

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 8/3/2021

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

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*Organization: Sierra Club

Address: 2101 Webster Street, Suite 1300

City: Oakland

State: CA

Zip: 94612

Public Meeting Date comments address: 7/30/2021

Check here if not related to specific meeting

List additional organization attendees at cited meeting:

Lindsay Beebe, Rose Monahan, and Ed Burgess

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

1) Coal Fuel Contracts & Pricing Tiers, 2) Front Office Transactions, 3) Transmission, 4) Carbon Capture, 5) Natrium Project, and 6) Regional Haze Assumptions

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.

1. Coal Fuel Contracts & Pricing Tiers

- a. Please explain whether PLEXOS is able to accommodate different pricing tiers for fuel supply and/or minimum take provisions from Coal supply agreements.
- b. Please provide the pricing tiers assumed for each plant for production cost modeling purposes (i.e. marginal cost of generation).
- c. Please provide the pricing tiers assumed for each plant for calculation of the revenue requirement.
- d. Please explain whether any of the coal units in PacifiCorp's fleet are assumed to operate as "must run" in PLEXOS. If so, please identify which units.

PacifiCorp Response

Tiered fuel pricing in dollars per million British thermal units (MMBtu) is modeled in the Plexos model. Please refer to the confidential data disc accompanying PacifiCorp's 2021 Integrated Resource Plan (IRP), specifically folder "Input Assumptions\Master Assumptions\BaseCase\Master," file "Scenario Master_BaseCase 20210519.xlsx," tab "10 - Coal Cost Incrementl by Volume."

* Required fields

Take-or-pay minimum fuel quantities in MMBtu are modeled in Plexos. This is done by segmenting into tiers the fuel costs and matching against the MMBtu to purchase as follows: take-or-pay, tier 1, tier 2, up to tier 3. Please refer to the Company’s response to subpart (a) above.

2. Front Office Transactions

- a. Please provide the capacity limits on the availability of front office transactions at the highest temporal resolution.
- b. Please explain whether FOT availability is assumed to change over the year either seasonally or hourly.
- c. Please provide the FOT availability limits as used in the Company’s 2019 IRP and explain any differences.
- d. Please describe and provide the numerical values of any energy limits on imports to the Company’s system.
- e. Please explain whether the Company will be investigating portfolios or conducting sensitivity analysis based on different FOT availability. Please specify the scenarios.

PacifiCorp Response

Please refer to PacifiCorp’s 2021 Integrated Resource Plan (IRP), Volume I, Chapter 7 (Resource Options), page 213, Table 7.11 (Maximum Available Front Office Transaction Quantity by Market Hub) for the front office transactions (FOT) capacity limits and assumed availability.

3. Transmission

- a. Please identify whether any of the RFP short list sites correspond to PacifiCorp’s planned transmission expansion projects. Please provide list cross referencing these.
- b. Please provide an estimate of the incremental renewable resource additions that each planned transmission project will be able to support.

PacifiCorp Response

As discussed in PacifiCorp’s 2021 Integrated Resource Plan (IRP), Volume I, Chapter 1 (Executive Summary), page 3, the following projects resulting from PacifiCorp’s 2020 All Source Request for Proposals (2020AS RFP) require completion of both of the following transmission projects:

- 416 miles of new transmission from the new Aeolus substation near Medicine Bow, Wyoming, to the Clover substation near Mona, Utah (Energy Gateway South).
- 59 miles of new transmission from the Shirley Basin substation in southeastern Wyoming to the Windstar substation near Glenrock, Wyoming (Energy Gateway West Sub-Segment D.1).

| Project / Facility Name | Resource type | Contract Type | Generating Asset (megawatts (MW)) |
|-------------------------|---------------|---------------|-----------------------------------|
| Cedar Springs IV | Wind | PPA* | 350.4 MW |
| Boswell Springs | Wind | PPA* | 320 MW |
| Two Rivers Wind Project | Wind | PPA* | 280 MW |
| Anticline | Wind | PPA* | 100.5 MW |
| Rock Creek I BTA | Wind | BTA** | 190 MW |
| Rock Creek II 400 | Wind | BTA** | 400 MW |

* Required fields

*PPA = power purchase agreement
**BTA = build and transfer agreement

Please refer to PacifiCorp's 2021 Integrated Resource Plan (IRP), Volume I, Executive Summary, Table 1.1 (Transmission Projects Included in the 2021 IRP Preferred Portfolio) that provides the incremental renewable resource additions associated with each transmission segment.

4. Carbon Capture

- a. Please explain whether the Company's current IRP will investigate the role of CCUS technologies:
 - i. Will CCUS be available as an option for certain coal units? If yes, please specify the units and provide the cost and performance characteristics assumed (including the change in the coal unit's operations)
 - ii. Will CCUS be included exogenously in the model for certain coal units? If so, will this be a sensitivity run or will it be included in all runs.

PacifiCorp Response

Volume I, Chapters 8 and 9 of PacifiCorp's recently-filed IRP provide additional information on the selection of the preferred portfolio and the inclusion of resource portfolios. PacifiCorp analyzed a portfolio that included CCUS. Please also see action plan item 1d that discusses next steps related to CCUS.

5. Natrium Nuclear Project

- a. Please confirm that PacifiCorp plans to include the Natrium Project in its preferred resource portfolio.
- b. Please explain whether PacifiCorp plans to analyze any resource portfolios that do not include the Natrium project.

PacifiCorp Response

The NatriumTM advanced nuclear demonstration project is included in the preferred portfolio within PacifiCorp's 2021 IRP. Please see Volume I, Chapters 8 and 9 that provide additional information on the preferred portfolio and analysis of a portfolio that does not include the project.

6. Regional Haze Assumptions

- a. Please confirm that PacifiCorp does not plan to model SCRs at any of its Utah or Wyoming coal plants for Regional Haze compliance.
- b. Please specify PacifiCorp's Regional Haze compliance assumptions for its coal plants in Utah and Wyoming.

PacifiCorp Response

In PacifiCorp's recently published 2021 IRP, PacifiCorp did not model SCR on its Utah coal plants because there are no state or federal laws that require SCR on those units. PacifiCorp did not model SCR on its Dave Johnston or Naughton units for the same reason. The requirement to install SCR at Wyodak is currently stayed and is the subject of ongoing mediation and litigation settlement. In 2020, the state of Wyoming removed the requirement to install SCR on Jim Bridger Unit 1 and Jim Bridger Unit 2, and initiated rulemaking processes with the United States (U.S.) Environmental Protection Agency (EPA) to remove federal requirements for SCR on those units. That rulemaking process has yet to be resolved, and, as a participant, Sierra Club is fully aware of the unresolved nature of the proceedings.

For upcoming regional haze compliance requirements, in lieu of SCR, PacifiCorp modeled operating limits, which align with its proposals for Utah and Wyoming for the U.S. EPA regional haze second planning period. PacifiCorp acknowledges that SCR, or other retrofit considerations, may be proposed by state or federal agencies, and it will include sensitivity modeling runs with any such requirements that become required by law. Currently, no state or federal agency has required retrofits on PacifiCorp units for the U.S. EPA second planning period compliance, and the Company has not proposed that compliance approach.

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.

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.