

PSE Gas Utility Integrated Resource Plan Meeting with IRP Stakeholders

September 22, 2022

Overview

On September 22, 2022, Puget Sound Energy (PSE) hosted an online webinar with Integrated Resource Plan (IRP) stakeholders on the Gas Utility IRP to review the following:

- Updates on gas scenarios and sensitivities.
- Conservation Potential Assessment Results
- Integration of the Inflation Reduction Act into IRP planning
- Next steps for the Gas Utility IRP

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.

Attendees

A total of 58 stakeholders, PSE staff and facilitators attended the meeting.

Registrants included:

Alexandra Karpoff, Allison Jacobs, Alondra Regalado, Amy Wheelless, Aquila Velonis, Bill Donahue, Billy Hetherington, Bob Williams, Bradley Cebulko, Brett Rendina, Cindy Vu, Claire Moerder, Corey Corbett, Court Olson, Derek Patches, Don Marsh, Douglass Hart, Elizabeth Hossner, Gamze Gungor Demirci, Garret LaBove, Gurvinder Singh, Hannah Wahl, Jennifer Coulson, Jennifer Magat, Jennifer Snyder, Jesse Durst, Jessica Zahnow, Joel Nightingale, Kasey Curtis, Kelly Hall, Kelly Xu, Kim Zamora Delgado, Lorin Molander, Marc Alberts, Mark Lenssen, Meredith Mathis, Michelle W., Nancy Shimeall, Nathan Critchfield, Nick Gemperle, Phillip Popoff, Renchang Dai, Rick Kunz, Roxana Vilchis, Sara Leverette, Seth Baker, Sophie Glass, Stephanie Chase, Steve Schueneman, Tyler Tobin, Vassilisa Rubtsova, Virginia Lohr, Will Henderson, Willard Westre, and four call-in participants.

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
Don Marsh, Sierra Club	1:08 p.m.	Comment on slide 8. This slide is inaccurate and biased. I will elaborate verbally.
Sophie Glass, Triangle Associates	1:08 p.m.	Thanks, Don. We will turn to you next
Sophie Glass, Triangle Associates	1:11 p.m.	Hi Jennifer - I see your hand as well.
Court Olson, Engineer	1:11 p.m.	I think PSE knows enough about the IRA to take it into account. This feels like a runaround.

Name	Time Sent	Comment
Sophie Glass, Triangle Associates	1:12 p.m.	https://www.pse.com/-/media/PDFs/IRP/2022/08242022/2022-0824-MeetingSummary-Final.pdf?sc_lang=en&modified=20220920171401&hash=36626076FB299D70D2C6138F81410ACA The full feedback report
Court Olson, Engineer	1:13 p.m.	Second the comment from Don Marsh.
Sophie Glass, Triangle Associates	1:18 p.m.	https://www.youtube.com/watch?v=nvCnIV-cNFk
Sophie Glass, Triangle Associates	1:19 p.m.	Minute 18 has the lengthier overview of the Inflation Reduction Act
Court Olson, Engineer	1:22 p.m.	Not including the IRA incentives toward electrification in the gas forecast makes the forecast meaningless and is unacceptable.
Court Olson, Engineer	1:30 p.m.	Hybrid heat pumps are antiquated technology that is no longer relevant in today's market place.
Sophie Glass, Triangle Associates	1:31 p.m.	Thanks for your comment, Court. We can have PSE respond to this when Jennifer takes a pause
Virginia Lohr, Turbonet	1:35 p.m.	Is gas reduction considered in any scenario?
Sophie Glass, Triangle Associates	1:35 p.m.	Thanks, Virginia. Jen will answer questions in a moment
Virginia Lohr, Turbonet	1:36 p.m.	What does HHP mean?
Kelly Hall, Climate Solutions	1:36 p.m.	Hi Jennifer - are you not doing any sensitivities on the SES scenario?
Virginia Lohr, Turbonet	1:36 p.m.	Thanks for saying what it means. I wish it had been included in the abbreviations.
Court Olson, Engineer	1:36 p.m.	When will the actual details of the Cadmus electrification study be presented? Since we hear that they aren't considering IRA, we'd like to know if other government actions at State and local levels is being included.
Mark Lenssen, PSE	1:36 p.m.	HHP = Hybrid Heat Pump = Heat Pump w/ Gas Furnace as backup
Gurvinder Singh, PSE	1:36 p.m.	HHP = hybrid heat pump
Sophie Glass, Triangle Associates	1:37 p.m.	Thanks Kelly and thanks Court. We've noted your questions and will turn to a Q&A session momentarily
Aquila Velonis, Cadmus Group	1:37 p.m.	Cadmus will be presenting the results of the electrification scenarios today.
Court Olson, Engineer	1:38 p.m.	The potential supply of "renewable natural gas" is so limited that running a scenario seems of no value.
Virginia Lohr, Turbonet	1:44 p.m.	I support what Court is saying. I want my utility to be successful.
Nancy Shimeall	1:44 p.m.	agree with Court.
Court Olson, Engineer	1:46 p.m.	I'm not buying the reasoning that Phillip and Gurvinder are voicing for hybrid heat pumps. It doesn't make good sense to consumers.
Brad Cebulko, Strategen	1:47 p.m.	I have a question, Sophie
Virginia Lohr, Turbonet	1:47 p.m.	Negative growth is different than no growth. I think given what we know about Climate change it should be on a scenario.
Sophie Glass,	1:48 p.m.	Thanks, Brad. I'll add you to the stack.

