

PacifiCorp - Stakeholder Feedback Form

2019 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 2019 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 8/13/2018

*Name: Lisa Tormoen Hickey, Tormoen Hickey LLC

Title: Regulatory attorney consultant

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Phone: 719.302.2142

*Organization: Interwest Energy Alliance

Address: 14 N. Sierra Madre

City: Colorado Springs State: CO Zip: 80903

Public Meeting Date comments address: 7/27/2018 Check here if not related to specific meeting

List additional organization attendees at cited meeting: Lisa Tormoen Hickey

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

IntraHour Dispatch Credit

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

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

Interwest does not support the intrahour dispatch credit under the methodology as proposed, and as applied to the resources proposed. If the methodology were modified to provide for credit to be given to all technologies which can provide intrahour load-following, including grid scale solar and wind technologies, Interwest would likely support this type of credit, but only if methodology were developed by independent third party consultant and vetted through a technical review committee with opportunity for public comment first.

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.

The intrahour dispatch credit should not be incorporated in any IRP modeling, unless the methodology and application can be modified substantially to avoid discrimination against resources which can provide intrahour dispatch but which are not included in the resources which are to be credited. Grid-scale PV solar and wind also provide these services, and have been proven to provide higher response accuracy than natural gas fired resources. Inverter-based resources can reliably provide frequency control, voltage control and ramping capability equal to or faster than natural gas resources. See CAISO/NREL study summary in Utility Dive article "California solar pilot shows how renewables can provide grid services" pub. Oct. 16, 2017, found here: <https://www.utilitydive.com/news/california-solar-pilot-shows-how-renewables-can-provide-grid-services/506762/> and see also the CAISO/NREL study "Demonstration of Essential Reliability Services by a 300-MW Solar Photovoltaic Power Plant" pub. March 2017, found here: <https://www.nrel.gov/docs/fy17osti/67799.pdf>. The study demonstrated that solar PV provides 90% response accuracy compared with "best in class" natural gas resources which provided only 60% response accuracy.

* Required fields

Wind has for some years been known to provide intrahour dispatch capabilities as discussed in the American Wind Energy Association report "Renewable Energy Builds a More Reliable and Resilient Electricity Mix", M. Goggin, May 2017, page 31, found here: <http://awea.files.cms-plus.com/FileDownloads/pdfs/AWEA%20Renewable%20Energy%20Builds%20a%20More%20Reliable%20and%20Resilient%20Electricity%20Mix.pdf>, (click on #6, re: reliability services); and NREL's "Active Power Controls From Wind Power: Bridging the Gaps", found here: <https://www.energy.gov/sites/prod/files/2014/01/f6/Active%20Power%20Controls%20from%20Wind%20Power.pdf>.

When coupled with advanced forecasting methods, solar and wind can provide intrahour dispatch and should be provided the credit, if applied to any resources in your fleet.

Recommendations: Provide any additional recommendations if not included above - specificity is greatly appreciated. Please publish findings and final recommendations of technical review committees which review your reports which are used to develop modeling assumptions.

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

Thank you for participating.