

PacifiCorp - Stakeholder Feedback Form

2021 Integrated Resource Plan

PacifiCorp (the Company) requests that stakeholders provide feedback to the Company upon the conclusion of each public input meeting and/or stakeholder conference calls, as scheduled. PacifiCorp values the input of its active and engaged stakeholder group, and stakeholder feedback is critical to the IRP public input process. PacifiCorp requests that stakeholders provide comments using this form, which will allow the Company to more easily review and summarize comments by topic and to readily identify specific recommendations, if any, being provided. Information collected will be used to better inform issues included in the 2021 IRP, including, but not limited to the process, assumptions, and analysis. In order to maintain open communication and provide the broader Stakeholder community with useful information, the Company will generally post all appropriate feedback on the IRP website unless you request otherwise, below.

Date of Submittal [Click here to enter date.](#)

*Name: Rose Anderson

Title: **Economist**

*E-mail: Rose.anderson@state.or.us

Phone: [Click here to enter text.](#)

*Organization: Oregon Public Utility Commission

Address: [Click here to enter text.](#)

City: [Click here to enter text.](#) State: [Click here to enter text.](#) Zip: [Click here to enter text.](#)

Public Meeting Date comments address: 8/28/2020 Check here if not related to specific meeting

List additional organization attendees at cited meeting: [Click here to enter text.](#)

***IRP Topic(s) and/or Agenda Items:** List the specific topics that are being addressed in your comments.

2021 CPA, Demand Response participant costs

Check here if any of the following information being submitted is copyrighted or confidential.

Check here if you do **not** want your Stakeholder feedback and accompanying materials posted to the IRP website.

***Respondent Comment:** Please provide your feedback for each IRP topic listed above.

OPUC Staff (Staff) requests that PacifiCorp make improvements to the Participant Costs value for Demand Response (DR) resources in the 2021 CPA. Staff's recommendations are informed by recent studies of demand response customer experiences and by a more complete incorporation of the CPUC DR methodology.

To provide some background, in the 2019 CPA the levelized cost calculation for DR resources included an element called Participant Costs. Participant Costs consisted of costs to participants in a DR program, including Transaction Costs, Value of Service Lost, and Capital Costs to Participant. Participant Costs for DR resources were estimated using Participant Benefits as a proxy, similar to CPUC methodology for demand response cost/benefit analysis.^{1,2} CPUC assumes Participant Benefits are a good proxy for Participant Costs because:

It is reasonable to assume that participants in voluntary DR programs perceive their costs as being less than the benefits, or at the very least participants perceive that they are "breaking even." Therefore, the maximum possible value of their costs is equal to the value of the benefits.³

¹ Applied Energy Group. PacifiCorp Conservation Potential Assessment for 2019-2038. Volume 3: Class 1 and 3 DSM Analysis. March, 2019. Pages 30-31.

² CPUC. 2016 Demand Response Cost Effectiveness Protocols. July 2016. Page 47. Available at: <https://www.cpuc.ca.gov/general.aspx?id=7023>

³ CPUC. 2016 Demand Response Cost Effectiveness Protocols. July 2016. Page 46. Available at: <https://www.cpuc.ca.gov/general.aspx?id=7023>

* Required fields

The value used to represent Participant Benefits, and therefore the maximum possible value of Participant Costs, was the value of program incentives received by customers.⁴ This incentive value was multiplied by 75 percent to represent the likelihood that customers are actually doing better than ‘breaking even’ in demand response programs, or else they would be unlikely to participate.

Staff recommends the following in order to improve the Participant Cost assumptions in the 2021 CPA:

- 1) The 2019 CPA assumed that DR participant costs are equal to 75 percent of the value of a DR program’s incentives. For most DR resources, this approach is consistent with CPUC treatment. However, for AC cycling programs the CPUC protocols only apply 35 percent of customer incentives to Participant Costs, recognizing that the customer discomfort, and therefore the Value of Service Lost, to customers from AC cycling programs is minimal.

The Rocky Mountain Power website for the Cool Keeper program notes,

Most customers don't notice the typical temperature change of approximately 1 to 4 degrees. More than 92,000 customers are currently participating in the program, and 98 percent of Cool Keeper participants are satisfied with the program.

The 2021 CPA should follow CPUC’s methodology by using 35 percent of program incentives to represent Participant Costs for AC cycling programs.

PacifiCorp Response:

The 2021 Conservation Potential Assessment (CPA) will use 35 percent of program incentives to represent participant costs for air conditioning (AC) cycling programs.