Name	Time Sent	Comment
Triangle Associates		
Kelly Hall, Climate Solutions	1:57 p.m.	Following up on that conversation, in general it would be helpful to understand all the assumptions that go into PSE's gas mid demand.
Sophie Glass, Triangle Associates	1:58 p.m.	Thanks Kelly
Sophie Glass, Triangle Associates	2:01 p.m.	We will pause for questions after Slide 25
Court Olson, Engineer	2:06 p.m.	(1) How do you define "natural gas efficiency potential" and how would a customer achieve it? (2) Also, how are you incorporating customers replacing gas furnaces and gas appliances with electric heat pump and other high efficiency electric appliances.?
Sophie Glass, Triangle Associates	2:06 p.m.	Thanks Court. Aquila will respond after this slide (25)
Court Olson, Engineer	2:08 p.m.	PSE's "cost effective" formula is fundamentally flawed in favor of short turn payback, rather than long term payback.
Joel Nightingale, WUTC	2:08 p.m.	A couple of questions on slide 23 (or thereabouts). (1) How did you land on 2/3 TRC for cost effectiveness for vulnerable population gas efficiency? (2) Did you consider "highly impacted communities" as well in this analysis, or only vulnerable populations?
Court Olson, Engineer	2:09 p.m.	Consequently, PSE is not including improvements with long-term payback, such as windows replacement.
Jennifer Coulson, PSE	2:09 p.m.	Here is the link to the July load forecasting meeting https://www.youtube.com/watch?v=ftNk9fjCIBE
Sophie Glass, Triangle Associates	2:10 p.m.	^Kelly
Sophie Glass, Triangle Associates	2:16 p.m.	We will pause again after slide 33 for dialogue
Kelly Hall, Climate Solutions	2:20 p.m.	Thanks, Jennifer and Sophie. I have those slides but there are still a lot of questions I have about what goes into the mid case. I'll follow up individually.
Brad Cebulko, Strategen	2:20 p.m.	Sophie, I have a question on slide 27
Sophie Glass, Triangle Associates	2:21 p.m.	Thanks Brad
Sophie Glass, Triangle Associates	2:22 p.m.	We will pause after slide 33 for questions. If you are able to elaborate on your question for slide 27, PSE can start thinking through an answer in the background
Brad Cebulko, Strategen	2:24 p.m.	I did not understand the table. For example, the end use "heat pump." Is this saying that a heat pump measure installed in the gas only service territory does not impact the gas load forecast?
Sophie Glass, Triangle Associates	2:25 p.m.	Thanks for elaborating, Brad. Very helpful.
Court Olson, Engineer	2:30 p.m.	Having been trained as an engineer myself, and being quite familiar with the building consumers market, I have an overview perspective I would like to share. It includes some sympathy for Cadmus and any other engineer trying to project gas demand in today's dynamic consumer market.
Amy Wheelless,	2:30 p.m.	but it could decrease the load?

