

# PSE IRP Feedback Report

## Webinar 10: Clean Energy Action Plan (CEAP) and Clean Energy Implementation Plan, Economic, Health and Environmental Benefit Assessment of Current Conditions and Delivery System and Grid Modernization Needs

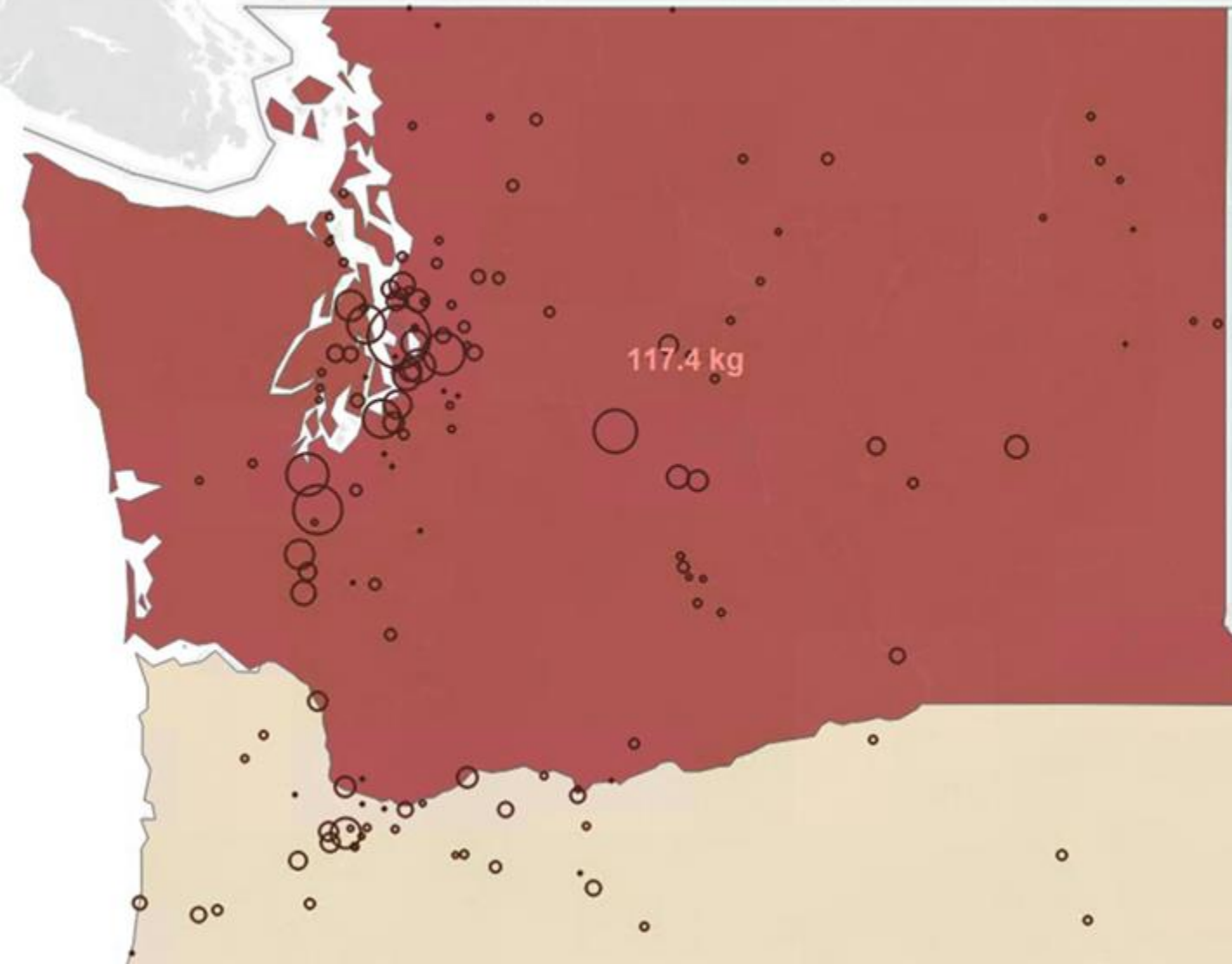
November 16, 2020

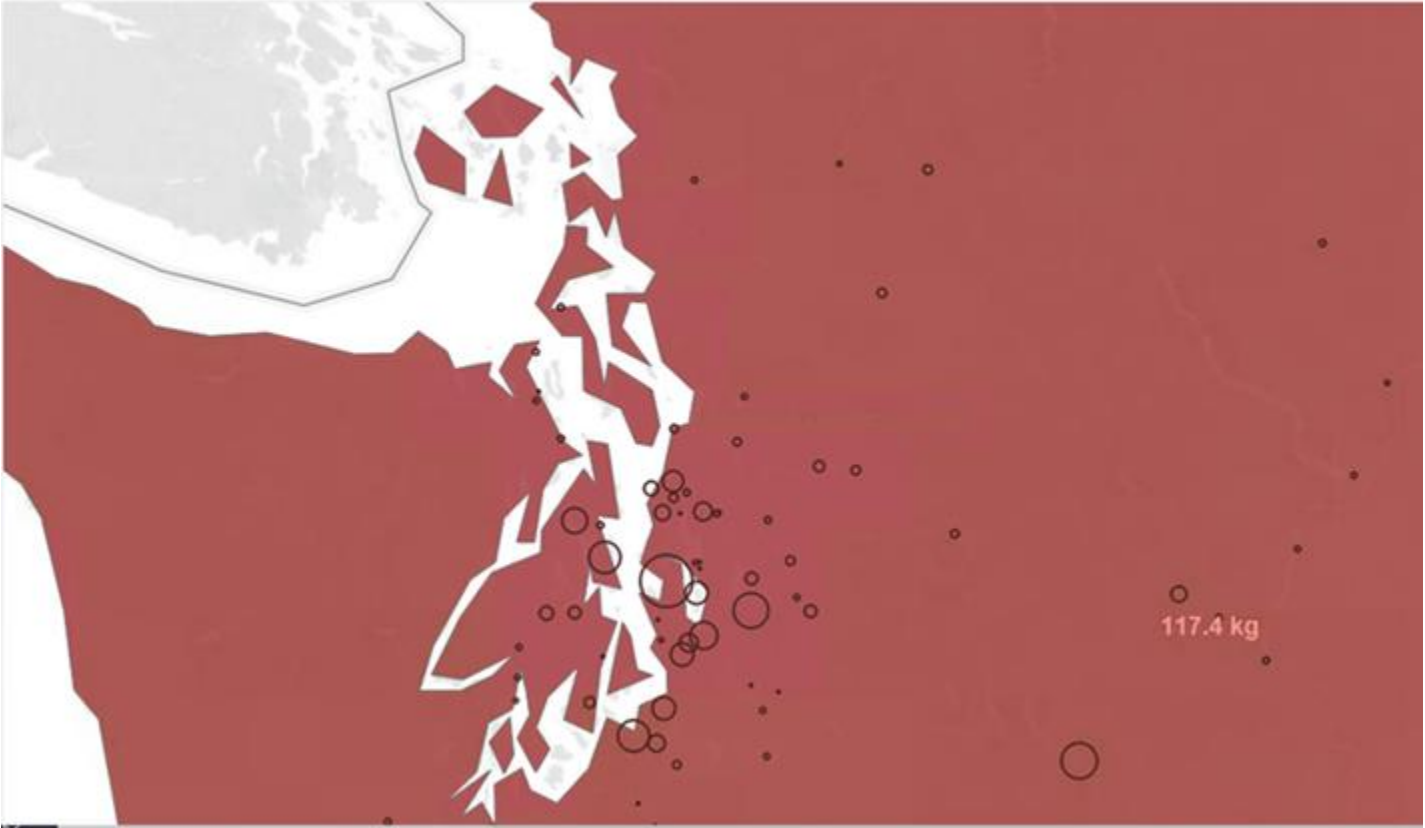
