

December 19, 2019

To: David Mills – Puget Sound Energy (PSE) Senior Vice President, Policy and Energy Supply

Cc: Jay Balasbas – UTC Commissioner

Rachel Brombaugh – King County Executive Energy Policy & Partnerships Specialist

Brad Cebulko – UTC Staff

Carla Colamonici – Regulatory Analyst, Public Counsel

David Danner – UTC Commission Chair

Lisa Gafken – Assistant Attorney General, Public Counsel Unit Chief

Irena Netik – PSE Director of Energy Supply Planning and Analytics

Steve Johnson – UTC Staff

Ann Rendahl – UTC

Deborah Reynolds – UTC Staff

Kathi Scanlan – UTC Staff

Subject: Energize Eastside questions

Dear Mr. Mills,

On November 4, 2019, five members of PSE's Technical Advisory Group sent a letter to Irena Netik, PSE's Director of Energy Supply Planning and Analytics. We asked three questions that Ms. Netik answered and published on PSE's IRP website on November 27, 2019. Here we review our questions and explain why we find PSE's answers unsatisfactory.

1. Will PSE suspend the Energize Eastside project until it can be discussed by the TAG in the context of an Integrated Resource Planning process?

No.

PSE's single-word answer to this question contradicts the TAG charter¹ that PSE proposed, and group members agreed to follow. The charter states:

The members of the TAG are charged with providing input on:

- *Local system planning: **transmission and distribution***

The project team will:

- *Provide background materials, presentations, and data to TAG members and at www.pse.com/irp in advance of meetings to inform their input*

At the meetings, TAG members will:

- *Voice concerns and complaints at the meeting, not outside the meeting*

With respect to Energize Eastside, a very large transmission project, none of these charter expectations has been met. PSE has canceled two TAG meetings where Energize Eastside was to be discussed. Therefore, the requirements of WAC 480-100-238.5 that emphasize the importance of public input are not fulfilled. These shortcomings must be addressed before ratepayers are obligated to pay for this project through their monthly electric bills.

¹ https://www.pse.com/-/media/PDFs/001-Energy-Supply/001-Resource-Planning/IRP_2019_TAG_Charter_Final.pdf

2. Will PSE provide written answers to the UTC's questions about the Energize Eastside project that were included in the Commission's comments on PSE's 2017 IRP?

PSE quotes a letter from Mark Johnson, WUTC Executive Director and Secretary, which appears to excuse PSE for not answering the Commission's direct questions about Energize Eastside. Nonetheless, these questions remain relevant to the public's interest.

Both the WUTC and PSE have affirmed the public's interest and input regarding major utility projects like Energize Eastside. In remarks shared at the May 2019 Listening Session, PSE Vice President David Mills said, "I'm excited to be here ... and am specifically interested in your comments, and your thoughts and your concerns as we are in the process of developing the 2019 IRP for both our electric and natural gas portfolios."

PSE's Listening Session provided an opportunity for the public to comment on the IRP, but it wasn't possible to engage in a discussion or ask detailed questions. Aside from the TAG, what forum is available for that kind of interaction?

PSE might say land use hearings are the right forum. However, these hearings are conducted by land use judges who are considering how a project relates to a city's land use codes. This isn't the place to delve into details regarding megawatts or contingencies or feasible alternatives. A land use judge may not have the technical expertise to appreciate the complexities of transmission planning. This is illustrated by the following quote from Bellevue's Hearing Examiner in his decision earlier this year:²

Common sense supports [PSE's] concerns that extreme heat in summer months, or even like that experienced recently during the past month with area temperatures in the high 80s and low 90s, poses a very real risk of failure for a system that has not been upgraded for decades to address increased demand caused by significant growth in the Eastside of King County.

Nowhere in his decision does the Hearing Examiner justify his conclusions by referring to rates of Eastside demand growth (which PSE continues to withhold), how close transformers have come to overloading, or to what extent regional transfers of electricity may be impacting local infrastructure. These would be normal questions for technical experts to probe.

In some cities, technical details are not considered relevant to the application of local land use codes. For example, a senior planner in Renton recently stated that project need is not considered in Renton's codes:³

Project Need: *The proposed transmission line upgrade is permitted within the City of Renton subject to the approval of a Conditional Use Permit (CUP) by the Hearing Examiner. The City's regulations do not require that the applicant demonstrate that the project is needed in order for a Conditional Use Permit to be granted.*

