

PacifiCorp - Stakeholder Feedback Form

2023 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 2023 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 2022-03-03

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Title: _____

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Phone: (972) 408 - 7813

*Organization: Renewable Northwest

Address: _____

City: _____ State: OR Zip: 97201

Public Meeting Date comments address: 02-25-2022 Check here if not 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.

SSR Table and Renewables Combined Study

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.

Renewable Northwest appreciates PacifiCorp's consideration of hybrid and standalone energy storage resources in the 2023 IRP. We recommend the Company considers DC-Coupled solar + storage (with a 1.5 & 1.7 ILR and 4-hour Li-ion battery) as a distinct resource as part of their SSR table and subsequent IRP modeling. DC-coupled hybrid resources typically have lower interconnection costs than AC-coupled systems, as they rely on only one single point of interconnection. This single point of interconnection in a DC-coupled system also makes it economically viable to oversize the PV system and store excess generation in batteries, thus supporting cost-effective time-shifting of excess solar. We also recommend considering additional battery storage durations for the SSR table and the IRP modeling. 6 and 8-hour battery storage durations are increasingly being utilized across the US and with increasing penetration of renewable energy resources, it is essential PAC looks at medium and long-duration storage as one of the avenues to store and dispatch excess renewable energy during times when the grid requires it. NREL's 2021 ATB has detailed cost curves going up till 10-hours for utility-scale Li-ion battery storage.

PacifiCorp Response:

At present there are no revenue grade, ANSI-approved DC meters however, the Company recognizes the technology will continue to evolve. Proxy resource modeling in the 2023 IRP is intended to be representative of expected costs and operational characteristics across a range of configurations and at this time is based on AC configuration but does not preclude other constructs from participating in all-source requests for proposals. PacifiCorp has commissioned a study of the cost and performance characteristics of renewable resources and energy storage and will share the results of that study for discussion at a future 2023 IRP public-input meeting.

* Required fields

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.

https://atb.nrel.gov/electricity/2021/utility-scale_battery_storage &
<https://www.nrel.gov/docs/fy21osti/77917.pdf> (DC-coupled)

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

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

Thank you for participating.