with regard to the Tacoma LNG Facility. Staff has not suggested that PSE's IRP filing is deficient such that it requires supplemental information to comply. Furthermore, similar information has been presented to the Commission in previous IRPs and in Docket UG-151663.

3. Washington Public Policy and Carbon Emissions

Staff states, in part, as follows with respect to Washington public policy and carbon emissions:

To properly consider its actions relative to Washington public policy on GHGs, PSE should supplement the 2017 IRP to explain and illustrate how its forecast resource acquisition will contribute to meeting state policy goals at least through 2035. To the extent it may be able to project its contribution to these state goals in 2050, it would also be appropriate to forecast in the 2019 IRP.

(Staff Detailed Comments at 3.) PSE's analysis of forecast portfolio carbon dioxide (CO₂) in the 2017 IRP considered the primary public policy goal of Washington State to reduce emissions to 1990 levels by 2020. Indeed, thirteen of the fourteen scenarios modeled by PSE included a carbon price. (*See* 2017 IRP, Chapter 4, Figure 4-2.)

PSE's IRP complies with IRP regulatory requirements in WAC 480-100-238 and WAC 480-90-238. PSE shares Staff's concerns about climate change, and PSE recognizes its role in reducing greenhouse gas emissions in this state. In that regard, PSE has adopted its own internal goal of reducing carbon emissions fifty percent by 2040. The time for analysis of the 2017 IRP should conclude. PSE respectfully requests that the Commission decline Staff's request that PSE supplement the 2017 IRP to illustrate how PSE's forecast resource acquisition will contribute to meeting state policy goals at least through 2035.

4. Legal Challenges to the Clean Air Rule

Staff states as follows with respect to PSE's legal challenges to the Clean Air Rule:

The IRP mentions on page 3-3 that the Clean Air Rule "is the subject of several lawsuits challenging [its] validity." PSE neglects to mention that the Company is an active participant in the legal effort

to invalidate the CAR. In the interest of transparency, PSE should reveal that they are a party to that action and explain why PSE chose to be a party and update the status of those cases in the 2019 IRP.

(Staff Detailed Comments at 5.) PSE opposes Staff's request for PSE to reveal litigation positions in outside proceedings such as an IRP process. Such request goes beyond the obligations required by the IRP rules and could affect PSE's participation in such litigation.

5. Strategy to Mitigate Risk of Regional Resource Inadequacy

Staff states as follows with respect to a strategy to mitigate risk of regional resource inadequacy:

PSE notes on page 3-5 that its reliance on market purchases means it "must monitor regional resource adequacy issues closely and be prepared to modify our purchase strategy accordingly should changing conditions warrant." Staff applauds PSE for recognizing this risk and further honing its analysis of this risk in Appendix G. However, PSE does not explicitly describe a risk mitigation strategy. Staff recommends that PSE supplement this IRP, explicitly describing its market reliance risk mitigation strategy and its rationale, to the extent this can be made publicly available without revealing sensitive market information.

(Staff Detailed Comments at 5.) PSE recognizes the value of addressing regional resource inadequacy and will explore possible modifications to its planning standard to mitigate this risk in the 2019 IRP. PSE proposes that Staff and PSE confer with external stakeholders beginning in the second quarter of 2018 to discuss risk mitigation strategies and rationale. Accordingly, PSE respectfully requests that the Commission decline Staff's request that PSE supplement the 2017 IRP to address regional resource inadequacy.

6. Modeling for Regional Climate Change Impacts

Staff states as follows with respect to modeling for regional climate change impacts:

PSE identifies gaps in information that it needs to better plan for climate change, noting that, "Developing or getting access to regional forecasts that will give us the information outlined above is a priority for PSE." Staff recommends that PSE explore the costs and benefits of identifying or developing this data, and consider opportunities to collaborate with other utilities, or to share the

expense of a consultant. This effort should evaluate whether the continued use of older weather data sets, with extreme cold hours and days, is still appropriate to use in modeling peak energy demand and to represent future weather and hydro conditions. PSE should include the specific actions it is taking in pursuit of this priority and any findings achieved to date in the next IRP.