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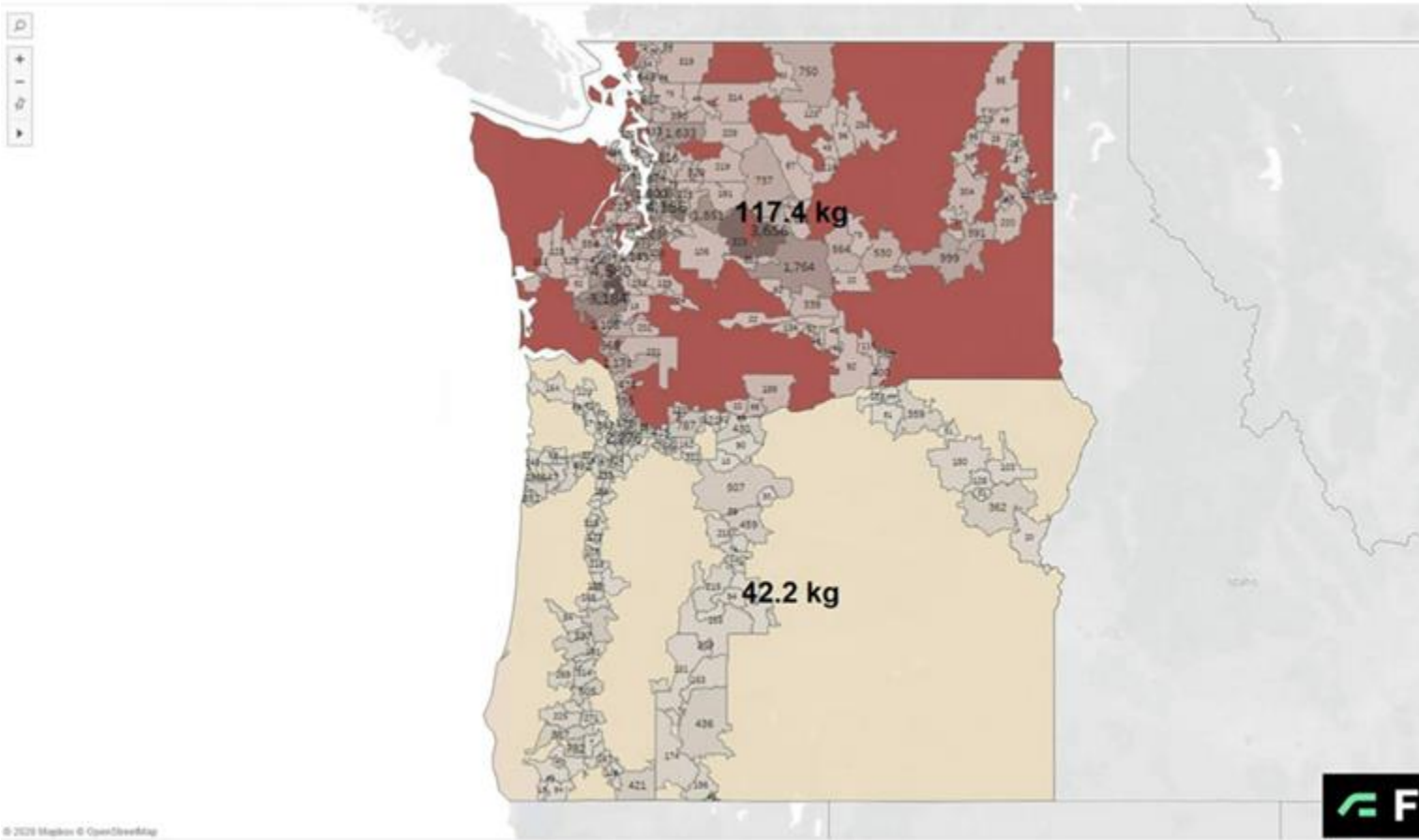
The following stakeholder input was gathered through the online Feedback Form, from November 9 through November 30, 2020. PSE's response to the feedback can be found in the far-right column. To understand how PSE incorporated this feedback into the 2021 IRP, read the Consultation Update, which will be released on December 14, 2020.

