

## 2023 Gas Utility Integrated Resource Plan: PSE webinar with IRP stakeholders

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March 31, 2022

### Overview

On March 31, 2022 Puget Sound Energy (PSE) hosted an online meeting with Integrated Resource Plan (IRP) stakeholders on assumptions for the 2023 Gas Utility Integrated Resource Plan, and to specifically:

- Discuss and provide feedback on:
  - Carbon prices and the social cost of greenhouse gases
  - Gas utility resource alternatives
  - Gas Utility IRP Scenarios

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://pse.com/irp).

### Attendees

A total of 69 stakeholders, PSE staff and facilitators registered for the meeting.

### Registrants included:

Aaron Tam, Alexandra Karpoff, Allison Jacobs, Amreen Pappar, Anne Newcomb, Austin Nnoli, Bill Donahue, Bob Williams, Brett Rendina, Brian Robertson, Christine Bunch, Cindy Vu, Claire Wendle, Corey Corbett, Daniel Handal, David Meyer, Deepa Sivarajan, Diann Strom, Doug Hart, Elizabeth Hossner, Fred Heutte, Gurvinder Singh, James Adcock, Jennifer Coulson, Jennifer Snyder, Jesse Durst, Jessica Zahnow, Joni Bosh, Kara Durbin, Kasey Curtis, Katie Ware, Kelly Xu, Kelly Hall, Larry Becker, Lauren McCloy, Leslie Almond, Lorin Molander, Marc Alberts, Marcus Sellers-Vaughn, Marilyn Subala, Mark Lenssen, Marty Campbell, Melanie Coon, Michal Munoz, Michelle Wildie, Monica Blakeslee-Kish, Niece Weatherby, Nora Hawkins, Patrick Leslie, Phillip Popoff, R.Court Olson, Rachel Clark, Renchang Dai, Rosemary Moore, Ryan Frazier, Sara Leverette, Semra Riddle, Sheri Maynard, Sophie Glass, Stephanie Chase, Thor Angle, Tyler Tobin, Vidushi Raina, Villamor Gamponia, Wendy Gerlitz, Will Henderson, Willard Westre, Zeia Lomax.

## 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	1:05 p.m.	sglass@triangleassociates.com
Claire Wendle, Triangle Associates	1:14 p.m.	Link to recording: <a href="https://www.youtube.com/watch?v=KnxdGxsPofA">https://www.youtube.com/watch?v=KnxdGxsPofA</a> (CCA presentation begins at 16:00)
Sophie Glass, Triangle Associates	1:31 p.m.	Thanks, Jim Adcock. I see your hand and we will get to you next.
Jennifer Snyder (UTC)	1:40 p.m.	There is one clear limit on RNG acquisition price in the law: RCW 80.28.385(1) .....The customer charge for a renewable natural gas program may not exceed five percent of the amount charged to retail customers for natural gas.
Sophie Glass, Triangle Associates	1:41 p.m.	<ul style="list-style-type: none"> <li>• Are there other additional renewable fuel sources we should consider?</li> <li>• Are there other publicly-available data sources for biomethane (RNG) supply curve data we should consider?</li> <li>• Electrification: What types of heat pumps should we model in the electrification scenario?</li> </ul>
Sophie Glass, Triangle Associates	1:41 p.m.	^Questions from PSE to stakeholders
Joni Bosh	1:45 p.m.	G, slide 25 could you explain why gas use increases over time? I know you will address this in a future meeting, but just a summary would be helpful. Thanks
Sophie Glass, Triangle Associates	1:46 p.m.	Thanks, Joni. We've noted your question.
Court Olson, Optimum Bldg Consultants	1:49 p.m.	That answer to Joni's question on increasing demand forecast doesn't make sense to me. If you know demand will be going down, why start with the assumption that it will be going up? Sounds like you are starting your analysis with a known contradiction.
Sophie Glass, Triangle Associates	1:50 p.m.	Thanks, Court. We can come back to you and this question.
Kara Durbin (PSE)	1:56 p.m.	Jennifer, thank you for your earlier comment citing the relevant statutory provision (from HB 1257) regarding RNG. You are right, and we are mindful of this limitation in the statute.
Sophie Glass, Triangle Associates	2:05 p.m.	Full report that is linked on the slide: <a href="https://gasfoundation.org/wp-content/uploads/2019/12/AGF-2019-RNG-Study-Full-Report-FINAL-12-18-19.pdf">https://gasfoundation.org/wp-content/uploads/2019/12/AGF-2019-RNG-Study-Full-Report-FINAL-12-18-19.pdf</a>
Kelly Hall	2:07 p.m.	Can you say more about rules potentially restricting RNG to Washington? Were you referring to the production or use?
Sophie Glass, Triangle Associates	2:07 p.m.	Thanks, Kelly. We will get to you next.
Court Olson, Optimum Bldg Consultants	2:16 p.m.	Doesn't green hydrogen have limited potential of 10 to 15 percent dilution of methane in the pipeline and end appliances?
Sophie Glass, Triangle Associates	2:16 p.m.	Thanks, Court. We will ask this question after Gurvinder finishes this slide.
Court Olson, Optimum Bldg Consultants	2:27 p.m.	"Traditional Heat Pumps" are no longer used. They should be off the table today. Modern heat pumps can operate at temps. well below freezing.
Sophie Glass, Triangle Associates	2:28 p.m.	Court - we've copied this comment into our notes for today. Thanks for your input.
Christine Bunch	2:29 p.m.	Is this analysis only for PSE gas and electric service territory?
Sophie Glass, Triangle Associates	2:29 p.m.	I see your hand, Willard. Can you put your question in the chat? That might help us answer your question more directly.
Court Olson, Optimum Bldg Consultants	2:30 p.m.	This use of "traditional heatpumps" data is outdated and outrageous!