(Staff Detailed Comments at 6). PSE believes that the addition of modeling for regional climate change impacts in the 2017 IRP, at the request of the Northwest Energy Coalition, is a positive addition. Forecasting the frequency and severity of extreme weather in the Pacific Northwest due to influences in climate change will be very challenging over the next few decades. Northwest Power and Conservation Council staff has performed analyses similar to those suggested by Staff. Although PSE's ability to advance regional forecasting regional weather changes due to climate change may be limited, PSE will engage as much as practicable.

7. Modeling Estimated Environmental Costs and Benefits

Staff states, in part, as follows with respect to modeling estimated environmental costs and benefits:

Although PSE met the letter of the law by modelling various carbon prices in the IRP, the justification for ignoring the societal cost of carbon has no basis in rule. The societal cost of carbon is nationally recognized and widely used approach to quantify the very risks identified in the IRP rule. Until a better measure of the damages associated with greenhouse gas emissions is identified, it should be used in a default sensitivity or even the default scenario. Consequently, Staff recommends that PSE use estimated societal costs of carbon during the 2019 IRP analysis.

(Staff Detailed Comments at 7.) PSE agrees with Staff's statement that PSE satisfied its legal obligations by modeling various carbon prices in the 2017 IRP. Staff's assertion that such modeling is required is confusing. PSE's prior IRPs have not included the analysis Staff asserts is required, yet the Commission ruled that those IRPs complied with the IRP regulatory requirements. To the best of PSE's knowledge, neither Avista nor PacifiCorp have filed IRPs that include the analysis that Staff now asserts is necessary.

PSE also disagrees with Staff that the 2017 IRP "ignored" the societal cost of carbon. Thirteen of the fourteen scenarios modeled by PSE included a carbon price based on a combination of assumed state and federal regulations, including the Clean Power Plan and the Clean Air Rule. Staff's recommendation that PSE provide additional estimates of

societal costs of carbon or monetized cost of the health impacts from fossil-fuel emissions in its 2019 IRP purports to impose obligations on PSE that go beyond the IRP rules and its policy. Should Staff want to expand the Commission's policies with respect to various environmental regulatory issues, this should be addressed in the Commission's ongoing IRP rulemaking, Docket A-130355.

8. Offshore Wind Potential Characterization and Cost Assumptions

Staff questions PSE's assumptions with respect to potential placement of offshore wind farms and makes various recommendations, including the following:

Commission Staff recommends that PSE consider the potential placement of offshore wind farms inside the 60 meter offshore water depth line as an alternative to deep water locations to reduce the cost estimates for Washington offshore wind resources in the next IRP. In addition, PSE should use projected cost reductions for offshore wind, as it does for other resources, to make a fair cost comparison between various future eligible renewable resources.

(Staff Detailed Comments at 7.) Staff's focus on offshore wind appears disproportionate to the actual resource potential. Even offshore wind developers have not expressed much optimism for being able to cost-effectively build such resources off the Washington coast. PSE believes that the market will provide greater information regarding the potential for offshore wind development off the Washington coast than academic studies on a resource that does not currently appear cost-effective.

9. Model Demand Forecasts with Retrofit Conservation in Years 11 Through 20

Staff recommends that PSE should assume in years 11 through 20 that a reasonable level of emerging retrofit electric and natural gas conservation measures will become available in the market at cost-effective rates even though they cannot be accurately identified or predicted now. (Staff Detailed Comments at 9-10.) PSE agrees that there may be potential opportunities for energy efficiency not reflected in the outer years of the Conservation Potential Assessment. WAC 480-100-238(3)(b) requires "[a]n assessment of commercially available conservation, including load management, as well as an assessment of currently employed and new policies and programs needed to obtain the conservation improvements." Currently unknown conservation measures will likely develop, but such unknown measures are so far out in the future that they have little impact on actual resource decisions PSE will need to make in the action window. PSE is open to considering a scenario/sensitivity where unknown conservation measures evolve in the future. PSE must also be mindful about prioritizing resources. Although retrofit conservation in outer

years should be on the list of things to consider, PSE respectfully requests that the Commission recognize that PSE may need to be flexible in terms of prioritizing future IRP activity.

