

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 10/20/2022

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Title: _____

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Phone: 503-580-0209

*Organization: Renewable Energy Coalition

Address: _____

City: _____ State: _____ Zip: _____

Public Meeting Date comments address: _____ 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.
Qualifying Facilities

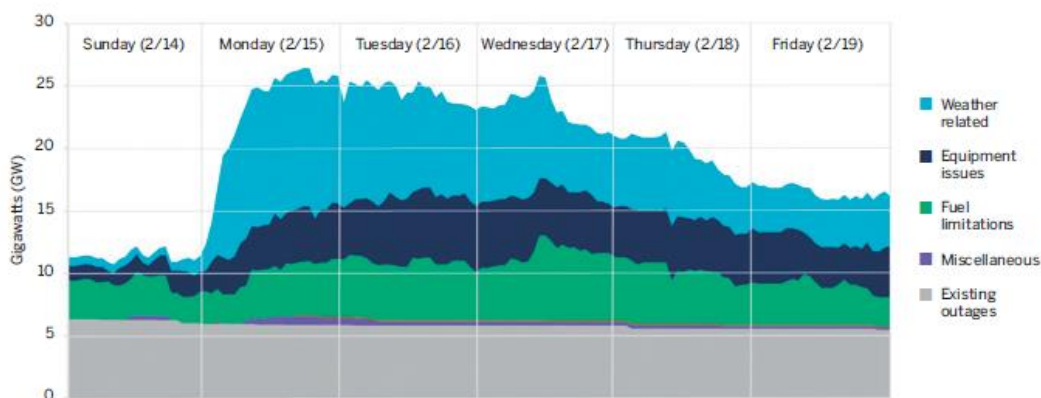
Check here if you do **not** want your Stakeholder feedback and accompanying materials posted to the IRP website.

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

1. Please provide an update on any commercial agreements regarding the Natrium plant.
2. Because of the possibility that the Huntington contract can be exited due to environmental regulation, OPUC Staff requests the 2023 IRP include a model run to examine the results of the relaxation of minimum take assumptions at the Huntington plant, removing any minimum take constraint at Huntington after 2023. Endogenous retirement of Huntington would be allowed in any year in this sensitivity.
3. Coal and gas plants tend to have difficulty in extreme heat or cold. Thermal plants require more power to cool themselves in extreme heat, reducing the amount of power available to the grid.^{1,2} They also tend to trip off or go into forced outages during weather events. For example, during a May heat wave in ERCOT, about 3,000 MW of gas capacity tripped offline throughout the day, forcing requests for customers to reduce demand.³ During a February 2017 heat wave in Australia, 14% of coal and gas capacity was unavailable as a result of faults largely related to the heat.⁴ On PacifiCorp's system, Jim Bridger units have recently tripped during heat waves. Recently, FERC, PJM, and other RTOs have considered new ways to think about resource performance and capacity accreditation of thermal resources.⁵ New methods have been proposed to more accurately represent the reliability contribution of thermal generators by taking into account the distribution of system outages and potential correlations in outages across a generation fleet.^{6,7}

* Required fields

FIGURE 5
Correlated Outages for Natural Gas Generators by Cause During the ERCOT February 2021 Event



Note: Extreme cold temperatures began on Monday morning.

Source: Electric Reliability Council of Texas (2020c).

Increasingly, an average ‘Forced Outage Rate’ may not be representative of the actual reliability of thermal units.⁸

Please explain whether PacifiCorp has recently re-evaluated its calculation of capacity contribution/Forced outage rates for thermal generators.

- Has PacifiCorp recently considered whether improvements should be made to the capacity contribution or Forced Outage Rate calculation used in IRP modeling for thermal units?
- How has PacifiCorp accounted for the risks of thermal generation becoming unavailable during extreme weather in its calculation of capacity contribution/Forced Outage Rates for thermal units, especially as the likelihood of extreme weather events increases with climate change?

¹ Australia Institute. [Can’t stand the heat: The energy security risk of Australia’s reliance on coal and gas generators in an era of increasing heatwaves](#). Page 15.

¹ Australia Institute. [Can’t stand the heat: The energy security risk of Australia’s reliance on coal and gas generators in an era of increasing heatwaves](#). Page 15-16.

¹ Institute for Energy Economics and Financial Analysis. [May heat wave exposes myth of fossil fuel reliability as Texas coal- and gas-fired generators fail early season performance test](#).

¹ Australia Institute. [Can’t stand the heat: The energy security risk of Australia’s reliance on coal and gas generators in an era of increasing heatwaves](#). Page 2.

¹ Advanced Energy Economy. [GETTING CAPACITY RIGHT: HOW CURRENT METHODS OVERVALUE CONVENTIONAL POWER SOURCES](#).

¹ Advanced Energy Economy. [Accrediting Resource Adequacy Value to Thermal Generation](#). P 6-7.

¹ ESIG. [Resource Adequacy for Modern Power Systems](#).

¹ ESIG. [Resource Adequacy for Modern Power Systems](#).

¹ Advanced Energy Economy. [Accrediting Resource Adequacy Value to Thermal Generation](#). P 9.

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.

⁸ Advanced Energy Economy. [Accrediting Resource Adequacy Value to Thermal Generation](#). P 9.

* Required fields

Recommendations: Provide any additional recommendations if not included above - specificity is greatly appreciated. This feedback and questions can be posted to the IRP website.

PacifiCorp Response (10/31/22):

- 1.) No update is available regarding commercial agreements. Negotiations are ongoing.
- 2.) The 2023 IRP will not include take-or-pay pricing as a base model assumption for Huntington in consideration of the possible application of environmental clauses.
- 3.) While we have not adjusted our FOR assumptions, BHE has been complying with additional NERC requirements regarding extreme weather preparedness. PacifiCorp has always performed weatherization on the thermal plants, but weatherization measures/actions are now being formalized by NERC.
- 4.) FOR assumptions have not changed due to existing weatherization measures and improved extreme weather planning.

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

Thank you for participating.