Name	Time Sent	Comment
NW Energy		
Sophie Glass, Triangle Associates	2:30 p.m.	Thanks Court and Amy - let's return to both of these
Virginia Lohr, Turbonet	2:34 p.m.	Is the survey as distributed available for review?
Gurvinder Singh, PSE	2:34 p.m.	yes we can provide those
Court Olson, Engineer	2:36 p.m.	Taking a survey of the public on hybrid heat pump interest is highly suspect in my view. Most people would not know the difference between hybrid and all electric heat pumps.
Kelly Hall, Climate Solutions	2:39 p.m.	How do these heat pump policy replacements fit into the IRP?
Amy Wheelless, NW Energy	2:40 p.m.	In chatting with some HVAC folks, 35' for a setpoint (slide 36) seems somewhat conservative, but not out of the realm of possibility (i.e., 28-35°F is common, based on conversations). In addition, it sounds like there is some work to have "smarter" set points. From an order of magnitude perspective, how might those variables change the impact on the residential baseline forecast (slide 40)? does the heat pump information include any ductless heat pumps that are installed without backup strip heat, which seems somewhat common
Virginia Lohr, Turbonet	2:40 p.m.	Gurvinder, Thanks for the reply. I would like to see the survey.
Amy Wheelless, NW Energy	2:42 p.m.	sorry my slide numbers are off in my other question!
Sophie Glass, Triangle Associates	2:45 p.m.	Let's aim for a break at 2:55 PM (rather than at 2:40 per the agenda)
Kelly Hall, Climate Solutions	2:45 p.m.	Can I follow up with Gurvinder to make sure I understand his previous answer?
Sophie Glass, Triangle Associates	2:46 p.m.	Sure, Kelly.
Court Olson, Engineer	2:46 p.m.	There is no need for discussing a "change over temperature". Modern electric heat pump technology can service all temperatures that we experience here in Washington State. There is no temperature where a switch to gas is needed.
Court Olson, Engineer	2:50 p.m.	It is very frustrating and disappointing that PSE is apparently trying to perpetuate the misinformed idea that electric heat pumps won't work at our lower winter temperatures. This is not true with today's electric heat pumps on the market now.
Sophie Glass, Triangle Associates	2:50 p.m.	Thanks Court - I'll note your comments
Jennifer Coulson, PSE	2:51 p.m.	Hi Kelly - The policy electrification and policy hybrid heat pump are incorporated in scenario 2 & sensitivity F. Hopefully that is more clear, feel free to follow up if needed.
Court Olson, Engineer	2:53 p.m.	This projection of a future with more and more hybrid heat pumps is purely wishful thinking from a gas utility perspective. The market is not taking this pathway.
Court Olson, Engineer	3:03 p.m.	Please be reminded of my request at 2:30 to share my overview perspective on electrification and the challenge that any engineer has in projecting the rate of this transformation.
Sophie Glass, Triangle Associates	3:04 p.m.	Thanks Court we can start with you
Brad Cebulko, Strategen	3:25 p.m.	What is PSE's assumption for the amount of hydrogen that can be blended into the natural gas distribution system?

Name	Time Sent	Comment
Sophie Glass, Triangle Associates	3:25 p.m.	Thanks, Brad, I'll be sure Steve responds to this
Court Olson, Engineer	3:27 p.m.	Making Green Hydrogen requires water. Water is an increasingly precious and potentially scarce resource. Given our desire to maintain hydro electric production here in the NW, along with use of water in agriculture, where does PSE see us getting the water to make Green Hydrogen?
Brad Cebulko, Strategen	3:35 p.m.	Sorry, question for Steve. What is PSE's source for green hydrogen price assumptions?
Gurvinder Singh, PSE	3:39 p.m.	We used E3 as a source, they published a report in 2020. I will post link below
Brad Cebulko, Strategen	3:41 p.m.	What is your source for the technical and economic potentials for RNG in Washington and in North America?
Sophie Glass, Triangle Associates	3:42 p.m.	Thanks, Brad. We will turn to this in a moment
Gurvinder Singh, PSE	3:42 p.m.	Hydrogen price assumptions based on E3 study: https://www.ethree.com/e3-evaluates-hydrogen-opportunities-in-a-low-carbon-future/
Court Olson, Engineer	3:44 p.m.	The Increasing "baseline" load forecast on slide 54 is fundamentally flawed. Demand will be declining over the projected future term shown. Local governments are increasingly restricting the use of gas in buildings where most consumption occurs. State code is limiting gas use in new buildings. Also, some local governments here in PSE territory are promoting and incentivizing switching from gas to electricity for heating space and water in existing buildings, so that existing demand will be increasingly declining, too.
Kelly Hall, Climate Solutions	3:45 p.m.	Piling onto Brad's question, I have a question on PSE's assumption on the available supply to PSE with more and more states updating their GHG reduction requirements. As demand increases (especially with increasing CFS policies), I imagine the supply will be fairly constrained.
Amy Wheelless, NW Energy	3:49 p.m.	and then will those supplies be going to their highest and best uses if PSE is buying up supply? thinking of it from an economy sure standpoint rather than from the utility
Amy Wheelless, NW Energy	3:49 p.m.	economy-wide*
Gurvinder Singh, PSE	3:49 p.m.	RNG sources: North America sourced RNG was https://gasfoundation.org/2019/12/18/renewable-sources-of-natural-gas/
Gurvinder Singh, PSE	3:50 p.m.	The WA RNG is based on our own knowledge of the WA market
Gurvinder Singh, PSE	3:52 p.m.	LT = long term; AGF = American Gas Foundation (the study referenced above)
Brad Cebulko, Strategen	3:52 p.m.	How do these CCA prices compare to the value of RNG for transportation, such as the California LCFS and federal renewable fuel standard?
Meredith Mathis, PSE	3:56 p.m.	https://www.pse.com/IRP/Get-involved/Give-feedback
Meredith Mathis, PSE	3:57 p.m.	You can register for the drop in sessions here: https://www.pse.com/IRP/Get-involved
Sophie Glass, Triangle Associates	3:58 p.m.	sglass@triangleassociates.com