

**Exh. JBN-4
Docket UE-210795
Witness: Joel B. Nightingale**

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of

PUGET SOUND ENERGY

**Clean Energy Implementation Plan
Pursuant to WAC 480-100-640**

DOCKET UE-210795

**EXHIBIT TO
TESTIMONY OF**

JOEL B. NIGHTINGALE

**STAFF OF
WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION**

PSE Response to UTC Staff Data Request No. 9

October 10, 2022

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

**Docket UE-210795
Puget Sound Energy
PSE 2021 Clean Energy Implementation Plan**

WUTC STAFF DATA Request No. 009:

DATA REQUESTS DIRECTED TO: Kara Durbin

REQUESTED BY: Joel Nightingale

Re: Demand Response Target

- a. Please describe why PSE did not include demand response (DR) in the distributed energy resources (DER) program evaluation process in Chapter 2 of the CEIP (starting at 32) and in Appendix D.
- b. Principle 1 of the National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources¹ emphasizes the importance of “using consistent methods and assumptions to avoid bias across resource investment decisions.” Does PSE consider the processes described in the CEIP for evaluation and selection of DERs to align with this principle? Please explain why or why not.
- c. It is Staff’s understanding (based in part on the description of PSE’s electric analysis models in Appendix G of PSE’s 2021 IRP) that the 23.7 MW demand response target comes from PSE’s CEIP portfolio model, and that this model includes effective load carrying capability (ELCC) values as an input.
 1. Is this correct?
 2. If no, please describe at what point capacity contribution is accounted for in PSE’s modeling.
 3. If yes, what factors drive the difference between the annual demand response targets in Table 2-3 and those in Table 1-1 of PSE’s final CEIP.
- d. The CEIP notes that because “PSE is a winter peaking utility,” the demand response (DR) analysis in its 2021 CPA “focused on identifying programs aimed at reducing PSE’s winter peak demand” (CEIP at 23).
 1. Please describe how this “focusing” on the winter peak shaped the 2021 CPA’s assessment of demand response programs. Were there any demand response programs that PSE considered in the CPA (or CEIP) which were not focused on winter peak, but were cost effective?

¹ Available at: <https://www.nationalenergyscreeningproject.org/national-standard-practice-manual/>

2. What, if any, DR measures/programs were limited and/or excluded from consideration in the 2021 CPA due to this focus on winter peak?
 3. How did this focus on winter peak DR programs impact the DR target in PSE's CEIP?
 4. Did PSE exclusively consider DR programs aimed at reducing winter peak demand in its CPA, or did it analyze whether other DR programs were cost effective?
- e. The CEIP notes that "as PSE gains additional insight from the targeted Distributed Energy Resources (DER) Request for Proposal (RFP), which includes demand response, [PSE] may adjust this target" (CEIP at 23). The CEIP also states that PSE "made no changes to the DR target based on customer benefit indicators" (CBI) and instead plans to "use the results of the Targeted DER RFP to consider customer benefit indicators" (CEIP at 24). Per PSE's RFP webpage (pse.com/rfp), bids for the DER RFP were due on March 21, 2022, and PSE's "Phase 1 screening" process was to be completed in Q2 2022, with a short list selected in Q3 2022.
1. What is the current status of the DER RFP?
 2. What insights has PSE taken from the DER RFP that may impact the DR target during this CEIP period (2022-2025)? For each insight, what direction would it tend to move the DR target?
 3. How do these insights from the DER RFP compare to the assumptions made about DR in:
 - i. The 2021 CPA and IRP modeling?
 - ii. The 2021 CEIP modeling?
 4. Were any changes made to the CEIP's DER subtargets (i.e., 80 MW of distributed solar and 25 MW of distributed storage by 2025) based on CBIs?
 5. In a CEIP proceeding, pursuant to RCW 19.405.060(1)(c), the Commission evaluates the CEIP as it was filed by a utility. Does PSE plan to request an adjustment its 2021 CEIP DR target based on new information from the DER RFP? If so, what procedure does PSE plan to use to request this adjustment? I.e., does PSE intend to request permission to file an amendment to its final CEIP, or does PSE intend to incorporate these changes as part of the CEIP biennial update?
- f. PSE has set its demand response target at 23.7 megawatts (MW) by 2025.
1. If all of those megawatts came from a direct load control (DLC) program for residential heat pump water heaters, approximately how many water heaters would need to participate for PSE to meet this target?

