# **PSE Demand Forecast Meeting with IRP Stakeholders**

# *July 13, 2022*

**Overview**

On July 12, 2022 Puget Sound Energy (PSE) hosted an online webinar with Integrated Resource Plan (IRP) stakeholders on Demand Forecast:

* Provide an overview of Demand Forecast and how it fits into the IRP process.
* Share information about the Electric and Gas demand forecast results.
* Share information about the Electric Vehicle (EV) forecast.

Additionally, participants were able to ask questions and make comments using a chat box provided by the Zoom platform.

Below is a report of the questions submitted to the chat box. Answers to the questions were provided verbally by PSE staff during the meeting. Please note that questions were answered in order of relevance to the topic currently being discussed. Questions regarding other topics were answered at the end of the meeting.

To view a recording of the webinar and to hear responses from staff, please visit the project website at [pse.com/irp](https://www.pse.com/irp).

**Attendees**

A total of 64 stakeholders, PSE staff and facilitators attended the meeting.

**Registrants included:**

Aaron Tam, Alexandra Karpoff, Allison Jacobs, Ashton Michael Davis, Bob Williams, Brad Cebulko, Brett Rendina, Brian Duncan, Byron Harmon, Cindy Vu, Claire Moerder, Claire Wendle, Colin Crowley, Court Olson, Don Marsh, Douglass Hart, Elizabeth Hossner, Evan Savage, Fred Huette, Graham Marmion, Gurvinder Singh, Hannah Wahl, Jake Hofgard, Jeffrey Larsen, Jennifer Coulson, Jennifer Magat, Jesse Durst, Jessica Zahnow, Jisong Wu, Joel Nightingale, Kajal Gaur, Kara Durbin, Kathi Scanlan, Kelly Xu, Lorin Molander, Malcolm McCulloch, Marc Alberts, Mark Lenssen, Meredith Mathis, Michelle Wildie, Lori Hermanson, Natalia Fioretti, Nathan Critchfield, Nick Gemperle, Phillip Popoff, Ray Outlaw, Renchang Dai, Robin Maslowski, Sara Leverette, Sashwat Roy, Seth Baker, Sophie Glass, Stephanie Chase, Tyler Tobin, Vivek Balasubramaniam, Wendy Gertlitz, Will Henderson, Will Sierzchula, Willard Westre, 3 call-in attendees.

**Questions Received**

Questions from attendees are posted in the order in which they were received. The meeting began at 1:00 PM PDT and ended at 4:00 PM PDT.