10. Integrated Planning for Local High-Growth Areas

Staff states that “PSE should start evaluating the potential to roll up local distribution planning with a modernized grid into the larger-scale IRP process.” (Staff Detailed Comment at 10.) As stated previously, PSE has begun evaluating the potential to integrate transmission and distribution planning into the IRP process. PSE provided more transmission and distribution analysis in the 2017 IRP (*see, e.g.*, Chapter 8) than in any prior IRP and specifically discussed its future intent on page 8-30 in a section titled “Areas of Future Focus.” PSE respectfully requests that the Commission provide guidance but not be overly prescriptive about how to approach the challenge of better integrating resource planning into system planning. PSE also looks forward to additional Commission guidance on this issue in the IRP rulemaking in Docket A-130355.

11. Use Smaller or No Electric Conservation Bundles

Staff recommends that

PSE create smaller electric conservation bundles, particularly around anticipated cost-effectiveness price points, or model individual measures separately to more accurately determine the amount of cost-effective conservation available and to examine the effect of a lower discount rate for residential conservation in the 2019 IRP.

(Staff Detailed Comments at 12.) PSE will work with stakeholders in the 2019 IRP to discuss conservation bundles with the understanding that it is mathematically impractical to include each individual conservation measure in an IRP analysis. Bundling is necessary to properly account for interactive effects. PSE is open to working with Staff and other stakeholders, including the Northwest Power and Conservation Planning Council, in the development of the Conservation Potential Assessment to fine-tune how those bundles are defined and how many bundles should be considered upfront.

12. Increase Clarity of Carbon Cost Abatement Curve Analysis

Staff recommends that PSE take advantage of the expertise offered in the IRP advisory group, in addition to PSE staff, to identify modifications in the 2019 IRP to analyze the costs of varying carbon abatement methods. (Staff Detailed Comments at 13.) PSE is open to such additional analysis. On page 6-85 of the 2017 IRP, the first sentence under the heading “Key Findings” states alternatives were considered in the Base + No

CO₂ scenario. PSE presented it in this manner to avoid conflating utility actions with policy actions. If a similar cost of carbon abatement analysis is included in the 2019 IRP, PSE looks forward to a dialogue with Staff and other stakeholders on the best way to present this information. Costs and carbon emissions can vary significantly by year in such an analysis. Presenting the information in different ways helps focus on different kinds of concerns.

13. Update Energy Delivery Performance Criteria to Reflect a Modernized Grid

Staff recommends, in part, that PSE updated energy delivery performance criteria to reflect a modernized grid:

To evaluate alternatives in the development and operation of a modernized grid, performance criteria for electric and gas delivery must be added to the legacy list of performance criteria. Staff recommends that PSE start working to determine how new or improved capabilities made possible through grid modernization are reflected in the grid performance criteria listed in Figure 8-5 in the 2019 IRP and that the revised performance criteria become a standard part of transmission and distribution planning.

(Staff Detailed Comment at 14.) PSE understands that it will be responsible for demonstrating the costs and benefits of grid modernization investments in one or more subsequent rate proceedings. PSE has had modernizing efforts in play for many years (e.g., such as SCADA) and will continue to utilize grid modernization pilot projects to better understand capabilities on its unique system. Grid modernization investments will continue to be important elements utilized to meet the reliability and safety performance expectations of its customers. PSE is unclear what is meant by “revised performance criteria” and looks forward to more dialogue on this topic with stakeholders.

14. Creation of a Routine Public Review Process for Distribution and Transmission Planning

Staff recommends that PSE establish a routine public review process for distribution and transmission planning:

PSE explicitly recognizes in this IRP the need for increased transparency in their distribution and transmission public processes and Staff agrees with this assessment. To address this need, and to be useful for the 2019 IRP, Staff recommends that PSE convene a

standing stakeholder distribution and transmission advisory group no later than Spring 2018.

...

... Staff recommend that PSE supplement the 2017 IPR [sic] filing with the following information as soon as possible:

- o how PSE plans to roll up distribution energy resource analyses to system level impacts, and
- o when PSE will create an advisory group for distribution energy resource planning, and its proposed membership and role in terms similar to the existing conservation advisory group.

(Staff Detailed Comment at 15.) PSE agrees with Staff's recommendation that PSE convene a standing stakeholder distribution and transmission planning (i.e., not implementation) advisory group, but PSE hopes for further guidance in the IRP rulemaking, Docket A-130355, regarding timing and scope of such group. PSE has already issued an RFP for the 2019 conservation potential assessment and included up to four localized areas. Those localized areas will likely be individual circuits or groups of substations, or some other aggregation, that will be determined in the context of the 2019 IRP. PSE will discuss these plans with external stakeholders in the 2019 IRP process.