| Feedback Form Date | Stakeholder      | Comment  | PSE Response  |
|--------------------|------------------|--|---|
| 11/13/2020         | Don Marsh, CENSE | <p>Dear PSE IRP Team,</p> <p>Thank you for the slides for the November 20 IRP webinar posted at <a href="https://oohpseirp.blob.core.windows.net/media/Default/2021/meetings/Nov_16_Webinar/Webinar%2010%20-%20Presentation.pdf">https://oohpseirp.blob.core.windows.net/media/Default/2021/meetings/Nov_16_Webinar/Webinar%2010%20-%20Presentation.pdf</a>. We would like to comment on the section titled "Highly Impacted Communities and Vulnerable Populations Assessment" (beginning at slide 27).</p> <p>In this section, PSE describes how the company will <i>measure</i> population disparities, but it is not clear what the company will <i>do differently</i> after it has collected this information. An example would be helpful for stakeholders to understand how PSE has fulfilled this responsibility in the past, how effective these efforts have been, and what PSE will change in the future to meet CETA requirements.</p> <p>For example, district 53053940005 in Tacoma is located approximately 1.25 miles from PSE's new Tacoma LNG facility. By our calculations, this district scores 54 points out of a maximum of 75 using the "Final composite score" formula on slide 33. By any measure, this is a "highly impacted community." Accordingly, it would be helpful for stakeholders to know:</p> <ul style="list-style-type: none"> <li>• What extra efforts did PSE make to engage a community that endures challenging socioeconomic factors such as Limited English (rank 8), People of Color (rank 9), and unemployment (rank 8)?</li> <li>• This community suffers the second-highest rank in overall Environmental Exposures and Environmental Effects categories. What steps did PSE take to assure the community that the LNG plant would not further impact the health and well-being of its residents?</li> <li>• What percentage of this community was fully engaged in the process? What percentage submitted written and oral and written comments in public meetings regarding the facility? Was this response proportional to the proximity of the community to the project?</li> <li>• In the future, what steps could PSE take to better engage a community that is disadvantaged by language, culture, and employment conditions?</li> </ul> <p>PSE's answers to these questions have relevance to the question posed on page 37: "Who do we need to involve to improve the analysis?"</p> <p>In addition to our concerns about representation and treatment of vulnerable populations, we would like to comment on slide 45 regarding the Delivery System Planning process. The first box lists "Assumptions, performance targets and modeling input" as a primary step to establishing grid needs. However, these assumptions and performance targets are not available to the public for comment and review. In various forums, PSE has claimed this information is restricted by federal laws that protect the energy grid from malicious attacks by terrorists.</p> <p>We support reasonable restrictions on information to inhibit terrorist attacks. However, PSE has also prevented individuals and experts with appropriate security clearance from seeing these assumptions and performance targets. In the case of Energize Eastside, PSE has not updated its forecasts or analysis that justify the project since 2015. However, PSE acknowledges that demand forecasts and energy technologies have changed significantly during the last five years. State legislation has also changed in important ways.</p> <p>Questions about Energize Eastside are relevant to Monday's webinar because PSE lists a "Bellevue Area New Substation" on slide 50 without explanation of the capacity need it is addressing. This substation is an integral part of the Energize Eastside</p> | <p>Thank you for your comments on the Economic, Health and Environmental Benefits Assessment of Current Conditions and feedback on equity. As discussed during the webinar, PSE is at the beginning of the evaluation and the purpose of the webinar was to solicit input from stakeholders to help inform the assessment. The assessment will inform the outcome of the final IRP.</p> <p>Concerning PSE's efforts to broaden public engagement, efforts were made in early 2020 to broaden the 2021 IRP participation and an email list of more than 1,500 people was developed with input from regulators, stakeholders, and community outreach specialists. Personal phone calls were made to invite targeted individuals representing various communities and populations to participate. There is more work to be done concerning outreach and inclusion. There have been challenges with all meetings of the 2021 IRP process conducted remotely because of COVID-19 restrictions and PSE welcomes input concerning outreach and solutions for inclusion.</p> <p>The need for the Energize Eastside project has been firmly established going back to 2013; information regarding the need for the project can be found on their website at <a href="http://www.energizeeastside.com">www.energizeeastside.com</a>. Any further questions should be directed to the energize eastside team via their dedicated e-mail, <a href="mailto:energizeeastside@pse.com">energizeeastside@pse.com</a>.</p> |

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|                    |  | <p>project. PSE claims that it has verified the need for this project with supplemental studies in 2016, 2017, 2018, and 2019. However, the company has not shared the results of these studies with the public or consultants hired to represent the public. We would like to verify that PSE has appropriately updated its assumptions and forecasts that underlie these studies.</p> <p>Such disclosures are important to set the stage for increased transparency and accountability – key elements for a just and equitable Clean Energy Transformation.</p> <p>Sincerely,</p> <p>Don Marsh, President CENSE.org</p>   |   |
| 11/16/2020         | James Adcock   | <p>I express concerns about the big elements which will not be ready in time for the Draft IRP -- including that which has been most controversial over the last 12 years, namely the stochastic modeling -- which I believe will keep participants from commenting in an informed manner on that Draft.</p> <p>I recommend that PSE and UTC figure out some way to get substantially complete modeling efforts, including the stochastic modeling, in the "Draft" IRP time frame, so that the IRP participants can meaningfully comment on elements of that draft which they believe are in error. Otherwise it becomes an invitation for PSE to slip-stream the more controversial aspects into just the final IRP document, such that no timely feedback can be given, and PSE, after continually blocking meaningful conversations with participants during the IRP meetings, now creates a fait accompli -- where participants are effectively frozen out of the entire IRP process up through the final IRP documentation being published.</p>  | <p>PSE acknowledges your concerns and is working to include all the analysis conducted to date in the draft IRP, due January 4, 2021. PSE looks forward to stakeholder feedback on the draft. PSE will host two more public participation meetings in 2021 before the final IRP to review the remaining analysis and obtain stakeholder feedback.</p> |
| 11/16/2020         | Cress Wakefield, ARUP                                    | <p>Recommend including timelines as part of the IRP on delivery system planning for DERMS and TOU, as the carbon initiatives of large commercial companies and cities seem to be outpacing the readiness of the utilities. Even if the incentives/pricing were unclear, it would help with planning.</p>  | <p>Thank you for your suggestions. The timeline for TOU pilot activity will be included in the IRP. The timeline for DERMS implementation is in development, but will be discussed in the IRP.</p>  |
| 11/16/2020         | Brian Grunkemeyer<br>Founder & CEO<br>FlexCharging, Inc. | <p>I wanted to follow up with Tyler Tobin and Ben Farrow about tailpipe emissions from gasoline cars. We can use that to justify accelerating EV adoption. We have a deep but not broad data set. I suggest we could work together to collect more data to better make a compelling case for additional spending on increasing EV adoption.</p> <p>In terms of indicators of equity, I suggest you include air pollution. Specifically, EV investments that speed up adoption will avoid tailpipe emissions from gasoline vehicles, <i>in specific communities</i>. We all know air pollution impacts human health, through asthma attacks and shortened lifespans. But programs increasing EV adoption can help avoid air pollution, and therefore avoid these health impacts and costs.</p> <p>For the vehicles signed up with FlexCharging, my team has analyzed the avoided NOx + NMOG tailpipe pollution, grouped by city. There are also avoided pollution from particulate matter, formaldehyde, and carbon monoxide, all informed by EPA estimates. Note most of the drivers live in the Seattle &amp; Eastside area (and some in Portland), but the avoided tailpipe emissions impact is statewide. This data of course requires tracking cars &amp; where they drive, instead of focusing on smart plugs.</p> | <p>Thank you for input and suggestions. This is interesting work, which may hold value during the development of PSE's Clean Energy Action Plan (CEAP) and Clean Energy Implementation Plan (CEIP). PSE will follow up outside of this Feedback Report to learn more about FlexCharging, Inc.'s data set and its applicability to PSE's models.</p>   |

| Feedback Form Date | Stakeholder | Comment  | PSE Response |
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|                    |             |  <p data-bbox="438 1352 1187 1382">Zooming in, you can see more details about affected communities:</p> |              |

| Feedback Form Date | Stakeholder | Comment   | PSE Response |
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|                    |             | <p>Tailpipe Pollutants Avoided- NOx + NMOG (kg)</p>  <p>We get this data by polling vehicle status regularly when driving. We have high resolution GPS data, which we can then map to zip codes, or with a little work, down to the census tract. Here's our data broken down by zip code. State level numbers are in kg, and each zip code is in g.</p> |              |