- 2) Given that smart thermostat programs are being shown to result in minimal discomfort to participants, and that smart thermostats are capable of pre-cooling and pre-heating in advance of demand response events in order to increase comfort of participants, PacifiCorp should utilize Participant Costs lower than 75 percent of incentives for participants in smart thermostat programs.^{5,6}

OPUC Staff recommends a value of 35 percent or less, consistent with the value proposed in the 2021 NWPCC Power Plan for residential space heating and space cooling.⁷ In Bring Your Own Thermostat programs, a higher value may be justified to reflect the cost of a smart thermostat to the customer.

PacifiCorp Response:

The 2021 CPA will use 35 percent for participant costs for residential space heating and space cooling.

- 3) A recent BPA study on demand response for water heaters indicates that customers reported a loss of hot water about equally in weeks with and without a DLC event. Only 17 percent of customers ran out of hot water more than a couple of times in eight months for any reason (DLC event or other reason). Additionally, in Portland General Electric’s (PGE) multifamily water heater pilot application, PGE

⁴ Applied Energy Group. PacifiCorp Conservation Potential Assessment for 2019-2038. Volume 3: Class 1 and 3 DSM Analysis. March, 2019. Pages 30-31.

⁵ Nexant. Xcel Energy Colorado Smart Thermostat Pilot – Evaluation Report. May 12, 2017. Page 118.

⁶ ACEEE. National Study of Potential of Smart Thermostats for Energy Efficiency and Demand Response. 2016. Page 2-8

⁷ NWPC. Residential DR Product Assumptions (xlsx). Available at: <https://www.nwcouncil.org/energy/energy-advisory-committees/demand-response-advisory-committee>

* Required fields

expected to manage its program so that customers would perceive no change to their hot water availability. A recent evaluation of the multifamily water heater pilot showed that only six percent of aware tenants had any complaints about hot water availability, and only three percent reported a change in hot water availability over time, suggesting their issues could have been due to the program.^{8,9}

Given that it is possible to run a DLC Water Heating program with little or no decline in customer experience, PacifiCorp should apply a Participant Cost of 25 percent of incentive value or less for DLC residential Water Heating.¹⁰ This would be consistent with the water heating participant cost assumption proposed for the 2021 NWPCC Power Plan.¹¹

PacifiCorp Response:

The 2021 CPA will use 25 percent for Participant cost for direct load control (DLC) residential water heating.

- 4) Finally, the 2019 CPA lacked sensitivity analysis of Participant Costs. Given that participant costs are highly uncertain and were listed by CPUC as one of the variables likely to influence the cost-effectiveness of DR, PacifiCorp should perform a Participant Costs sensitivity analysis similar to that included in the CPUC demand response protocols.¹²

Participant Cost sensitivity analysis should be performed for each DR resource, and it should include a low, reference, and high Participant Cost assumption for each. This would result in reporting of high, medium, and low leveled costs for demand response resources.

PacifiCorp Response:

The California Public Utilities Commission (CPUC) 2016 protocols for demand response provide specific guidance for estimating low and high participant cost sensitivities. Estimation of impacts to customer program participation due to low and high participant costs however, are not prescribed in the protocols and there is limited demand response program participation research from which to develop estimates for elasticity of customer demand. The 2021 CPA will follow the CPUC guidance in creating low and high participant cost sensitivities.

Data Support: If applicable, provide any documents, hyper-links, etc. in support of comments. (i.e. gas forecast is too high - this forecast from EIA is more appropriate). If electronic attachments are provided with your comments, please list those attachment names here.

Demand Response feedback -OPUC Staff-.docx

Recommendations: Provide any additional recommendations if not included above - specificity is greatly appreciated. OPUC Staff recommends Participant Costs be reduced for several types of demand response, as further explained in the attached document.

⁸ PGE. Docket No. UM 1827. PGE's Application for Deferred Accounting of Costs Associated with the PGE Demand Response Water Heater Pilot. Page 7.

⁹ [Guidehouse. Docket No. UM 1827](#). Multifamily Residential Demand Response Water Heater Pilot Evaluation.

¹⁰ https://www.bpa.gov/EE/Technology/demand-response/Documents/20181118_CTA-2045_Final_Report.pdf

¹¹ NWPCC. Residential DR Product Assumptions (xlsx). Available at: <https://www.nwcouncil.org/energy/energy-advisory-committees/demand-response-advisory-committee>

¹² CPUC. 2016 Demand Response Cost Effectiveness Protocols. July 2016. Page 14-15. Available at: <https://www.cpuc.ca.gov/general.aspx?id=7023>

Please submit your completed Stakeholder Feedback Form via email to IRP@PacifiCorp.com

Thank you for participating.

* Required fields