15. Energize Eastside Transmission Build Public Process

Staff recommends, in part, that PSE create an advisory group focused on transmission and distribution planning

PSE's 2017 Integrated Resource Plan Work Plan (Work Plan) states a commitment to an improved stakeholder process. However, the Work Plan did not initially include PSE's system transmission and distribution planning as a specified topic for a needs assessment or, or as a topic warranting public review

...

Staff believes that PSE's delay in beginning an analysis of PSE transmission and distribution needs within the IRP process was avoidable and thus adversely affected PSE's ability to satisfy stakeholders' need for transparency. For future projects and IRPs, this issue could be addressed by the creation of an advisory group

focused on transmission and distribution planning, as recommended in the previous Staff comment.

(Staff Detailed Comment at 14.) As previously stated, PSE notes that local transmission and distribution system needs assessments have never been part of previous IRPs and it is unclear whether any such assessment is required by the IRP rule, particularly projects that are driven by regulatory requirements. PSE is no longer planning Energize Eastside, and the project is, and has been, in the implementation phase. Nonetheless, PSE agrees with Staff's recommendation that PSE convene a standing stakeholder distribution and transmission advisory group for future planning.

PSE disagrees with Staff that an entirely new public process should be integrated into the IRP process. If the Commission finds an additional public process is necessary, it should be addressed and developed in an IRP rulemaking, not through comments to the 2017 IRP. Accordingly, PSE respectfully requests that the Commission decline Staff's recommendation to supplement the 2017 IRP in this regard.

Further, PSE strongly disagrees with Staff's claim that any perceived delay in analyzing transmission and distribution needs adversely affected PSE's ability to satisfy stakeholders' need for transparency. PSE's Work Plan for the 2017 IRP did not initially include PSE's system transmission and distribution planning as a specified topic because the Commission "has no formal role in the transmission planning process."¹ Instead, consistent with PSE's commitment to engage stakeholders, PSE launched its own public outreach process in late 2013. Indeed, PSE was aware of public interest in PSE's Energize Eastside project because of extensive community outreach conducted outside, and prior to, PSE filing its 2017 IRP.

PSE public outreach process was – and remains – a robust public process. In 2014, PSE engaged the community in a public discussion regarding routing for Energize Eastside. PSE convened a 24-member Community Advisory Group to consider community values when evaluating transmission line route options. The advisory group spent a year learning about the Eastside's electrical system, participating in meetings and workshops, and evaluating eighteen (18) route options identified by PSE. PSE responded to questions about system planning, and PSE held an all-day IRP advisory group ("IRPAG") on March 16, 2017 dedicated to system planning. PSE held sixteen (16) IRPAG meetings in total, and many CENSE members participated in this IRPAG discussion process. In addition, all Energize Eastside information was available outside of the IRP process.

Additionally, PSE held numerous community meetings to share information about the project and collect input from the community for use in the Community Advisory

¹ Letter from Commission Staff to Richard Lauckhart, dated October 12, 2015.

Group's discussions to help them develop a recommendation for PSE's consideration. PSE's public discussion process included twenty-two (22) Community Advisory Group related-meetings (including two (2) question and answer sessions, six (6) open houses, and two (2) online open houses). Overall, PSE provided more than 300 briefings to stakeholders and neighborhood groups, participated in more than 75 community events, provided a traveling kiosk at five locations that displayed project updates, published three project newsletters, and reviewed more than 2,300 comments and questions.

Through this PSE-led process, PSE learned about community values and concerns about the Energize Eastside project and responded to questions on project need and alternatives. Focusing specifically on transparency, PSE made project technical studies available on the project website, including the Eastside Needs Assessment Report (2013), the Eastside Transmission Solutions Report (2014), Underground Feasibility Study (2014), and the Non-wires Solution Analysis (2014).

In addition to making technical reports available to the public, PSE provided experts to answer project questions at Community Advisory Group-related meetings, open houses and question and answer sessions, briefings, and an online webinar. These experts included PSE staff and nationally-recognized authorities on system planning, construction, engineering, permitting, legal, and health issues. These reports, public meetings, and expert briefings addressed many questions posed by these IRPAG members, such as:

- “What is the potential for conservation to meet future demand?”;
- “What emerging technologies such as solar or battery storage provide alternatives to power lines?”;
- “Why is the project needed?”;
- “How does PSE develop its load forecast?”;
- “Why (and what) federal planning standards is PSE required to meet?”; and
- “Is the project for local benefit”?

