

PacifiCorp - Stakeholder Feedback Form

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 call, 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 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 post appropriate feedback on the IRP website based on your selection below.

Date of Submittal 2024-08-09

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Address:

City:

State:

Zip:

Public Meeting Date comments address:

Check here if related to specific meeting

List additional organization attendees at cited meeting:

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

Distributed Generation Study, Sensitivities

Check here if you want your Stakeholder feedback and accompanying materials posted to the IRP website.

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

Questions: Does the distributed generation study include any locational forecasting of DER adoption more specific than state level? Does the IRP evaluate any interactive effects between distributed energy resource adoption and other customer-sited technologies? For example, interactive effects between high DER adoption and high electrification, or high adoption of EVs? In the June 26 - 27 presentation, slide 42 states \u001CNet-billing states tied to avoided cost forecast from IRP.\u001D In this context, does avoided cost refer to PURPA rates for qualifying facilities? Or something else? How are forecasts for future avoided costs developed? In the June 26 - 27 presentation, slide 42 states the value of backup power is \u001CIncluded in customer benefits of PV + Battery technology.\u001D How specifically is the value of backup power used as an input to the \u001CHigh\u001D forecast? Why does PacifiCorp believe that it is appropriate to assume no value for backup power in the \u001Cbase\u001D case as well as the \u001Clow\u001D case? What assumptions does the distributed generation study include about how customer batteries are dispatched? For example, how many hours, how many days a year, or which hours? Does the presence of solar/storage systems in the adoption forecasts result in a different load profile than solar alone? Does the load forecast account for the load effects of a customer dispatching their battery, for example in response to a time of use rate? Have PacifiCorp\u0019s past RFPs allowed for distributed generation resources to bid into the RFP? For example, could a virtual power plant bid into an RFP as a potential resource? Recommendations: Increase the granularity of distributed energy resource forecasting and include locational forecasts of distributed energy resource adoption. Locational forecasting of DER adoption is necessary to capture the full value of DER resource additions and supports efficient investment decisions. See the following reports: NREL: \u001CValue of Distributed Energy Resources Largely Depends on Three Things: Location, Location, Location.\u001D Available at: <https://emp.lbl.gov/news/value-distributed-energy-resources> Electric Power Systems

* Required fields

Research: \u001CValuing Distributed Energy Resources for Non-Wires Alternatives.\u001D Available at: <https://www.sciencedirect.com/science/article/pii/S0378779624004073> Explore multiple scenarios that integrate potential futures for distributed energy resource adoption and other demand-side technology, in order to understand how DERs could enable additional loads from electrification. Ensure next RFP invites participation from distributed energy resources and aggregated distributed energy resources that are able to meet the energy, capacity, and grid services needs identified in the RFP. Integrate any competitive distributed energy resource bids from RFPs into future IRPs as selectable resources in the supply-side resource table. Include future scenarios that evaluate interaction of DERs and electrification. Include a sensitivity that evaluates the interactive effects between high distributed energy generation adoption and high electrification. Incorporate use of the Energy Infrastructure Reinvestment act to retire or repurpose eligible resources as a scenario or sensitivity to understand the potential impacts on unit retirement date and replacement portfolio.

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.

NREL: \u001CValue of Distributed Energy Resources Largely Depends on Three Things: Location, Location, Location.\u001D Available at: <https://emp.lbl.gov/news/value-distributed-energy-resources> Electric Power Systems Research: \u001CValuing Distributed Energy Resources for Non-Wires Alternatives.\u001D Available at: <https://www.sciencedirect.com/science/article/pii/S0378779624004073>

Recommendations: Provide any additional recommendations if not included above - specificity is greatly appreciated.

PacifiCorp Response:

- a) Does the distributed generation study include any locational forecasting of DER adoption more specific than state level?

There is no locational forecasting in this study

- b) Does the IRP evaluate any interactive effects between distributed energy resource adoption and other customer-sited technologies? *For example*, interactive effects between high DER adoption and high electrification, or high adoption of EVs?

We do include the private generation forecast in our baseline projections, and also use that forecast to inform battery forecasts for the DR programs as well. We do use the expected case and not a high generation case for our reference case projections.

- c) In the June 26 - 27 presentation, slide 42 states \u001CNet-billing states tied to avoided cost forecast from IRP.\u001D In this context, does avoided cost refer to PURPA rates for qualifying facilities? Or something else? How are forecasts for future avoided costs developed?

The avoided cost forecast for net-billing states reflects the hourly marginal energy values for locations around the Company's system based on the 2023 IRP preferred portfolio. The hourly energy values are weighted for each of the hourly profiles for different private generation technology types. Avoided cost does not refer to PURPA rates for qualifying facilities.

- d) In the June 26 - 27 presentation, slide 42 states the value of backup power is \u001CIncluded in customer benefits of PV + Battery technology.\u001D How specifically is the value of backup power used as an input to the \u001Chigh\u001D forecast?

* Required fields

The value of backup power is used as a direct annual benefit in the economic analysis portion of the modeling process. This influences customer paybacks and other economic metrics which are inputs in the ultimate adoption curves.

- e) Why does PacifiCorp believe that it is appropriate to assume no value for backup power in the \u001Cbase\u001D case as well as the \u001Clow\u001D case?

As discussed on stakeholder calls, the scenarios were created to provide a bandwidth of potential DER adoption futures, and the value of backup power was added in the high case to simulate enhanced adoption tied to actual customer value placed on having backup power.

- f) What assumptions does the distributed generation study include about how customer batteries are dispatched? For example, how many hours, how many days a year, or which hours?

Part of the modeling process includes an hourly billing analysis that requires customer load and resource dispatch shapes. Battery dispatch is determined by reducing onsite energy use and customer demand charges (where applicable). The batteries are assumed to charge/dispatch daily (one cycle/day), and the total hours and time of day is determined by individual customer load shapes and onsite energy use.

- g) Does the presence of solar/storage systems in the adoption forecasts result in a different load profile than solar alone?

The solar profile in the solar+storage configuration would not change, but storage is used to reduce onsite customer load and demand charges where applicable. Please see Figure 3-1 in the 2023 report¹ as an example.

- h) Does the load forecast account for the load effects of a customer dispatching their battery, for example in response to a time of use rate?

Please see Figure 3-1 in the 2023 report¹ as an example.

- i) Have PacifiCorp\u0019s past RFPs allowed for distributed generation resources to bid into the RFP? For example, could a virtual power plant bid into an RFP as a potential resource?

PacifiCorp\u0019s 2022 All-Source RFP allowed for all resource types, including demand response resources, which could be a type of virtual power plant.

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

Thank you for participating.

¹ “2023-2042 PRIVATE GENERATION FORECAST Behind-The-Meter Resource Assessment: PacifiCorp.” Feb 2, 2023. Available online: [PacifiCorp_Private_Generation_Resource_Assessment.pdf](#)