| **Name** | **Time Sent** | **Comment** |
| --- | --- | --- |
| Sophie Glass, Triangle Associates | 1:06 p.m. | Reminder: meeting materials for today were posted here: https://www.pse.com/IRP/Get-involved |
| Sophie Glass, Triangle Associates | 1:06 p.m. | Hot Sheet: <https://www.pse.com/-/media/PDFs/IRP/2022/07122022/Hot-Sheet-2022_0712_IRPStakeholders_Demand-Forecast.pdf?sc_lang=en&modified=20220705161158&hash=2667C112334B51EA3C7AA48892341E70> |
| Sophie Glass, Triangle Associates | 1:06 p.m. | Presentation: https://www.pse.com/-/media/PDFs/IRP/2022/07122022/Presentation--07122022Demand-Forecast-Final.pdf?sc\_lang=en&modified=20220711224809&hash=AAEF8DBB60BE37734C92285E032BBF0D |
| Sophie Glass, Triangle Associates | 1:06 p.m. | Resource Adequacy Meeting – August 24 |
| Sophie Glass, Triangle Associates | 1:07 p.m. | [sglass@triangleassociates.com](mailto:sglass@triangleassociates.com) |
| Don Marsh, Sierra Club | 1:16 p.m. | For slide 12, I would like to make a somewhat detailed comment (approx.. 2 minutes). Realizing that’s a little longer than usual, I will try to shorten any other comments I have later. |
| Sophie Glass, Triangle Associates | 1:17 p.m. | Thank you, Don. Noted! |
| Brad Cebulko | 1:18 p.m. | Sophie, I too have a question on slide 12. |
| Don Marsh, Sierra Club | 1:18 p.m. | Oops, the numbering seems to have changed from the presentation I previewed earlier. I will let you know the new slide number when we get to it |
| Sophie Glass, Triangle Associates | 1:19 p.m. | Thanks, Don. |
| Sophie Glass, Triangle Associates | 1:19 p.m. | And noted, Brad. |
| Don Marsh, Sierra Club | 1:19 p.m. | Perhaps that was slide 12 on the electric demand forecast? |
| Sophie Glass, Triangle Associates | 1:26 p.m. | @Don – I just confirmed that the deck we are using and the deck that was posted online is the same, with the exception of slides 63-64. |
| Joel Nightingale, UTC | 1:27 p.m. | Maybe you plan to cover this in the presentation, but since it came up, when is the final DSR expected to be available/ |
| Don Marsh, Sierra Club | 1:29 p.m. | Sophie, I just located my slide deck and found the correct slide number is 17. I accidentally used the date rather than the slide number. Sorry for the confusion. |
| Sophie Glass, Triangle Associates | 1:31 p.m. | @Don – yes, we can heard you after Slide 17. And Allison and Stephanie will be unpacking Slide 17 in their presentations. |
| Sophie Glass, Triangle Associates | 1:33 p.m. | January 20 presentation that Lorin mentioned: https://www.pse.com/-/media/PDFs/IRP/2022/01202022/2022\_0120\_IRPStakeholderMeeting\_v0113.pdf?sc\_lang=en&modified=20220308173525&hash=8A77F72FCF8F5F2B80A349A55A8F3E53 |
| Don Marsh, Sierra Club | 1:33 p.m. | Very glad to see summer peak forecast after asking for it for many years! |
| Sophie Glass, Triangle Associates | 1:34 p.m. | See slide 31 of January presentation |
| Sophie Glass, Triangle Associates | 1:34 p.m. | Thanks, Brad – I see your hand |
| Don Marsh, Sierra Club | 1:49 p.m. | Is the weather normalization based on 90 years of history still, or what is the new basis? |
| Sophie Glass, Triangle Associates | 1:51 p.m. | Thanks, Don. And Brad I see your hand. We will get to your questions after Allison finishes with Slide 25. |
| Sophie Glass, Triangle Associates | 1:53 p.m. | Court > Brad > Don |
| Brad Cebulko | 2:13 p.m. | On slide 30, what are the assumed technologies driving AC growth? Is it primarily the addition of heat pumps, or is PSE assuming growth in AC units without an electrical heat component? I am asking because if PSE is assuming growth in AC due to an increasing penetration of heat pumps then that additional electric heating load should also be captured in both the electric and gas load forecasts. |
| Don Marsh, Sierra Club | 2:13 p.m. | Slide 29: Does the forecast turn upward in ten years because PSE stops applying efficiency due to replacement? |
| Sophie Glass, Triangle Associates | 2:13 p.m. | Thanks for the questions, Brad. You will be first up when we pause for questions after slide 33. |
| Sophie Glass, Triangle Associates | 2:14 p.m. | Thanks, Don. You will be after Brad. |
| Don Marsh, Sierra Club | 2:17 p.m. | Slide 32: Would like to differentiate electricity supplied by local resources (like rooftop solar) over remote resources that require investments by transmission and other infrastructure |
| Sophie Glass, Triangle Associates | 2:18 p.m. | CPA = Conservation Potential Assessment |
| Kathi Scanlan, UTC | 2:23 p.m. | Hi Stephanie, (1) you mentioned calibration. Would you please discuss the calibration methodology? How PSE calibrate customer growth, AC sat growth, EVs, other slices etc. (2) Has PSE looked at the difference between low and high forecast scenarios over the last few IRP cycles? For example, what is the range of the high/low forecasts over time? Thank you. |