PSE's public outreach process was (and remains) independent of and supplemental to other regulatory and permitting processes. For example, pursuant to the State Environmental Policy Act, the project is undergoing a two-phased Environmental Impact Statement (“EIS”) process led by the City of Bellevue, in cooperation with the cities of Kirkland, Newcastle, Redmond and Renton (“Cities”). The EIS process began in April of

2015 and is expected to conclude in March of 2018. The Cities' EIS process includes additional opportunities for public involvement through scoping and Draft EIS comment periods. During these comment periods, the Cities hosted comment meetings and hearings, including open houses. As the project proponent, PSE participated in the public scoping and Draft EIS open houses, totaling sixteen (16) meetings over two years. IRPAG members have been actively involved in the EIS process and have provided public comment at scoping meetings and Draft EIS hearings. To view the extensive EIS materials, including public comments, visit www.EnergizeEastsideEIS.org. Throughout the EIS process (and now concurrent permitting processes), PSE has continued to work with the community, respond to questions, brief stakeholders, meet one-on-one with property owners, send project update newsletters, and transparently share project studies on the project website (or reference to the EIS website as appropriate).

16. Energize Eastside Needs Analysis

Staff recommends, in part, that the 2017 IRP should have spoken in detail about questions of how PSE studies supporting a finding of need for the Energize Eastside project:

PSE's 2017 Integrated Resource Plan Work Plan (Work Plan) states a commitment to an improved stakeholder process. However, the Work Plan did not initially include PSE's system transmission and distribution planning as a specified topic for a needs assessment or, or as a topic warranting public review

...

During the course of the IRP process, PSE provided a number of studies in support of the reliability need it identified and potential alternative solutions to the Energize Eastside project.

However, the time allocated by PSE to discuss these and other studies during the IRP advisory group meetings was not sufficient to examine the studies in detail. This left some basic questions about the studies' assumptions, methodologies, and conclusions unresolved. For example Staff concerns include a lack of narrative in the IRP regarding:

- The effect of the power flows due to entitlement returns on the need for the Energize Eastside project.

- The reason for, and effect on the need for the Energize Eastside, of modeling zero output from five of PSE's Westside thermal generation facilities.
- PSE's choice not to provide modeling data to stakeholders with Critical Energy Infrastructure Information clearance from FERC.
- Resolution of the effect of PSE's load assumptions on the need for Energize Eastside Project.

The IRP process is specifically structured to allow public discussion and inquiry, including a thorough examination of the analysis supporting a conclusion of need. This is an area where PSE can improve. In describing the status of the Energize Eastside Project with respect to its 2017 IRP, PSE states,

The needs assessment and solution identification phases of this project have been completed. Currently, the project is in the route selection and permitting phases.

The IRP should have spoken in detail about questions of how conclusions are drawn in studies supporting a finding of need. For instance, it is still not clear if a joint utility analysis of all available transmission and potential interconnections in the Puget Sound region might solve the Energize Eastside reliability issues. Whether PSE has engaged in such analysis or discussions remains unclear to Staff, and would have been better answered in the IRP.

(Staff Detailed Comment at 16-17.) As an initial matter, the rules are unclear whether an IRP must include a needs assessment of specific local transmission and distribution system projects, and PSE notes that project need is thoroughly addressed in rate proceedings. However, PSE did provide a needs assessment in its 2017 IRP.

PSE disagrees that the time allocated to discuss needs analyses was insufficient. The needs studies had been available to review for years prior to the IRP. As previously discussed, PSE made project technical studies available on the project website. Specifically, PSE published the Eastside Needs Assessment Report and the Eastside Solution Study Executive Summary to the project website in 2013 and published each of the Eastside Transmission Solutions Report, the Underground Feasibility Study, and the Non-wires Solution Analysis to the project website in 2014. In short, the reports and studies supporting the needs analysis have been made public for several years prior to the

filing of the 2017 IRP in November 2017. Finally, PSE disagrees with any allegation that it has not been transparent or provided sufficient time to review the Energize Eastside Project. Analyses regarding the Energize Eastside project have been in the public domain for years prior to the 2017 IRP.

