

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 7/11/2019

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Address: Click here to enter text.

City: Click here to enter text. State: Click here to enter text. Zip: Click here to enter text.

Public Meeting Date comments address: 6/21/2022 Check here if not related to specific meeting

List additional organization attendees at cited meeting: Click here to enter text.

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

Modeling assumptions, B2H, transmission, EGS, Storage

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.

In the June 21 Public Input Meeting, PacifiCorp indicated the SO model may not always be able to select transmission endogenously, and identified an issue with endogenous transmission selection as the reason for cases like P-22 that select specific transmission in a specific year. Please elaborate on the circumstances when SO is not able to select transmission endogenously. Please briefly describe the reason for this issue.

PacifiCorp Response:

The System Optimizer model (SO model) can select endogenously from the transmission upgrade options made available to it. However, certain transmission segments may include benefits to other transmission segments, such as higher transfer capabilities on other paths, which cannot be incorporated into the model logic. Per the April and November 2018 public-input meeting materials and discussion, performance and topology limitations restrict the number and type of endogenous options that can be modeled. Endogenous transmission modeling has on average tripled SO model run times. Endogenous modeling can incorporate new or expanded transmission capacity between two transmission bubbles, but not between three or more bubbles. Incremental capacity that is “intra-bubble” also cannot be modeled. Some potential options have secondary impacts such as on Path-C constraints or may require three or more bubbles (this is the case with the Boardman-to-Hemingway (B2H) transmission project). Consequently, the B2H project cannot be adequately included as endogenous transmission options for model selection as the benefits and functionality of the line would be underrepresented. The net

* Required fields

benefits and/or costs of these options are therefore assessed in separate portfolios that force the segment in the model in order for them to be fully represented.

2.

In the B2H portfolios, P-25 and P-26, what year was B2H assumed to be in service? Please provide a brief description of why this year was chosen.

PacifiCorp Response:

B2H is assumed to be in-service in 2026 consistent with discussions with Idaho Power, the project sponsor.

3.

Was B2H ever allowed to be selected endogenously in any of PacifiCorp's IRP portfolios? If not, please explain PacifiCorp's reasoning for excluding it.

PacifiCorp Response:

No. B2H is a sponsor-driven project and the model is not capable of recognizing the benefits of B2H in isolation such that it would make sense to endogenously model the B2H as an option. Therefore PacifiCorp evaluated portfolios that specifically included B2H independently. Please see response to item #1 above.

4.

In the portfolios in which Energy Gateway South (EGS) is built in 2023, what year did PacifiCorp assume the associated Eastern Wyoming wind resource began construction and what PTC value did PacifiCorp assign to the wind project?

PacifiCorp Response:

The model assumes that concurrent with the Energy Gateway South transmission line being selected to come online in 2024 (a proxy for year-end 2023), that up to 1,920 megawatt (MW) of new wind interconnection at a 40% production tax credit could be selected.

5.

OPUC Staff has previously shown interest in an Oregon depreciation date study/portfolio. Does PacifiCorp plan to run a portfolio with Oregon depreciation dates?

PacifiCorp Response:

While not explicitly labeled as a depreciation study case, Case P-03 (the Regional Haze Intertemporal Case) includes coal retirement assumptions that are aligned with the depreciation study.

6.

Please provide a narrative explanation of how PacifiCorp models Wind + Storage and Solar + Storage projects in System Optimizer. Are there any requirements that would prevent renewables + storage from being located in a site with access to less transmission capacity than the sum of the capacity of the renewables and storage? For example, could a project with 200MW solar and 200MW battery be chosen for a location with access to only 200MW transmission?

PacifiCorp Response:

Per discussion and materials presented at the January 24, 2019 public-input meeting, storage options can cause nameplate capacity to exceed transmission capacity under the assumption that the company will not operate the battery so as to exceed transmission rights. Battery resource options are available for selection in the "parent" bubble within the new transmission topology that enables endogenous modeling of transmission upgrades. This allows these resource options to be chosen without other new resource alternatives that were otherwise required to charge the battery, and allows these resource options to be chosen without incremental transmission capacity.

Note that the co-location of solar + storage also recognizes the cost savings associated with charging the battery

directly from the solar resource, and at the same time recognizes the restriction of the solar and battery components sharing a common interface to the grid.

7.

With Order No. 18-324, the Oregon Public Utility Commission adopted competitive bidding rules (CBRs) for electric companies, now set forth in Oregon Administrative Rules Division 860, Chapter 89, to replace the past use of Commission guidelines. Under OAR 860-089-0250(2), additional RFP information must be included in a utility IRP unless the Company intends to develop and seek approval of a different proposal.

OAR 860-089-0250 (2)

"The draft RFP must reflect any RFP elements, scoring methodology, and associated modeling described in the Commission-acknowledged IRP. The electric company's draft RFP must reference and adhere to the specific section of the IRP in which RFP design and scoring is described.

(a) Unless the electric company intends to use an RFP whose design, scoring methodology, and associated modeling process were included as part of the Commission-acknowledged IRP, the electric company must, prior to preparing a draft RFP, develop and file for approval in the electric company's IE selection docket, a proposal for scoring and any associated modeling."

Will PacifiCorp include RFP details in the IRP?

PacifiCorp Response:

PacifiCorp will comply with current rules, regulations and orders adopted by the Oregon Commission specific to the issuance of request for proposals (RFPs) for electric generation service in Oregon. As the 2019 Integrated Resource Plan is not yet final and the preferred portfolio and action plan not known at this time, PacifiCorp has not yet determined when or if a new RFP will be required or issued.

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.

http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Integrated_Resource_Plan/2019_IRP/PacifiCorp_2019_IRP_June_20-21_2019_PIM.pdf

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.

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