July 22, 2020

To: Irena Netik – PSE Director of Energy Supply Planning and Analytics

Cc: Brad Cebulko – UTC Staff
    Steve Johnson – UTC Staff
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    Kyle Frankiewich – UTC Staff
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Subject: 2021 IRP Electric Demand Forecast

Dear Ms. Netik and IRP Team,

After reviewing the presentation for the upcoming (Sept. 1) IRP webinar to review PSE's latest load forecast, I would like to thank the team for some positive steps in this forecast:

1. The declining post-DSR electric forecast is more inline with forecasts for other nearby utilities (Seattle City Light, Tacoma Power, Snohomish PUD). For example, PSE's forecast shows a -0.4% AAGR for 2021-2031. For comparison, Seattle City Light's 2018 IRP shows an AAGR of -0.6% for the same period. We are pleased to see the post-DSR estimate on the same graph as forecast growth pre-DSR.

2. PSE includes summer and winter peak demand data for 2008-2019 (slides 48 and 49), and a reference to the data source from the FERC library. This data clarifies historical trends.

3. In response to our queries about weather records and the basis of weather normalization, PSE published a table on slide 29 showing different durations for calculating normal weather. It is obvious that heating declines with shorter history periods (probably due to local climate change), and cooling increases. PSE's chosen standard is for a 30-year period, which appears to overstate heating and understate cooling.

Among these positive developments, we see opportunities for improvement. Here are some of the issues we would like to see addressed in the webinar and going forward:

1. The AAGR shown in the post-DSR electric forecast appears misleading without further context. The expected demand declines until 2031, and then starts to increase, leading to an overall AAGR of 0.2%. But the increases and the AAGR may be illusory because PSE is not accounting for any new conservation programs after 2031. The graph says, "No new conservation after committed 2-year targets," but this does not clarify that the increasing demand after 2031 is an accounting artifact, not a realistic possibility. If anything, more aggressive conservation will be necessary after 2031 to reach 100% clean energy by 2045 in accordance with CETA goals. This graph is specifically extended to 2046 to account for CETA, but the load forecast itself doesn't appear to account for the effects of CETA.

2. Although PSE included a table showing historical summer peak demand, the presentation includes no forecast for summer peaks. It doesn't even include a graph of historical summer peak demand, so I created the graph from PSE's data:
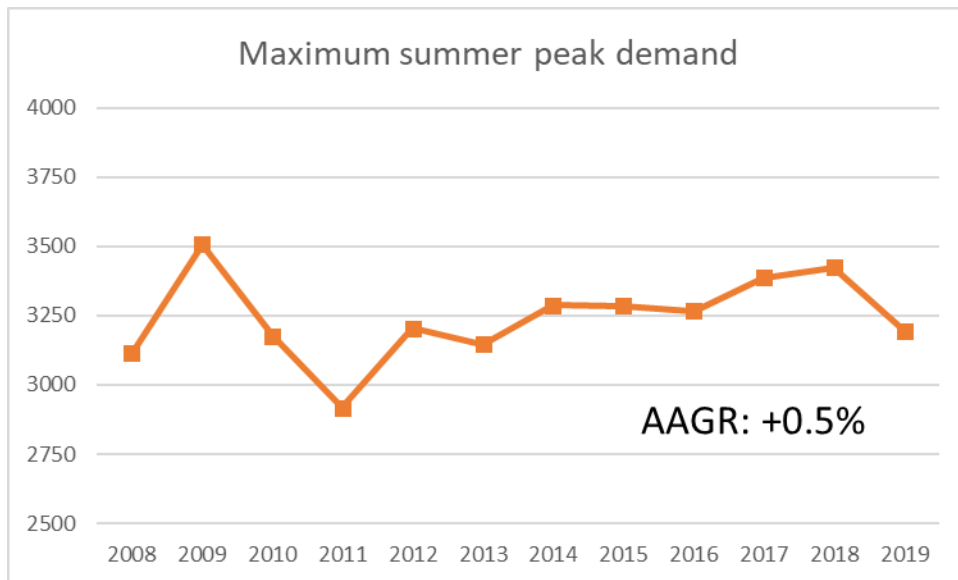
The graph shows a very gradual rise in summer peak demand, averaging about 0.5% per year. The peak in 2018 was almost as high as the highest peak in 2009, although the peak temperature in 2018 was eight degrees cooler, so it appears that peaks are gradually increasing.

3. We are puzzled why PSE is issuing RFPs for winter demand response, but no corresponding RFP for summer demand response. Summer peaks are increasing, and winter peaks are not. Obviously, the summer peaks are about 25% lower than winter peaks, but we understand that PSE is concerned about summer reliability. Does PSE believe that summer demand response is not needed or not as feasible as winter demand response?

4. Using 30 years of weather records to normalize weather calculations is at the upper limit of what we consider reasonable, given recent changes in climate. As we observed in earlier letters, New York's utility commission is using 15 years of weather records for normalization.

5. On slide 63, PSE appears to be using "88 temperature years" as an input to the Resource Adequacy Model. This may distort the results and introduce "cold bias" in the model that could be potentially costly for ratepayers. We ask that no record before 1990 be used to better account for recent climate changes.

Declining winter peaks and gradually increasing summer peaks provide PSE and ratepayers some room to concentrate on CETA goals and smart energy management. However, clear data is needed to understand the challenges and opportunities before us. We encourage PSE to provide this data and strong leadership to achieve successful outcomes.

Sincerely,

Don Marsh