PSE participates in joint utility transmission planning via ColumbiaGrid. ColumbiaGrid provides an annual update to the Commission, the most recent provided in Docket UE-170791. Additionally, Staff had multiple opportunities to engage in transmission planning via PSE's annual OATT Attachment K open meeting, which occurs in June of each year. Given the multiple public transmission planning processes, PSE disagrees with Staff's apparent position that such issues are required in an IRP. The specific needs assessment questions listed in Staff's comments were asked and answered in the appropriate processes (e.g., PSE's community advisory group process and subsequent environmental review and permitting processes).

PSE recognizes its burden of demonstrating the need for the Energize Eastside project in the appropriate rate proceeding. Nonetheless, PSE addresses specific issues raised in Staff's comments as follows:

Since 2014, PSE has responded to more than 100 inquiries from individuals who are active in the IRPAG process. Specifically, CENSE was formed in May 2014 following multiple Community Advisory Group-related meetings, an open house, undergrounding and electromagnetic field workshop, and a question and answer session. PSE received the following comment from a CENSE member in January 2014, which initiated an ongoing dialogue that PSE continues today:

I am a resident of Somerset neighborhood, through which the "J" segment passes. Our beautiful view of the Seattle skyline and Olympic mountains is currently cut by the 115 kV lines that already exist. We have been wishing they weren't there for almost 20 years since we bought our house.

The proposed 230 kV lines will be much worse for us and our neighbors. At least the current lines and the wood poles don't strike one as "industrial" looking. But the taller poles with more stacked wires will be a tragedy for our neighborhood. Because of this, the resistance to this route will be intense and could significantly impact the schedule and cost of this project. I hope PSE can spare everyone a lot of heartache and rule out this option early in the process.

There is one alternative that would be a net improvement for our neighborhood. If PSE could bury the lines underground for even a

relatively short stretch (between 1/2 or 3/4 of a mile), the project would get an entirely different appraisal from my neighborhood. We would actually welcome the route if the wires could disappear from our view. I understand all the issues and additional expense this would bring up, but it might be worth the effort to avoid developing a new route rather than using the existing J route. It would be great for our neighborhood and PSE to work together with enthusiasm on this project, rather than becoming adversaries...

PSE responded to this comment by explaining that PSE is reviewing alternative routes and that undergrounding transmission lines has its own challenges. Additionally, PSE staff met with CENSE members on October 9, 2014, to answer questions regarding PSE's load forecast, need and solution studies, CENSE's load forecast graphics, solutions analysis, planning standards, Canadian entitlement, and system risks.

In late 2014, in response to CENSE requests, the City of Bellevue (one of the local permitting authorities) hired independent engineers to assess the power flow studies performed by PSE. Bellevue's independent expert, Utility System Efficiencies, Inc. (USE), performed independent studies that showed a clear need for the project. CENSE members submitted many project need questions to USE, which were addressed in USE's final report, as follows:

- *Is the EE project needed to address the reliability of the electric grid on the Eastside? YES.*
- *If the load growth rate was reduced, would the project still be needed? YES.*
- *If generation was increased in the Puget Sound area, would the project still be needed? YES.*
- *Is there a need for the project to address regional flows, with imports/exports to Canada (ColumbiaGrid)? Modeling zero flow to Canada, the project is still necessary to address local need.*

(Utility System Efficiencies, Inc., Independent Technical Analysis of Energize Eastside (Apr. 28, 2015.)) It should be noted that CENSE has since questioned the findings of this USE report. USE modeled scenarios in power flow cases and verified that PSE followed industry practice in forecasting demand load. Regarding issues involving the Canadian Entitlement, USE noted that "there is still a winter overload which means there is still a local project need." CENSE has suggested that removing the Canadian Entitlement "solves almost all of the overloads"; however, this statement demonstrates a lack of understanding

of transmission planning. Planning scenarios are binary (i.e., “pass or fail”) to determine whether operators in real-time have a transmission system that can keep the grid operative, even if the actual real-time conditions differ from ideal conditions.