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|                    |                  | <p>Tailpipe Pollutants Avoided- NOx + NMOG (kg)</p>  <p>Our data shows a statewide benefit to many communities, to augment the equity benefits from accelerating EV adoption. FlexCharging can provide a data gathering piece for your measurement &amp; verification needs, to demonstrate this benefit. There are two very clear answers for policy makers:</p> <ol style="list-style-type: none"> <li>1) WA air pollution exposure is highest in the Puget Sound region, heavily overlapping with your service territory.</li> <li>2) Benefits from EV's in Bellevue extend to air quality improvements statewide, in addition to just the owner's territory.</li> </ol> <p>We additionally support managed charging to optimize around dynamic prices from a utility, and we're working on optimizing around minimizing marginal CO2 emissions, using an emissions forecast from WattTime. The money aspect impacts all ratepayers by affecting your costs, while the carbon emissions impact is global, though quantifying it can help the US as we establish national goals under the Paris Climate Accord. At some point, national goals need to translate into per-state and per-utility level commitments. We can support your efforts with our data set, and perhaps we could collaborate on expanding this data set.</p> |  |
| 11/24/2020         | Don Marsh, CENSE | <p>Dear PSE IRP Team,</p> <p>I seek further details regarding a statement by Jens Nedrud in IRP Webinar #9 at timestamp 02:10:35 (see the recording at <a href="https://transcripts.gotomeeting.com/#/s/74f800380e1968d7d6749493e6c8287fbf835cb8af1a8321f59b6590ed2a5e0c">https://transcripts.gotomeeting.com/#/s/74f800380e1968d7d6749493e6c8287fbf835cb8af1a8321f59b6590ed2a5e0c</a>).</p> <p>Mr. Nedrud said: <i>"I will say that we have experienced significant summer peaking events that have caused our operators a little bit of challenges in operating the grid that Energize Eastside would have addressed. So again, you can find more information on the project website."</i></p>   | <p>The need for the Energize Eastside project has been firmly established going back to 2013; information regarding the need for the project can be found on their website at <a href="http://www.energizeeastside.com">www.energizeeastside.com</a>. Any further questions should be directed to the energize eastside team via their dedicated e-mail, <a href="mailto:energizeeastside@pse.com">energizeeastside@pse.com</a>.</p> |



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|                    |                                 | <p>Checking the website (<a href="https://energizeeastside.com">https://energizeeastside.com</a>), I find no details about summer peaking events that strained the transformers and transmission lines that PSE proposes to upgrade.</p> <p>Answers to the following questions would help us understand the situation Mr. Nedrud alluded to.</p> <ol style="list-style-type: none"> <li>1. On what dates and hours did the challenges occur that Mr. Nedrud mentioned?</li> <li>2. What was the peak load (in MW) that was being consumed by Eastside customers at the time?</li> <li>3. What percentage of their peak capacity was experienced by the four Eastside transformers and two transmission lines that would be relieved by Energize Eastside upgrades?</li> <li>4. How long did the stress conditions last?</li> <li>5. What actions did operators take to alleviate the problem?</li> <li>6. Approximately how many customers would have lost power if the operators had not acted?</li> <li>7. How many times have similar conditions occurred during the past decade?</li> </ol> <p>Thank you for providing these clarifying details to help the public understand the need for Energize Eastside.</p> |  |
| 11/30/2020         | Don Marsh, CENSE                | <p>Dear PSE IRP Team,</p> <p>The attached letter contains questions regarding Jens Nedrud's presentation in IRP Webinar #9 regarding disclosure of information on major projects (including Energize Eastside, which has never been discussed in an IRP Advisory Group meeting).</p> <p>I hope PSE will answer these questions to avoid possible denial of rate increases for projects that have not been transparently presented to the public or land use examiners. That unfortunate outcome would harm not only PSE and its investors, but also ratepayers who need a financially healthy utility to make critical investments expected by CETA.</p> <p>Sincerely,<br/>Don Marsh</p>  | <p>As discussed at the IRP meeting, the portion of the IRP pertaining to the "Delivery System and Grid Modernization Needs" specifically discussed the planning process to evaluate needs on PSE's delivery system. PSE also discussed the future planned growth/project areas currently in the planning phase. These include all major projects that require substantial transmission and/or distribution infrastructure. Each of the projects has an identified need and alternatives are being analyzed.</p> <p>As highlighted at the meeting, projects in the implementation phase, which are those in permitting, construction or energization, will be discussed at a future IRP webinar, currently scheduled for February. These projects alternatives have already been evaluated and their recommended solution selected.</p> <p>Specific to the question posed related to Energize Eastside discussion in prior IRP processes, the need for that project has been discussed in multiple prior IRP processes and included in those plans. Each of those processes has allowed for and included public engagement including stakeholder presentations as well as incorporated public comments.</p> <p>The Energize Eastside project is in the implementation phase and there have been no significant changes in either the need for the project or the solution evaluation which warrant a change to the recommended solution. Therefore, the Energize Eastside project will not be discussed at any upcoming 2021 IRP webinars. For the specific questions related to the project status and need for the Energize Eastside project, please refer those questions to the project e-mail at <a href="mailto:energizeeastside@pse.com">energizeeastside@pse.com</a>.</p> |
| 11/30/2020         | Scott Thomas, Town of La Conner | <p>Affordability challenges may lead to shutoffs or disconnections due to non-payment. PSE should report out which and how many households are shut off on an annual basis, and make the data publicly available. The data should be analyzed to ascertain the prevalence of disconnection notices and service disconnections served on low-income households, African-American and Latino households, households with children, renters, and people living in older and poorly insulated homes. Further, there is a need to explore the coping strategies that families resort to to keep their homes warm and lit, such as forgoing food and medicine and keeping homes at an unhealthy temperature.</p>  | <p>PSE recognizes this is a difficult time for many customers and has voluntarily suspended disconnections due to non-payment since early March of this year. Such disconnections will not resume before May 1, 2021, consistent with recent direction from the Utilities and Transportation Commission (UTC) related to COVID-19 relief. Additionally, PSE will be providing additional COVID-19 related energy assistance funds to low-income households needing help paying their energy bills during this time.</p> <p>PSE is already reporting data by zip code regarding prior disconnections, past due balances, and related data points to the UTC in Docket UE-200281.</p>  |