| Sophie Glass, Triangle Associates | 2:34 p.m. | Court – can you please put your question in the Chat? We won’t have time to answer it before the break. |
| Sophie Glass, Triangle Associates | 2:36 p.m. | See you at 2:41 |
| Don Marsh, Sierra Club | 2:41 p.m. | After my discussion with Stephanie Price, I’m not satisfied with her answer that EVs are driving the upward trend in demand started in 2031-32. Look at slide 31. The post-DSR trend changes from slightly negative to robustly positive. Now look at slide 30. The EV wedge does not suddenly accelerate in the early 2030s. Therefore, the reversal of peak demand is not due to a dramatic increase in EV demand at that time. I believe it is due to PSE’s acceleration of optional efficiency, which leads to a bad forecast in every IRP I have participated in. Time to correct that. |
| Sophie Glass, Triangle Associates | 2:43 p.m. | Thanks for your follow-up, Don. PSE has noted this and can respond in the feedback form. |
| Sophie Glass, Triangle Associates | 2:47 p.m. | Hi Court – you will be first up when we do our Q&A after slide 42. |
| Don Marsh, Sierra Club | 3:07 p.m. | Question about how EVs powering homes through power outages and perhaps earning money through virtual power plants might make EVs more attractive to customers. |
| Sophie Glass, Triangle Associates | 3:07 p.m. | Thanks for the question, Don. We will pause for questions after slide 55. |
| Brad Cebulko, Strategen | 3:10 p.m. | Slide 54. Can you talk about how Guidehouse incorporated recent policy changes in its assumptions? For example, do these assumptions include the impact of California’s proposed rule to ban new gasoline-powered cars by 2035? |
| Sophie Glass, Triangle Associates | 3:10 p.m. | Thanks, Brad. We will get to you next. |
| Brad Cebulko, Strategen. | 3:12 p.m. | One addition to my comment. Washington state has committed to following California’s vehicle emissions standards. |
| Sophie Glass, Triangle Associates | 3:17 p.m. | ICE vehicle – Internal Combustion Engine Vehicle |
| Brad Cebulko, Strategen | 3:18 p.m. | https://app.leg.wa.gov/rcw/default.aspx?cite=70A.30.010 |
| Will Sierzchula, Guidehouse | 3:24 p.m. | Hi Brad,    Gov. Inslee signed legislation which bans the registration of new ICEVs on March 25th (which was after this model run).  https://www.governor.wa.gov/office-governor/official-actions/bill-action  https://www.motorious.com/articles/features-3/washington-state-bans-ice/  This analysis included California’s ZEV mandate |
| Brad Cebulko, Strategen | 3:26 p.m. | Thanks, Will |
| Court Olson | 3:27 p.m. | Regarding winder peak demand: In recent years I recall hearing at least three scientists forewarn about the potential for increasing jet stream instability as the climate warms. Such instability would lead to greater temperature fluctuations in the future, including colder extremes in the winter. I’ve not recorded each of the times that I’ve heard such predictions. However, I do remember hearing it recently voiced in a PBS NOVA program entitled “Arctic Drift” which was broadcast in late 2021. Having recently viewed a recording of that program, I can say that this topic came up and was explained at about ¾ of the way through the program recording. My conclusion is that we must be prepared for winter peak low temps to be potentially be as low or even lower than we’ve seen in the past. |
| Don Marsh, Sierra Club | 3:28 p.m. | It would have been very interesting to see a sensitivity study that assumes V2G becomes common in the next decade or two. If that happens (seems likely), the total energy use might rise (due to round-trip inefficiency charging and discharging the EV batteries), but the peak demand impact could be flat or even DECREASE as the batteries serve a significant portion of the load. PSE should be considering how the company can enable this, participate in the new market, and profit. There are many opportunities. |
| Joel Nightingale, UTC | 3:31 p.m. | Are there plans to incorporate EV programs (incentives, TVR, etc.) into the inputs for these annual studies as they come online, or will those programs always come in during the CPA/DSR portion of the IRP process? |
| Don Marsh, Sierra Club | 3:35 p.m. | I’d love to see PSE become a real advocate for EVs, seeing it as an opportunity to improve reliability, reduced emissions, and save customers money. I really want to be inspired by what PSE is doing. PSE’s response should dwarf its LED programs (which weren’t bad). |
| Byron Harmon, UTC | 3:36 p.m. | I have some questions about slide 49 |
| Claire Wendle, Triangle Associates | 3:45 p.m. | https://www.pse.com/IRP/Get-involved/Give-feedback |
| Don Marsh | 3:45 p.m. | Feedback on the feedback process. When PSE answers our questions, you expect us to hunt for the feedback document. Maybe you could send it to questioners through email. |
| Sophie Glass, Triangle Associates | 10:31 a.m. | sglass@triangleassociates.com |