In May 2015, CENSE members and others questioned the adequacy of PSE’s needs analysis during the initial scoping phase of the EIS. The EIS team reviewed PSE’s needs analysis and again confirmed its adequacy:

Based on my expertise, I found that the PSE needs assessment was overall very thorough and applied methods considered to be the industry standard for planning of this nature. Based on the information that the needs assessment contains, I concur with the conclusion that there is a transmission capacity deficiency in PSE’s system on the Eastside that requires attention in the near future.

(Stantec Consulting Services Inc., EIS Review Memo (July 31, 2015).)

In June 2015, CENSE filed a complaint with the Federal Energy Regulatory Commission (FERC) in FERC Docket No. EL15-74-000 against PSE, Seattle City Light, Bonneville Power Administration, and Columbia Grid regarding PSE’s Energize Eastside project, specifically related to transmission planning and the Canadian Entitlement. PSE responded to the complaint by demonstrating that power flows to Canada under the Canadian Entitlement are a fact of the regional system and must be included in accurate power flow modeling. Furthermore, PSE demonstrated that such flows do not affect the need for Energize Eastside, which is a local load serving project. FERC agreed with PSE and dismissed CENSE’s complaint in its entirety, stating as follows:

[C]ontrary to Complainants’ vague allegations that the Respondents have violated [Federal transmission planning regulations], the record before us shows that [PSE] and the other Respondents have complied with the applicable transmission planning requirements.

Coalition of Eastside Neighborhoods for Sensible Energy, et al. v. Puget Sound Energy, et al., Order Dismissing Complaint at ¶ 61, 153 FERC ¶ 61,076 (Oct. 21, 2015) (the “FERC Order Dismissing Complaint”).

In early 2016, CENSE published the Lauckhart-Schiffman Load Flow Study, which used many of the same assumptions as the FERC complaint. After reviewing the Lauckhart-Schiffman study and identifying a number of flaws, Booga Gilbertson, Senior Vice President of Operations at PSE, addressed the study in a letter to Bellevue City Council (and subsequently summarized and posted to the project [website](#), as well as shared with the IRP Advisory Group). Ms. Gilbertson’s correspondence stated as follows with

respect to incorrect statements in the Lauckhart-Schiffman Load Flow Study regarding the Canadian Entitlement:

The Lauckhart-Schiffman study erroneously states that PSE modified data to increase transmission of electricity to Canada from 500 MW to 1,500 MW. PSE does not set the value of the power that flows to or from Canada. Any implication that PSE “modified” that number to justify building infrastructure is completely wrong.

Flows to and from Canada for planning purposes are set by the regional planning authority, ColumbiaGrid, in conjunction with other regional utilities. PSE does not set the value of the power that flows to or from Canada. Any implication that PSE “modified” that number to justify building infrastructure is completely wrong. The 1,500 MW of power flow to Canada is not set by PSE and does not flow through Bellevue on PSE’s system; the 1,500 MW is the load flow that is modeled for the entire region (Washington, parts of Montana and Canada). This is the modeling requirement – a requirement that is spelled out quite clearly in ColumbiaGrid’s Biennial reports (excerpt below).

“As required by the NERC Reliability Standards and ColumbiaGrid Planning and Expansion Functional Agreement (PEFA), it was necessary to model firm transmission service commitments in the System Assessment....Both of these firm transmission service commitments are on the west side of the path, thus 1,500 MW of transfers are modeled in the south to north direction in heavy winter cases.” – 2016 Update to the 2015 Biennial Plan, pgs. 49-50, ColumbiaGrid, February 2015.

Ms. Gilbertson’s correspondence stated as follows with respect to incorrect statements in the Lauckhart-Schiffman Load Flow Study regarding the CENSE’s arguments that PSE turn on local generation in or around Bellevue, Washington:

All the “local generation” that the Lauckhart-Schiffman study refers to is located outside of King County; there is no local generation in Bellevue. The problem Bellevue and the Eastside is facing is a delivery problem not a generation problem. To be clear, PSE could potentially solve this problem by building generation on the Eastside – a solution Mr. Lauckhart has suggested at public meetings. However, in our opinion, siting a 300 MW generation plant on the

Eastside is much more impactful than replacing existing power lines in an existing utility corridor.

PSE (and USE) did study a variety of generation scenarios, as required by the federal rules. It doesn't matter which generators are turned on or off when analyzing problems with the Eastside transmission delivery system. That is because the problem is delivery of power into the Eastside. Regardless of where the generators are located outside the Eastside area, there is insufficient transmission capacity to bring the power into the Eastside communities where it is needed.