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| 11/30/2020         | David Perk,<br>350 Seattle | <p>Irena Netik, Director, Resource Planning &amp; Analytics<br/>Ben Farrow, Director, Clean Energy Strategy, PSE<br/>Tyler Tobin, Resource Planning Analyst, PSE</p> <p>Thank you for your presentation on November 16 covering Highly Impacted Communities &amp; Vulnerable Populations Assessment.</p> <p>350 Seattle is glad to see that lawmakers have compelled Puget Sound Energy to take equity into account. Unfortunately, we're not surprised that it would require legislation, given PSE's history.</p> <p>Environmental racism has been a hallmark of the Tacoma LNG project. With insufficient consultation with the Puyallup Tribe (1), failure to acknowledge health and safety risks to the highly vulnerable populations around the facility (2), and construction before all permits were secured, PSE's relentless pursuit of the project has been a tremendous stress to vulnerable communities in Tacoma. Given this negative track record, PSE is going to have to dramatically improve its outreach and consultation with affected communities, and especially tribes, when undertaking future facilities and infrastructure projects.</p> <p>The choice of fracked gas as a replacement maritime fuel is itself deeply problematic. Fracked gas has profound social and health impacts at the site of extraction, and its global climate impacts can no longer be denied. Man camps used during the construction and extraction of fossil fuels have been linked to spikes in the epidemic of missing and murdered indigenous women and hardships to indigenous communities (3). Fracking produces large quantities of toxic water, poisoned wells and water tables, earthquakes, habitat and biodiversity loss (4). Young people locally and across the world recognize they face a bleak and uncertain future as a result of the climate crisis caused by fossil fuel use (5).</p> <p>By seeking to preserve and expand its gas business, PSE denies those impacts and works to ensure they continue by cynically targeting children who have already lost the prospect of a stable climate in their future (6). Our advice: reach out to local members of the Sunrise Movement for inclusion in the equity advisory group and end your relationship with the Partnership for Energy Progress.</p> <p>In our view, your equity advisors can't start soon enough. During the Covid-19 pandemic PSE has put profits over people, seeking to have ratepayers cover all additional costs incurred during the pandemic. To do this while your top executives, in the top 1% of state salaries, take no reductions in pay, is simply callous (7). Our advice: increase assistance to economically challenged ratepayers and consult with members of the utility justice movement, if they're willing to meet with you, like Puget Sound Sage.</p> <p>The recommended health disparities map is a good start (8) and we encourage you to continue your outreach for additional datasets.</p> <p>We urge you to implement a scope of action beyond the direct effects of PSE facility, infrastructure and fleet emissions. Equity efforts should include addressing air quality, both indoor (gas appliances) and out (tailpipe emissions). PSE is uniquely positioned to contribute to regional air quality solutions by supporting electric trucking in the Puget Sound freight corridor, and faster, wider electric vehicle adoption, including in low income areas. By contributing more air monitoring to regional data sets, PSE could help better identify point-sources and help verify future improvements.</p> <p>PSE should help build resilient communities by dramatically increasing your weatherization and community solar programs, and start implementing local storage and micro-grids (9).</p> <p>Finally, PSE needs to recognize the hard truth that your fossil gas business has no place in a decarbonized future (10). We urge you to start planning a path to get there.</p> <p>Sincerely,<br/><br/>David Perk</p> | <p>Thank you for your input and suggestions. PSE appreciates the recommendations to contact Partnership for Energy Progress and Puget Sound Sage as an Equity Advisory Group is established.</p> <p>Public health will be key component of the Economic, Health and Environmental Benefits Assessment, as such, air quality will certainly be included in the assessment.</p> |

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|                    |  | <p>350 Seattle<br/>5031 University Way NE<br/>Seattle, WA 98105</p> <p>References</p> <p>(1) Washington Tribes stand with the Puyallup Tribe, <a href="http://news.puyalluptribe-nsn.gov/washington-tribes-stand-with-the-puyallup-tribe/">http://news.puyalluptribe-nsn.gov/washington-tribes-stand-with-the-puyallup-tribe/</a><br/> (2) Tacoma Human Rights Commission, <a href="http://news.puyalluptribe-nsn.gov/wp-content/uploads/2019/04/THRC-LNG-rec-ltr-for-4.18.19-mtg-1.pdf">http://news.puyalluptribe-nsn.gov/wp-content/uploads/2019/04/THRC-LNG-rec-ltr-for-4.18.19-mtg-1.pdf</a><br/> (3) Man Camps Fact Sheet, <a href="http://www.honorearth.org/man_camps_fact_sheet">http://www.honorearth.org/man_camps_fact_sheet</a><br/> (4) Environmental Health Concerns From Unconventional Natural Gas Development, <a href="https://oxfordre.com/publichealth/view/10.1093/acrefore/9780190632366.001.0001/acrefore-9780190632366-e-44">https://oxfordre.com/publichealth/view/10.1093/acrefore/9780190632366.001.0001/acrefore-9780190632366-e-44</a><br/> (5) Global Climate Strike, <a href="https://globalclimatestrike.net/">https://globalclimatestrike.net/</a><br/> (6) Puget Sound Energy Wants Your Kids to Love Natural Gas, <a href="https://www.thestranger.com/slog/2020/06/26/43974948/puget-sound-energy-wants-your-kids-to-love-natural-gas">https://www.thestranger.com/slog/2020/06/26/43974948/puget-sound-energy-wants-your-kids-to-love-natural-gas</a><br/> (7) AG Ferguson calls on UTC to protect Washingtonians from utility shut-offs amid COVID-19 pandemic, <a href="https://www.atg.wa.gov/news/news-releases/ag-ferguson-calls-utc-protect-washingtonians-utility-shut-offs-amid-covid-19">https://www.atg.wa.gov/news/news-releases/ag-ferguson-calls-utc-protect-washingtonians-utility-shut-offs-amid-covid-19</a><br/> (8) Washington Tracking Network (WTN), <a href="https://fortress.wa.gov/doh/wtn/WTNIBL">https://fortress.wa.gov/doh/wtn/WTNIBL</a><br/> (9) Building Back Better: Investing in a Resilient Recovery for Washington State, <a href="https://climate-xchange.org/2020/06/30/building-back-better-investing-in-a-resilient-recovery-for-washington-state/">https://climate-xchange.org/2020/06/30/building-back-better-investing-in-a-resilient-recovery-for-washington-state/</a><br/> (10) Draft 2021 State Energy Strategy, <a href="https://www.commerce.wa.gov/wp-content/uploads/2020/11/WA-2021-State-Energy-Strategy-FIRST-DRAFT-2.pdf">https://www.commerce.wa.gov/wp-content/uploads/2020/11/WA-2021-State-Energy-Strategy-FIRST-DRAFT-2.pdf</a></p> |  |
| 11/30/2020         | Nathan Sandvig   | Please see attached. Thank you.  | Thank you for all your suggestions and for the Navigant white paper reference. PSE has done a lot of work for the externality costs and decommissioning costs associated with combustion turbines and have not seen a lot of information around the costs associated for battery energy storage systems. PSE will continue to monitor the costs and externalities associated with battery storage. |
| 11/30/2020         | Norman Hansen  | FYI. PSE feedback form submitted concerning an IRP discussion on Energize Eastside Transmission line proposed North Segment. Submitted comment and request:<br>" Energize Eastside Transmission line North Segment has not yet been permitted. Consequently, it is not yet in the implementation phase and should be discussed at the next IRP meeting.<br>Please advise your concurrence to discuss to meet the intent of the Washington Administrative Code."  | As highlighted at the meeting, projects in the implementation phase, which are those in permitting, construction or energization, will be discussed at a future IRP advisory group meeting, currently scheduled for February.  |
| 11/30/2020         | Kyle Frankiewich, Washington Utilities and Transportation Commission | Questions and recommendations from presentation:   | Thank you for your questions and recommendations. PSE inserted each item below along with PSE's responses.   |
| 11/30/2020         | Kyle Frankiewich, Washington Utilities and Transportation Commission | Slide 16: The slide include equity considerations as part of the CEAP, but not the IRP. RCW 19.280.030(1)(j) requires that the IRP implement RCW 19.405.030 through 19.405.050, which includes the customer benefit provisions in 19.405.040(8).   | Thank you for your feedback and code references concerning "the new planning cycle."   |
| 11/30/2020         | Kyle Frankiewich, Washington   | Slide 17: As in slide 16, staff notes that the statute has equity requirements for the IRP specifically. We hope PSE will reconcile its economically optimized portfolio and all equity requirements within its IRP broadly, and not just within the CEAP.   | Thank you for your feedback. The portfolio optimization model is a computer mathematical model that needs defined inputs and equations. Given that the assessment is new for the IRP, PSE will be looking at it outside the computer model and adjusting the portfolio.  |



