PSE Feedback Report

Energy Resource Planning Update meeting with IRP Stakeholders

Meeting date: January 20, 2022



2/24/2022

Document Purpose: The following document records Puget Sound Energy's responses to unanswered questions from Integrated Resource Plan (IRP) stakeholder meeting on Jan. 20, 2022 and subsequent input received via the feedback form. Meeting materials are available on the project website.

Date	Name	Comment	PSE Response
1/20/22	Katie Ware	Question re: slide 14 What does the model look like initially and what is the thought process to diversify after?	PSE provided a description of the utility-scale resources modeling iterations in the 2021 Clean Energy Implementation Plan (CEIP) in Chapter 2 on page 31.
			The thought process to diversify after the modeling runs was based on reflecting on a strong response from bidders for wind energy projects, as well as solar and battery energy storage projects.
			PSE performed multiple modeling iterations to understand the mix of utility-scale resources for the CEIP and discern their incremental cost and CETA-energy impact on the preferred portfolio. As part of the iterative process, PSE decided the battery and solar resources should be in the proposed resource mix for this final CEIP for a couple of reasons. First, a diversified portfolio provides benefits that an all-wind portfolio does not. Second, the addition of batteries supports power system resilience, another benefit to PSE's system. Given the strength and diversity of the proposals seen in the All-Source RFP, this proposed resource mix of solar, wind, and batteries seemed reasonable and more in line with the type of diversified portfolio PSE would like to pursue over the next several years.
1/20/22	Peter Besenovsky	The climate change model temperature data on slide 58 are so different that if the CanESM model is correct the average result is off by more than almost 20F	Future temperatures have much uncertainty around them. PSE will continue to evaluate how these models are reflecting our regionally observed temperatures and whether we should be using different models or methodology to calculate gas peak temperatures.
1/20/22	Joni Bosh	The three models come up with a range of temperatures, do you average them? How do you treat the range of temps and models to get your green lines?	PSE provided the calculations in full in the <u>spreadsheet</u> made available to IRP stakeholder. To summarize, PSE first calculated heating degree days (HDD) and cooling degree days (CDD), and then averaged those to come up with HDDs and CDDs that represent the average of the three models.
1/20/22	Don Marsh	Is the time-varying rates pilot part of CPA as well? Is the reason time-varying rates is not on this chart because it is coming in late? Would be great to have a chart from them as well	For this Conservation Potential Assessment (CPA), impacts of time-of-use (TOU) rates on conservation potential will be included in the 2023 Electric Progress Report.
			As context, the TOU <i>pilot</i> that PSE is requesting approval in the General Rate Case (GRC) (and also proposed in the CEIP in Chapter 4) will have a long process of approval, deployment, evaluation and final consideration for general rollout. This will be a multi-year process.
			We will likely be considering one potential area where the EV team is working on their managed charging pilot and are looking to study the impact on EV charging and thus the interactive effects that may have on the demand response programs related to EV charging being considered in this CPA. We will also try to align the TOU assumptions with the Critical Peak Pricing demand response programs.

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1/21/22	Brian Grunkemeyer	Please go beyond focusing on SeaTac temperatures to capture the impact of extremely warm days on PSE's service territory. Is there another temperature source in the region you can use, such as one in Bellevue and one around Olympia, and maybe Bellingham?	Thank you for suggesting we consider other weather stations. Incorporating climate change into our energy planning efforts is an evolving process and we appreciate stakeholder feedback for continued improvement.
		Please review this blog post by Cliff Mass, a UW climate modeler, commenting on the 2021 heat wave in June. Cliff Mass Weather Blog: A One-Hundred Year Heat Wave Event Comes Into Focus	
		"If you are right on Puget Sound temperatures will be tolerable (80s), but go inland a few miles and temperatures will zoom above 104F. Go inland a bit more, temperatures will be above 110F. I have provided a zoomed-in view for better viewing below. I never expected to see such temperatures in my lifetime. Eastside communities like Bellevue, Redmond, and Woodinville will be hit much harder than Seattle, Tacoma, and Everett."	
		He includes graphs showing the temperature variation between the edges of Puget Sound vs cities further inland, which are the core of PSE's service territory. On this day, SeaTac was 82 degrees, while I measured 115 degrees in Redmond. This was described as a one-in-100 year event, but people making those claims have frequently been eating their words a year or two later.	