In 2016 and 2017, the same members of CENSE who advocated against Energize Eastside starting in 2014 raised these same questions as IRPAG members in PSE's IRP process. PSE has consistently and transparently provided the same answers.

Regarding Critical Energy Infrastructure Information ("CEII"), PSE takes the security of the electric system extremely seriously. PSE's Order No. 890 CEII Request Procedures requires PSE to evaluate the requestor's identity (background checks), qualifications, legitimate interest, and need. PSE follows this process to review any and all requestors of CEII data on an individual basis. PSE has consistently responded to CENSE's consultants' applications, first seeking a statement of need for the information, and the use that would be made of that information. CENSE's consultants have never demonstrated it meets the requirements for CEII release. Additionally, PSE has legitimate concerns regarding how electric system information may be distributed among CENSE consultants and/or members. These concerns are based on the fact that Mr. Lauckhart's CEII application referenced collaborating with a colleague; however, PSE never received a CEII application from Mr. Schiffman.

Regarding load assumptions related to the need for Energize Eastside, independent experts USE and Stantec affirmed that PSE's load forecast met industry standards. Specifically, USE stated as follows:

No forecast is perfect, but by following industry practice, the ITA concludes that PSE used reasonable methods to develop the forecast. PSE's resultant forecast shows the Eastside area growing at a higher level than at the county and system level, and these growth rates are based on the data it received.

(Utility System Efficiencies, Inc., *Independent Technical Analysis of Energize Eastside* (Apr. 28, 2015).)

Addressing Staff's concern regarding a joint utility analysis of all available transmission and potential interconnections in the Puget Sound region, a regional solution does not resolve PSE's local need. The Energize Eastside project is necessary to provide additional capacity to serve projected PSE load growth on the Eastside, to reinforce the existing transmission ties between north King County and central King County, and to address NERC planning standards. The Eastside Transmission Solutions Report (2014) outlined solutions types studied, including reinforcing Bonneville Power Administration lines or reconductoring Seattle City Light lines, and describes how the transmission solution satisfies the needs identified in the Eastside Needs Assessment Report.

FERC also noted that Energize Eastside is a local load serving project and confirmed that PSE, BPA and ColumbiaGrid complied with their transmission planning responsibilities in proposing and evaluating the project.

Based on the record before us, we find that Puget Sound [PSE] and the other Respondents complied with their transmission planning responsibilities under Order No. 890 in proposing and evaluating the Energize Eastside Project.

FERC Order Dismissing Complaint at ¶ 63.

In summary, PSE has consistently and transparently responded to CENSE's information requests. The IRP process is not the appropriate forum to analyze the specific details of local transmission projects during the permitting phase. Rather, the EIS and permitting processes are the appropriate forums for such discussions.

17. Measuring the Benefits of Energy Storage

Staff recommends that PSE's 2018 IRP include quantitative analysis examining energy storage impact on PSE's system:

Staff acknowledges that the purpose of this appendix is currently characterized as qualitative background information. However, as PSE gains experience with energy storage on its system, Staff recommends that in the 2019 IRP this appendix include quantitative analysis examining energy storage impact on PSE's system that will eventually be useful in IRP modeling.

(Staff Detailed Comment at 21.) PSE is continuing to learn from its pilot energy storage projects and will take Staff's suggestion under advisement.

Conclusion

PSE appreciates staff sharing its comments on the 2017 IRP and for the opportunity to respond. PSE was compelled to be on the record opposing Staff's efforts to insert environmental policy into the IRP process, and otherwise expand on the IRP requirements by requesting that PSE supplement its 2017 IRP with additional information. The IRP is not a vehicle for expanding policy or rule interpretations that should occur in legislative and agency rulemaking processes. A better way going forward is for PSE, Staff and all stakeholders to provide input and feedback during the forming of the IRP work plan, and then adhere to elements of the work plan through the remainder of the IRP cycle. As in previous cycles, PSE will host IRPAG meeting(s) and work with stakeholders prior to filing any IRP work plan. PSE will consider Staff's comments in developing the work plan for the 2019 IRP and looks forward to collaborating with Staff and all stakeholders in that process. Please contact the undersigned if you have any questions regarding the above responses.

Sincerely,

/s/ Kenneth S. Johnson

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