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|                    | Utilities and Transportation Commission                              |  |  |
| 11/30/2020         | Kyle Frankiewicz, Washington Utilities and Transportation Commission | Slide 19: During the meeting, PSE verbally acknowledged that highly impacted communities and vulnerable populations are relevant customer groups. Staff agrees that these groups should be specific, intentional customer groups that are specifically engaged.  | Thank you for your feedback and support that highly impacted communities and vulnerable populations are relevant customer groups who should be engaged. Efforts were made in early 2020 to broaden the 2021 IRP participation and an email list of more than 1,500 people was developed with input from regulators, stakeholders, and community outreach specialists. Personal phone calls were made to invite targeted individuals representing highly impacted communities and vulnerable populations to participate. PSE agrees with you that there is more work to be done concerning outreach and inclusion. There have been challenges with all meetings of the 2021 IRP process conducted remotely because of COVID-19 restrictions and PSE welcomes input concerning outreach and solutions for inclusion. |
| 11/30/2020         | Kyle Frankiewicz, Washington Utilities and Transportation Commission | Slide 20: During the meeting, PSE verbally acknowledged that customer input is relevant for indicator development. Staff agrees that customer input is necessary for indicator development. Proposed CR-102 rules at WAC 480-100-655(2)(a) require customer input to develop indicators. Additionally, the Equity Advisory Group should be involved in the Company's CEIP in addition to the Low Income Advisory Group and Conservation Resources Advisory Group.  | Thank you for your feedback. PSE is actively working toward establishing an Equity Advisory Group to help develop indicators and the broader CEIP. PSE also looks forward to continued engagement with stakeholders and customers including the IRP public participation process, Equity Advisory Group, Low Income Advisory group and Conservation Resources Advisory group.  |
| 11/30/2020         | Kyle Frankiewicz, Washington Utilities and Transportation Commission | Slide 22: The slide uses the term "equitably distributed" in the triangle graphic. Staff recommends using the term "customer benefit" to refer to the full set of requirements in 19.405.040(8) and included in proposed CR-102 rules at WAC 480-100-610(4)(c), including the elements required by -4(c)(ii) related to public health, environment, and reductions and costs and risks as well as those required by -4(c)(iii) related to energy security and resilience. The term "equitably distributed" may unintentionally be seen to only refer to the requirements in -4(c)(i) related to the equitable distribution of benefits and reduction of burdens to vulnerable populations and highly impacted communities. | Thank you for your feedback concerning the word selection on slide 22: Meeting CETA goals. In future presentations, PSE will better clarify that all aspects of WAC 480-100-610(4) are clearly indicated. It was not PSE's intention to limit focus to -4(c)(i).   |
| 11/30/2020         | Kyle Frankiewicz, Washington Utilities and Transportation Commission | Slide 25: This is a good slide! It is busy, but that is appropriate given the myriad considerations and concepts being represented.  | Thank you for your feedback concerning slide 25: Incorporating the Assessment into the IRP.  |
| 11/30/2020         | Kyle Frankiewicz, Washington Utilities and Transportation Commission | Slide 26: Staff understands these questions to be the start to a productive conversation. Staff's initial responses are in the next section.   | Thank you for your feedback.   |
| 11/30/2020         | Kyle Frankiewicz, Washington Utilities and Transportation Commission | Slide 28: Staff understands this slide to help stakeholders parse energy and non-energy benefits might be assessed through this analysis.  | The intention of slide 28: Assessment Objectives is to introduce stakeholders to the concept of the Economic, Health and Environmental Benefits Assessment. Then to provide some context as to the different data types necessary to complete such an assessment. Finally, how those data types do not necessarily align with existing IRP model framework and illustrate the effort needed to incorporate this new modeling framework into existing IRP models.   |
| 11/30/2020         | Kyle Frankiewicz, Washington   | Slide 28. During the meeting, PSE verbally references the assessment as a quantitative assessment. Staff recommends that the Company consider qualitative input as well as qualitative information can inform the Company's judgement and discretionary decisions when developing its preferred portfolio.   | Thank you for your suggestion to consider qualitative information in addition to quantitative information in the Economic, Health and Environmental Benefits Assessment. PSE acknowledges WAC 480-100-605 defines an indicator as an either qualitative or   |