Name	Time Sent	Comment
Phillip Popoff (PSE)	2:31 p.m.	We will be studying impacts on our gas system for the gas utility and then the impact on PSE's electric system.
Phillip Popoff (PSE)	2:31 p.m.	Is that clear?
Deepa Sivarajan (Climate Solutions)	2:33 p.m.	if I'm reading Christine's question right, it was actually about PSE's service territory. I share the question - is this analysis specifically for PSE's service territory (and associated temperature ranges)?
Christine Bunch	2:34 p.m.	Philip, more specifically, how will this study consider non-PSE electric impacts (e.g SCL)? Thank you
Phillip Popoff (PSE)	2:35 p.m.	We are specifically studying just our gas utility and how it would affect our electric system. PSE provides electric service to half of our gas customers. So we would not be studying the impacts on Seattle City Light, Snohomish PUD, or Tacoma Power service territories.
Sophie Glass, Triangle Associates	2:46 p.m.	Questions for Jennifer's presentation:
Sophie Glass, Triangle Associates	2:46 p.m.	<ul style="list-style-type: none"> <li>• Are we considering the right input components?</li> <li>• Are we missing anything?</li> <li>• Are there other scenarios and sensitivities we should be considering?</li> <li>• Would you change anything?</li> </ul>
Court Olson, Optimum Bldg Consultants	2:51 p.m.	"Hybrid heat pumps" that use natural gas as backup are outdated today. Modern heat pumps don't need the gas backup. PSE appears to be voicing wishful thinking as if technology hasn't passed by the need for gas backup to air sourced heat pumps. Also, as Bill Westre has commented, ground source heat pumps have never needed a gas or base board heat source back up, because they are not sensitive to outside air temp.
Deepa Sivarajan (Climate Solutions)	2:51 p.m.	can you speak more to the difference between the reference case and carbon constraint scenario?
Christine Bunch	2:53 p.m.	How will hybrid heat pumps be incentivized - by the electric ratepayers or gas ratepayers?
Sophie Glass, Triangle Associates	2:54 p.m.	Thanks, Christine. We will get to your question.
Christine Bunch	2:55 p.m.	Clarification question: Is the full electrification scenario only for gas/electric PSE customers?
Jennifer Snyder (UTC) (she/her)	3:00 p.m.	To clarify, only incorporating electrification policies once they are passed, no scenarios that they may pass?
Kelly Hall	3:01 p.m.	Agree with Jennifer. I would like to see a scenario that also aligns with modeling and gas/electric demands from our State Energy Strategy.
Joni Bosh	3:04 p.m.	Agree with Jennifer and Kelly. It seems PSE should also consider demand changes if other jurisdictions might have or will soon adopt a glide path to electrify.
Kelly Hall	3:04 p.m.	And in the carbon constraint scenario, I think it's really important that PSE reduce its own emissions instead of treating RNG like a REC.
Willard Westre	3:07 p.m.	For new construction it doesn't make sense to build new gas lines to use hybrid type heat pumps to meet peak loads. Seems like this is a strategy to insure growth of gas infrastructure.
Court Olson, Optimum Bldg Consultants	3:08 p.m.	Agree with Mr. Westre.
James Adcock	3:08 p.m.	I agree with Court that it is important to get rid of "old fashioned heat pumps" in the analysis lest it meaninglessly skew the results -- since those are not sold anymore.
Joni Bosh	3:53 p.m.	I want to underscore my concern with all types of renewable hydrogen, effects on pipes, appliances etc., not just green hydrogen.
James Adcock	3:54 p.m.	+Joni -- not good for PSE's reputation whenever some "old NG pipe" somewhere blows up burning down a block of building.
Claire Wendle, Triangle Associates	3:57 p.m.	Link to feedback form: <a href="https://pse-irp.participate.online/feedback-form">https://pse-irp.participate.online/feedback-form</a>

Name	Time Sent	Comment
Sophie Glass, Triangle Associates	4:01 p.m.	<a href="mailto:sglass@triangleassociates.com">sglass@triangleassociates.com</a>
Sophie Glass, Triangle Associates	4:01 p.m.	9144209395