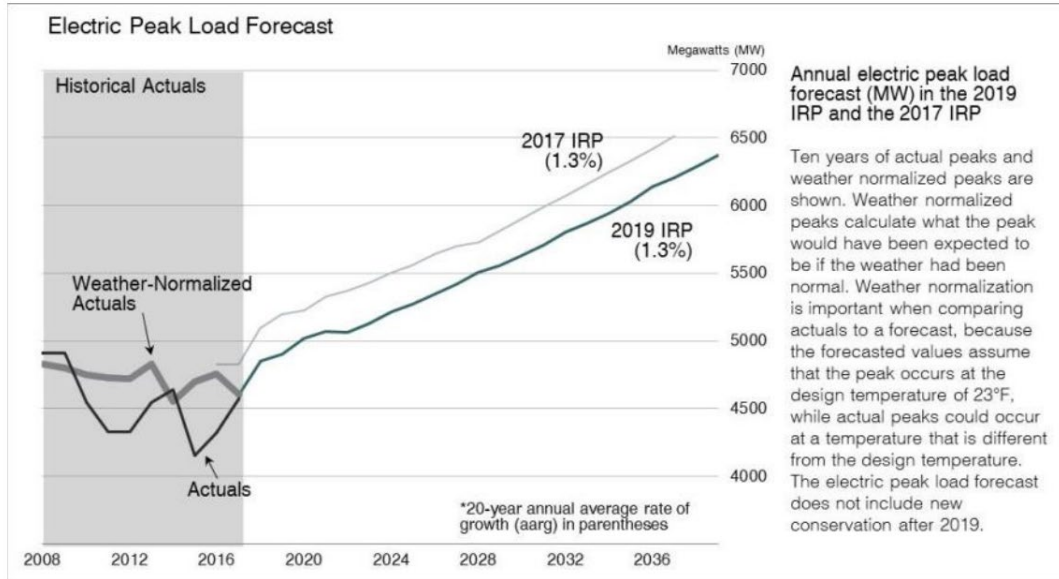
To ensure that technical questions are clearly and completely answered, a review by experts and members of the public should be conducted by the TAG or WUTC.

² https://bellevuewa.gov/sites/default/files/media/pdf_document/2019-06/Energize%20Eastside%20S%20Bell%20Segment%20Decision%20on%20CUP%20application.pdf

³ Email from Jill Ding, senior planner for City of Renton, to Sue Stronk, dated Nov. 26, 2019

3. Will PSE acknowledge declining winter peaks as documented by FERC Form 1 filings?

At TAG meeting #4 (January 9, 2019), PSE showed the following peak demand forecast:⁴



This graph shows “Actuals” and “Weather-Normalized Actuals” declining over the past ten years. When we raised this as a relevant issue for Energize Eastside, PSE supplied a 25-year history of December peak demand in PSE’s service territory. PSE states, “Based on the data from FERC Form 1, December peaks from 1994 to 2018 clearly show, in the graph below, that the overall trend is increasing.”

It appears that the chosen timeframe determines the rate of increase or decrease. We believe a shorter timeframe better captures advances in efficiency like LED lighting (LED market share was only 1% in 2010) and smart thermostats (the popular Nest thermostat was introduced in 2011). Methodology described in the Journal of Applied Meteorology and Climate (and adopted by New York’s utility commission) recommends using 15 years of temperature data to account for recent weather trends:

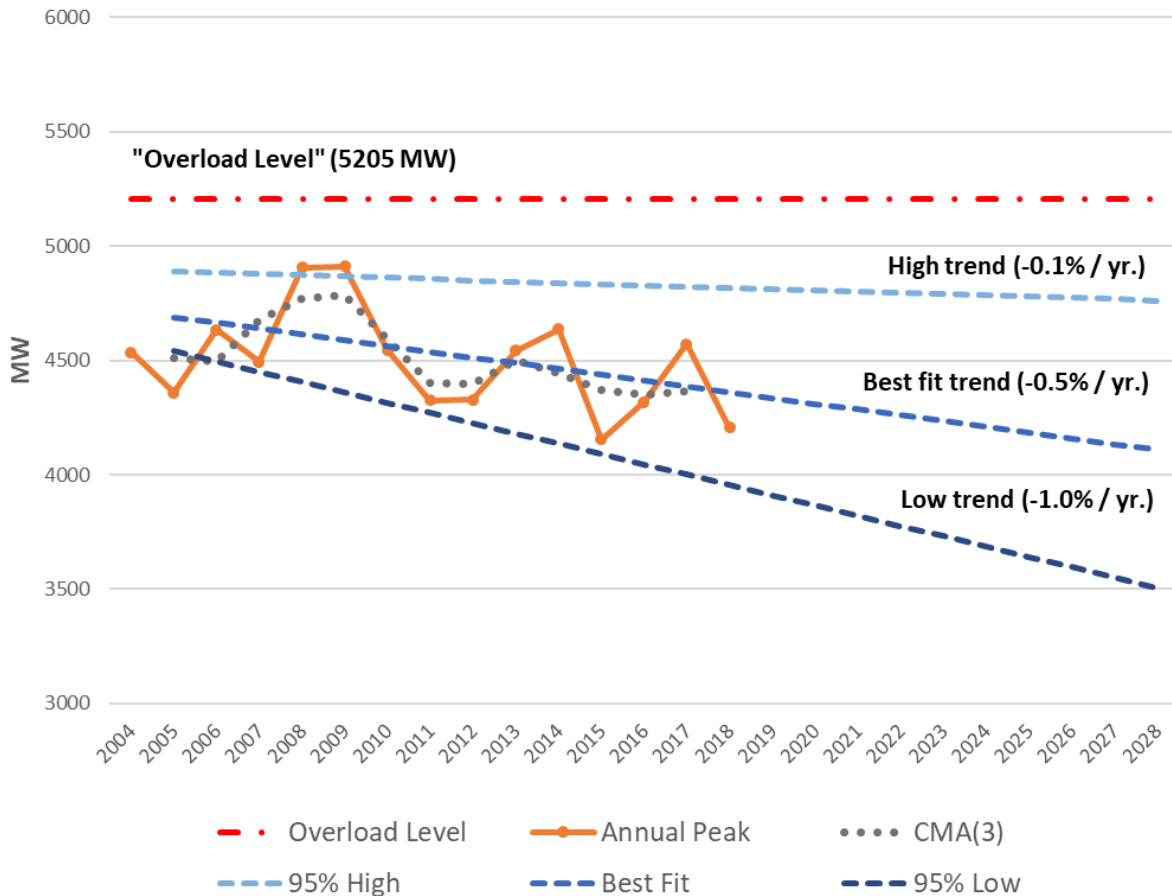
According to a 2013 paper published in the Journal of Applied Meteorology and Climate, the use of 30-year surface temperature averages as estimates of future temperatures will, in many instances, result in a ‘cold bias’—predicting temperatures will be colder than those actually experienced; using the most recent 15-year average is the best method for developing weather normalization curves.⁵