| Feedback Form Date | Stakeholder  | Comment   | PSE Response  |
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|                    | Utilities and Transportation Commission                              |   | quantitative attribute. PSE looks forward to developing a robust set of indicators with stakeholders, which will inform the assessment.   |
| 11/30/2020         | Kyle Frankiewicz, Washington Utilities and Transportation Commission | <p>Slide 29: This process map seems unnecessarily linear. We envision steps 1 and 2 to happen in parallel. As mentioned during the meeting, Staff notes that the identification of highly impacted communities and vulnerable populations should not be depicted as a precursor to developing the current conditions assessment pursuant to RCW 19.280.030(1)(k) as these are distinct work products.</p> <ul style="list-style-type: none"> <li>○ The designation of highly impacted communities is outlined in statute in RCW 19.405.020(23). Specifically, highly impacted communities must be based on the Department of Health's Cumulative Impact assessment, which will identify impacts based on climate change and fossil fuels, and census tracts that are at least partially in Indian Country. The process for designating vulnerable populations is described in proposed CR-102 rules at WAC 480-100-640(4)(b).</li> <li>○ The assessment described in RCW 19.280.030(1)(k) should capture energy and nonenergy benefits and burdens from utility programs and infrastructure, as well as general public health, environment, costs, risks, and energy security for all customers.</li> <li>○ After completion, these two work products should help to determine disparities in current condition for highly impacted communities and vulnerable populations compared to all other utility customers. The degree of disparity will guide the proportion of benefits, including the reduction of burdens, should be directed to highly impacted communities and vulnerable populations during the transition to clean energy to ensure an equitable distribution.</li> </ul> | Thank you for sharing the WUTC's perspective on the expected workflow and work products of the Economic, Health and Environmental Benefits Assessment. Upon reflection, PSE would agree that most of the work and results of steps 1 and 2 could be completed in parallel and will endeavor to do so during the assessment. PSE also agrees with the Staff's interpretation of determining the disparities based on the two work products.  |
| 11/30/2020         | Kyle Frankiewicz, Washington Utilities and Transportation Commission | Slide 33: This is useful, and it is clear that the company's initial approach to the equity assessment has benefited from the IRP team's thoughtfulness. However, we worry that a purely quantitative approach will not capture the benefits of a qualitative review as well.   | Thank you for your feedback concerning PSE's first approach concerning identifying the characteristics of the Economic, Health and Environmental Benefits Assessment. PSE acknowledges WAC 480-100-605 defines an "indicator" as an either qualitative or quantitative attribute. PSE looks forward to developing a robust set of indicators with stakeholders, which will inform to the assessment.  |
| 11/30/2020         | Kyle Frankiewicz, Washington Utilities and Transportation Commission | Slide 33: The process for identifying vulnerable pops is codified in draft rule. How does PSE's approach align with that guidance?  | WAC 480-100-605 defines a vulnerable population as "communities that experience a disproportionate cumulative risk from environmental burdens due to: Adverse socioeconomic factors, including unemployment, high housing and transportation costs relative to income, access to food and health care, and linguistic isolation; and sensitivity factors, such as low birth weight and higher rates of hospitalization." For the 2021 IRP, PSE intends to rely on the DOH Environmental Health Disparities Map, which includes many of these factors (as indicated by the stars on the slide), among others, in its composite score, to help identify vulnerable populations. However, as an Equity Advisory Group is established and further opportunities for public participation are made available, PSE intends to evolve its methodology and criteria for identifying vulnerable populations. |
| 11/30/2020         | Kyle Frankiewicz, Washington Utilities and Transportation Commission | Slide 35: Staff notes that the economic, health, and environment graphics on this slide should be considered as a subset of the disparities PSE considered. We hope this slide is illustrative rather than comprehensive. The assessment described in RCW 19.280.030(1)(k) must include data on energy and nonenergy benefits, costs and risks, as well as energy security. Therefore, the measurement of disparities should also reflect these categories. Related to our comments regarding slide 20, Staff recommends that the Company consider the disparities assessment an overlay to the Economic, health, and environmental burdens and benefits where the assessment itself focuses on understanding current conditions for all PSE customers.   | Slide 35 was intended to illustrate, in broad strokes, the aims and methods of the assessment. PSE's Economic, Health and Environmental Benefits Assessment will fulfill all requirements of RCW 19.280.030(1)(k).  |

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| 11/30/2020         | Kyle Frankiewicz, Washington Utilities and Transportation Commission | Slide 36: The company's methodology sketched out here implies that draft rules under draft WAC 480-100-610(4)(c) describes three separate customer benefit requirements. This is not staff's current understanding of the draft rule, though ideally this will get clarified in rule or in the adoption order  | PSE believes this comment may be in reference to slide 35, in which case, PSE would reiterate the response above, "Slide 35 was intended to illustrate, in broad strokes, the aims and methods of the assessment. PSE's Economic, Health and Environmental Benefits Assessment will fulfill all requirements of RCW 19.280.030(1)(k)."  |
| 11/30/2020         | Kyle Frankiewicz, Washington Utilities and Transportation Commission | Slide 36: Staff notes that qualitative measures are also called out in statute, and may inform the CEIP. Also, the definition of vulnerable populations (VPs) is different from HICs. The attributes that make a PSE customer a member of a VP might not inherently or per-se be geographically clustered, and may not map obviously onto a geospatial analysis.   | <p>Thank you for pointing out the distinction between the disparate definitions of vulnerable populations and highly impacted communities. PSE has lumped these terms together for the purposes of this presentation, as we are still waiting on the results of the DOH cumulative impact study to identify highly impacted communities.</p> <p>PSE intends to incorporate qualitative metrics as the CEIP process progresses. An initial assessment, relying on quantitative metrics, will be conducted as a stepping stone to a more robust assessment following input from an Equity Advisory Group and further public participation.</p> <p>PSE acknowledges that a geospatial analysis may not account for each individual customer within a given geographic region.</p> <p>PSE is working to identify methods to limit the influence of these shortfalls and will incorporate new methods as they are established.</p>   |
| 11/30/2020         | Kyle Frankiewicz, Washington Utilities and Transportation Commission | Slide 36: To clarify, in staff's view, PSE does not have to show progress in the assessment metrics; the company should demonstrate progress in the indicators. The indicators don't necessarily map 1:1 to assessment metrics. Tailpipe emissions may be a good example in this regard, in that EV adoption may ameliorate air quality but air quality is not only correlated to ICE vehicles.  | Thank you for providing improved clarity the relationship between assessment metrics and indicators.  |
| 11/30/2020         | Kyle Frankiewicz, Washington Utilities and Transportation Commission | Slide 43: The public meeting chat discussion at ~2:50pm focused on applicability of CETA planning requirements to Tx projects currently being pursued by PSE. Participant Black asked about which projects are being assumed as built within the IRP. PSE's Nedrud clarified that projects such as Energize Eastside are in the implementation phase. What are the phases that were referenced? What types of investments follow this phased development approach? What phases will PSE include as a part of decisions made and supported within the IRP, and in what phases are projects included as finished projects? Has PSE typically included capital-intensive projects in the company's IRPs at a certain phase (perhaps a planning phase?), but not at others (like an implementation phase)? | <p>All projects have a lifecycle including planning and implementation (consisting of permitting, construction and energization). Large projects specifically follow this development approach. Project needs are identified and alternatives are analyzed during the planning phase. Feedback and input on those will be sought as part of this IRP process and also through PSE's attachment K stakeholder process in accordance with PSE's FERC requirements. The solution is then selected based on that alternative analysis as well as feedback.</p> <p>Once a solution is identified and the project moves to the implementation phase, stakeholder engagement transitions to the local outreach and the jurisdiction governing permitting requirements. After identifying the recommended solution, PSE does not use the IRP process to continue to evaluate a solution unless there are significant changes that warrant revisiting. Specific to Energize Eastside, this project is in the implementation phase and there have been no significant changes in either the need for the project or the solution evaluation which warrant a change to the recommend solution.</p> <p>The typical types of investments for major projects include solutions to address needs identified to meet NERC compliance requirements on the transmission system, new distribution substations to meet local capacity needs or other projects which would reconfigure the topology or modify transmission system ratings.</p> |