Response:

- a. Puget Sound Energy (“PSE”) did not include demand response in the distributed energy resource (“DER”) program evaluation process in the Clean Energy Implementation Plan (“CEIP”) because CETA provides for a specific and separate target for demand response. Additionally, PSE recognized that demand response was being targeted already as part of its upcoming Distributed Energy Resources Request for Proposal (“DER RFP”) and was considered as part of its Conservation Potential Assessment (“CPA”). In the 2021 CPA, Demand Response was evaluated and the CPA included the technical potential and market feasibility for demand response programs. This exercise led to the development of the list of potential Demand Response programs shown in the 2021 Integrated Resource Plan (“IRP”) and CEIP. Given the impending Targeted DER RFP, PSE believed this would be the most appropriate avenue to evaluate Demand Response programs, once bids were received.
- b. Yes, as indicated in the 2021 CEIP, p. 36, PSE considers the Principles of the National Standard Practice Manual for Benefit-Cost Analysis in the evaluation and selection of DERs. In this CEIP, PSE uses Principle 1 across the DER solar and DER storage resources, and PSE uses a consistent methodology across the resources. PSE similarly intends to apply a consistent methodology to the evaluation and selection across all resource investment decisions and is doing so in the ongoing All-Source RFP and Targeted DER RFP evaluation process.
- c.
 1. Yes, that is correct.
 2. Not applicable.
 3. The difference is that Table 2-3 includes peak capacity values for Demand Response, while Table 1-1 is the nameplate capacity of the Demand Response targets. For Table 2-3, the ELCC is the driving factor in determining the peak capacity contribution.
- d.
 1. The CPA provides both summer and winter demand response (“DR”) values that are used in the portfolio model (see tables 36 and 37 in the DSR report Appendix E of the 2021 IRP). The same DR programs have both a winter and a summer peak. PSE is a winter peaking utility; thus, the winter peak DR gets selected in the portfolio model. However, there were no non-winter DR programs that were shown as cost-effective.
 2. No non-winter peaking DR programs were excluded since the same programs offer both a winter and summer peak benefit.
 3. The CEIP target is derived from the portfolio model outputs. Because the portfolio selected DR programs for their winter peak contributions, that is why there is a reference to a winter focus.
 4. See response to d.1., above.

- e.
1. PSE is currently undergoing Phase 2 evaluation of the bids received in the Targeted DER RFP.
 2. PSE continues to evaluate these bids and has yet to determine how and if the results may impact PSE's CEIP DR target. PSE has released an overview of the bids received [here](#). Based on the bids received in the DER RFP, PSE has learned that there appears to be less DER solar available than anticipated, and the costs associated with the programs are different than anticipated.
 3.
 - i. Through reviewing the bids received in the DER RFP, PSE has learned that there are DR resources available with a lower \$/mW cost than the CPA and IRP modeled DR technologies. Direct comparison between the CPA and IRP modeled DR resources and the bids received through the DER RFP is difficult at this phase in the acquisition process given that the CPA and the IRP modeled the DR resources individually by technology whereas the majority of the bids received in the DER RFP aggregate various DR technologies into a single bid.
 - ii. Please see response i. above. PSE made the same assumptions about DR in the CEIP modeling as the CPA and IRP modeling.
 4. PSE's DER subtarget was the result of considering preliminary customer benefit indicators in the IRP process. No changes were made to the DER subtarget in the CEIP process. The amount of DERs identified in the IRP preferred portfolio was carried forward in the CEIP.
 5. PSE does not have any plans to update its targets in the filed CEIP at this time. PSE does intend to reflect any proposed changes in targets due to either updated analysis or Commission action in its 2023 Biennial CEIP Update.
- f.
1. Based on the data provided in [Appendix E of the 2021 CPA](#), under "Portfolio Summary Inputs" tab, row 438, cell I 438, PSE calculates that 99,960 heat pump water heaters would need to participate in order to meet the target.