Using demand peaks in December may further bias PSE’s analysis. During the past 15 years, two-thirds of the maximum peaks occurred in months other than December. It is normal practice for Washington utilities to report the maximum annual peak rather than focusing on peaks occurring in a chosen month.

⁴ https://www.pse.com/-/media/PDFs/001-Energy-Supply/001-Resource-Planning/03_IRP_01_09_19_TAG_Meeting_4_Slide_Deck_FINAL.pdf, slide 46

⁵ <https://www.scottmadden.com/insight/traditional-weather-normalization-practices-used-utilities-ratemaking-process-appropriate-given-increased-climate-variability/>

Least Squares Fit and 95% Confidence Interval for PSE Annual Peak Forecast



This graph shows 15 years of PSE’s maximum annual demand peaks (not just December), according to FERC Form 1 filings. The peaks are smoothed using a three-year Centered Moving Average (CMA-3). High and low trends are calculated at a 95% confidence level, decreasing at an annual rate of 0.1% and 1.0%, respectively. The best fit trend decreases at 0.5% per year and was calculated using a least-squares solution for a simple linear regression.

The dashed red line shows the “Overload Level” as reported in Quanta’s 2013 *Eastside Needs Assessment Report*.⁶ PSE warns that certain transformers and transmission lines would overload if peaks exceed 5205 MW at the same time that two critical pieces of electrical infrastructure are out of service, half a dozen local generation plants are shutdown, and large amounts of electricity are being transmitted to Canada.

If peak demand trends continue as they have during the last 15 years, PSE’s overload scenario would never occur, and Energize Eastside would be a waste of customers’ money.