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| 11/30/2020         | Kyle Frankiewicz, Washington Utilities and Transportation Commission | Slide 51: Does PSE anticipate that it will ultimately have DER potential assessments by feeder (or substation) that are linked to the company's load forecast for that feeder or substation? Does PSE anticipate including DERs as resource options in its capacity expansion modeling? If so, does PSE anticipate initiating DER acquisition programs, similar to its EE programs, in addition to providing TOU or other rate design signals for DER development? Participant Eckman asked questions along these lines verbally, and staff includes them here with the hope of a written response.   | At this time, PSE is not planning to produce DER potential assessments akin to the conservation potential assessment at the feeder or substation level. However, hosting capacity analysis will allow PSE to understand where DERs can be sited without significant additional investment in the electric system. As verbally stated, PSE is including DERs as resource options in the capacity expansion model. Regarding DER acquisition programs, PSE anticipates defining the acquisition process as appropriate in the Clean Energy Implementation Plan. |
| 11/30/2020         | Kyle Frankiewicz, Washington Utilities and Transportation Commission | Feedback and recommendations separate from slides:<br><br>Note: Many recommendations for this meeting are included in the slide-specific comments above.  | Thank you for your feedback and recommendations separate from the slides. PSE inserted each item below along with PSE's responses.  |
| 11/30/2020         | Kyle Frankiewicz, Washington Utilities and Transportation Commission | <p><b>Responses to PSE's questions re: equity assessment</b></p> <ul style="list-style-type: none"> <li>a. How do we measure disparities affecting highly impacted communities and vulnerable populations? <ul style="list-style-type: none"> <li>i. Surveys and advisory groups are also a good way to understand these disparities.</li> <li>ii. The metrics themselves are explored more in the second question, but some other views into these disparities could come from PSE's customer data. For example, historical usage data could help the company identify disparities in weatherization within a neighborhood's housing stock. If an address's load is substantially more temperature-dependent, that home would likely be a good candidate for efficiency measures.</li> </ul> </li> <li>b. Are there quantifiable public health and environmental benefits and reductions of costs and risks? <ul style="list-style-type: none"> <li>i. The metrics on slide 33 are a great start. <ul style="list-style-type: none"> <li>1. Transportation issues are represented fairly by "transportation expense." This topic could also include average commute time, as well as access to transportation alternatives like bike routes or employer-organized transportation (vanpools, shuttles).</li> <li>2. "Cardiovascular disease" is broad and well-tracked, but other health-related metrics could draw a fuller picture. Asthma correlates strongly to air quality, and would definitely be appropriate for this list. Reduction of asthma rates would link directly to quantifiable benefits.</li> <li>3. Related to health and quality of life, food access and diet concerns – proximity to full-service grocers, cost of food relative to average income, obesity as a health risk – could also be added.</li> </ul> </li> <li>ii. Historical inequities and patterns of institutional action to the detriment of vulnerable populations persist, and are visible quantitatively in many of the metrics floated by the company. Practices such as redlining may be visible in housing burden data, for example. From a qualitative perspective, the unique history of PSE's service territory could inform the unique types of equity concerns PSE could ameliorate through its CETA-prompted actions, or inform the specific actions themselves.</li> </ul> </li> <li>c. Are there other quantifiable economic or equity measures that should be included? <ul style="list-style-type: none"> <li>i. Other than factoring cost-of-living at as granular a level as is practicable, the economic metrics the company has proposed seems like a good place to start.</li> </ul> </li> <li>d. What other metrics should be applied? <ul style="list-style-type: none"> <li>i. No other considerations at this time.</li> </ul> </li> <li>e. Are there other quantifiable reliability, energy security and resiliency measures that can be included in the assessment? <ul style="list-style-type: none"> <li>i. The proliferation of distributed energy resources around PSE's service area will have an impact on reliability. It is likely that DERs which enhance reliability will be adopted by more affluent customers – resources that may not be nearly as accessible to HICs and VPs. To the extent PSE can include some aggregate measure of technologies like PV, EVs, and small-scale battery storage, the company will be</li> </ul> </li> </ul> | Thank you for providing thoughtful answers to the presentation prompts. PSE will take these suggestions under advisement as we continue to develop and refine the Economic, Health and Environmental Benefits Assessment and progress the CEAP and CEIP.  |

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|                    |  | able to see the inequitable distribution of these resources. This should be easy, too, as DER assessments are also required under CETA.   |  |
| 11/30/2020         | Kyle Frankiewicz, Washington Utilities and Transportation Commission | <b>Content of the draft IRP:</b> While staff supports the continued engagement of the IRP advisory group after the IRP draft is filed, staff shares the concerns of other stakeholders that key parts of the IRP analysis may not be finished in time for inclusion in the draft IRP. Specifically, the broader exploration of flexibility and stochastic risk analysis of the company's (draft) preferred portfolio may not be available for thorough review by stakeholders prior to its completion in the IRP due in April. The IRP must evaluate changes to achieve, among many other constraints, the requirements of CETA at least reasonable cost, considering risk. The risk component implies some stochastic analysis of the preferred portfolio.   | PSE acknowledges your concerns and is working to include all the analysis conducted to date in the draft IRP, due January 4, 2021. PSE looks forward to stakeholder feedback on the draft. PSE will host two more public participation meetings in 2021 before the final IRP to review the remaining analysis and obtain stakeholder feedback. |
| 11/30/2020         | Virginia Lohr, Vashon Climate Action Group                           | <p>On Slide 19, I want to address Irena Netik's oral comments regarding public participation in the IRP Advisory Group (on the Nov. 16, 2020 Webinar recording from 29:38 to 31:41). My understanding of what she said is that PSE decided to have a very open process for the 2021 IRP and considered anyone who attended one of the IRP webinars to be part of the 2021 IRP Advisory Group. I have really appreciated this openness and the broad acceptance of who may participate. She also mentioned that this process was selected because it appeared to be where the rules for future IRPs were headed. She suggested that there was not full clarity in what the final rules will ultimately say.</p> <p>I want to express my hope that PSE will continue with this broad understanding of who may participate on the IRP Advisory Group in the future, regardless of what the rules say, assuming the rules are setting minimum requirements that PSE could exceed. The 2021 IRP process has been much more welcoming of participation than the 2019 IRP, which felt more exclusionary. I assume it was not intended, but the closed nature of 2019 IRP process contributed to some people's impressions that PSE was trying to hide information from the public.</p> | <p>Thank you for your feedback and sharing your support of the inclusive nature of the 2021 IRP public participation process.</p> <p>Thank you for your suggestions concerning public participation in PSE's future IRPs.</p>  |
| 11/30/2020         | Virginia Lohr, Vashon Climate Action Group                           | Please continue your inclusion of all interested people as participants in future IRP Advisory Groups.  | PSE welcomes all interested people as participants in the 2021 IRP process. Thank you for your continued participation!  |