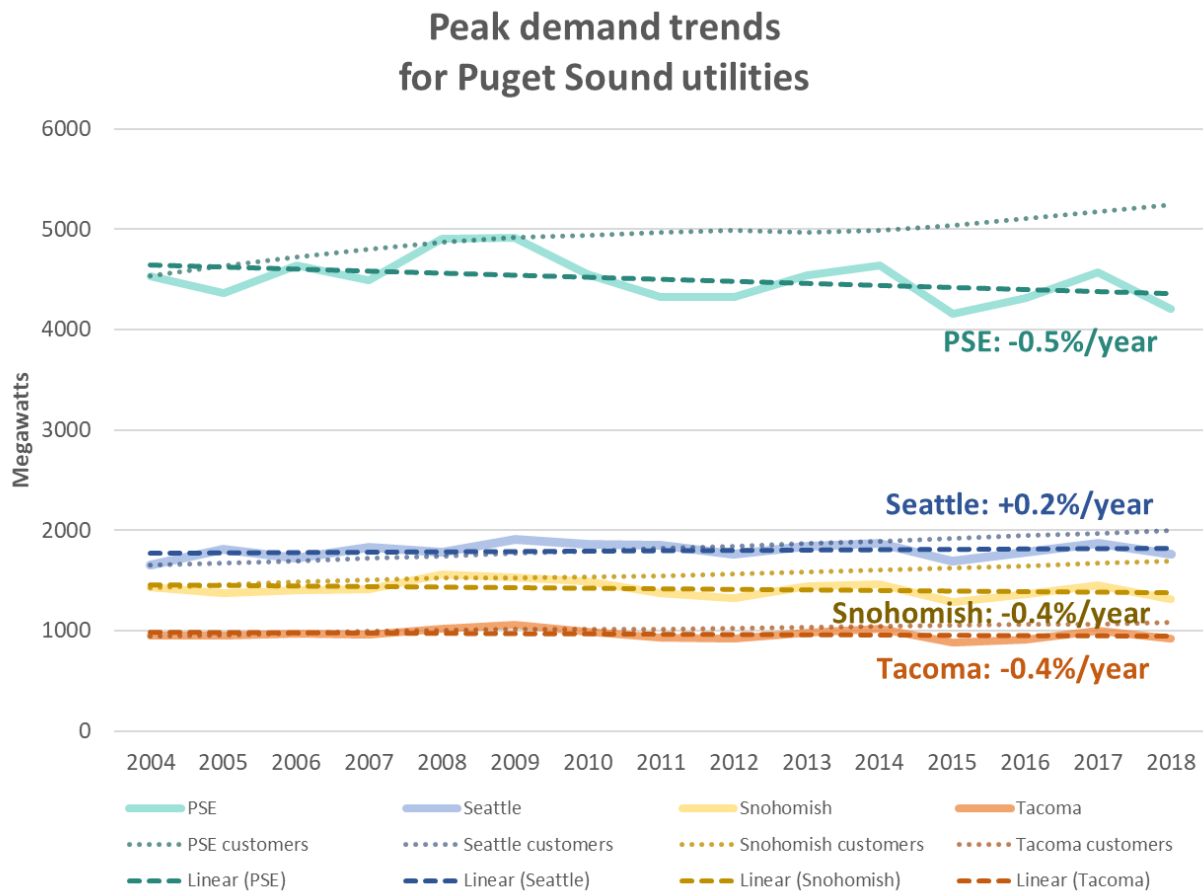
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https://energizeeastside2.blob.core.windows.net/media/Default/Library/Reports/Eastside_Needs_Assessment_Final_Draft_10-31-2013v2REDACTEDR1.pdf, p. 9

Puget Sound trends

According to PSE, population growth is a primary driver of the need to build Energize Eastside. This assumption is apparent in the most recent “Fact Sheet” for the project, published in September 2019: “Studies project that growth on the Eastside could cause demand for electricity to exceed the capacity of the backbone of the Eastside’s transmission system.”⁷

Using data from annual reports and public records requests, the following graph shows 15 years of maximum peak demand for PSE and three nearby Puget Sound utilities: Seattle City Light, Snohomish PUD, and Tacoma Power.



The solid lines show actual peak demand for each utility. The dashed lines show the linear trend line for the peak demand for each utility, as calculated by Microsoft Excel. The dotted line shows what the peak demand would have been if it had grown in direct proportion to each utility’s customer base.

Although customer growth and peak demand trends are mostly going in different directions, peak demand is affected by customer growth rates, as one would expect. PSE and Tacoma had the lowest growth of customers during this time period (increasing 0.8% per year) and the biggest declines in

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https://energizeeastside2.blob.core.windows.net/media/Default/AbouttheProject/2019_0903_PSE_EE_Factsheet_v1_WEB.pdf

demand. Seattle City Light had the highest growth in customers (1.37% annually) and the biggest increase in peak demand (0.2% annually).

The comparison between Seattle and PSE is worth a closer look. Seattle's customers grew at a rate over 60% higher than PSE's customer growth rate (1.37% vs. 0.84%). And yet, Seattle's peak demand grew at only 0.2% per year, **twelve times lower** than the peak demand growth rate PSE forecast in 2015 to justify Energize Eastside (2.4% annually). What could possibly explain this extreme disparity between two utilities located only six miles apart?

Conclusion

We have explained why we believe technical review of large transmission projects by the WUTC and/or TAG best serves the interests of ratepayers.

We request written answers to the following questions:

1. The charter that PSE created for the TAG includes review of local transmission and distribution resources by the group. How does PSE see this responsibility being fulfilled?
2. Please provide a specific date for a meeting of the TAG where we can provide technical inputs on major transmission projects, including Energize Eastside.
3. Five years ago, PSE's consultant forecast peak demand on the Eastside would grow at an annual rate of 2.4%, more than twice the rate of population growth on the Eastside, and 12 times the rate that peak demand has grown in Seattle. Given the actual trends presented in this letter, please explain why PSE's forecast remains reasonable. When will PSE publish an update to the 2015 forecast based on recent trends?

Respectfully submitted:

Don Marsh, CENSE.org

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Norm Hansen, Bridle Trails Neighborhood representative