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	1/16/2019
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Public Mee	eting Date comments address: Click	here to enter	date.	⊠ C	heck here if not rel	ated 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. General – Multiple Questions						
☐ 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. Click here to enter text.						

PacifiCorp Response:

Analysis for the 2019 Integrated Resource Plan (IRP) is ongoing and a final least-cost, least-risk preferred portfolio has not been selected. Studies and results discussed to date in the public-input meeting process reflect preliminary analysis that will inform scenarios to be evaluated during the portfolio-development phase in the IRP. The portfolio-development phase of the IRP will consider additional planning variables, including regional haze compliance, market price and carbon dioxide (CO₂) policy uncertainties, timing of Energy Gateway transmission projects, and demand-side management scenarios. PacifiCorp has not established a preferred portfolio nor an action plan to deliver that portfolio—no decisions have been made based on analysis performed to date, and rate impacts, if any, have not been determined at this time.

2. Is there something about 2022 to 2025 that makes those dates more attractive?

1. How will this move affect the rate payers in the State of Wyoming?

PacifiCorp Response:

The coal study initially assumed 2022 as a potential early retirement date when evaluating each unit on an individual basis (the unit-by-unit cases). This date was chosen because it is presumed to enable sufficient time to procure replacement resources and it falls within the four-year action-plan window of the 2019 IRP. The study was also designed to identify the same date for each unit, so that the relative economics among units could be assessed on an apples-to-apples basis, enabling the company to prioritize additional studies. PacifiCorp also summarized at the December 3-4, 2018 public-input meeting alternative retirement dates for certain units, including 2025, 2028, and 2031. Generally, these alternate-year

^{*} Required fields

studies showed that where potential economic benefits were identified they decline when potential early retirement dates are pushed out. Importantly, PacifiCorp has not completed the coal studies. The studies presented at the December 3-4, 2018 public-input meeting were preliminary and did not yet factor in potential costs to eliminate capacity shortfalls. This work continues, and as discussed above will only inform additional analysis that will be performed during the portfoliodevelopment phase of the 2019 IRP, which will ultimately drive the selection of a least-cost, least-risk preferred portfolio.

3. Were figures saying the cost of the subsidy for wind and solar factored in? In theory, they may go away in 2020, how does that affect the numbers?

PacifiCorp Response:

Yes, tax incentives for wind and solar resources are factored into the analysis. PacifiCorp modeled proxy wind and solar resources with applicable production tax credits or investment tax credits consistent with currently applicable phase-out timing. As tax credits are gradually phased out, the overall net cost of wind and solar resources increase relative to the cost of those resources if procured in early time frames. While the overall net cost of these resources can increase without tax credits, it does not mean that the overall cost exceeds other resource alternatives. These dynamics are factored into PacifiCorp's modeling.

4. How does the community impact factor in?

PacifiCorp Response:

The IRP helps establish a data set by evaluating economic outcomes for retail customers, while considering risk associated with planning uncertainties. This data set is one element of the company's resource plan and associated decision-making. The company recognizes the importance of establishing a resource plan with consideration of deliverability, implementation, employee and community impacts. At this stage, the IRP process has been focused on the data set. Nonetheless, PacifiCorp is focused on ultimately delivering a resource plan that considers the impact on our employees and the communities in which they live.

5. Has the current board set a date to get out of coal and gas?

PacifiCorp Response:

No.

6. The dam at Viva Naughton - what happens with this? Is there support for recreation?

PacifiCorp Response:

No decisions have been made at this time. See response to item 1 above.

7. Should the average consumer look for a reduction in bills?

PacifiCorp Response:

See response to item 1 above.

8. Are the savings mostly based on doing away with workers?

PacifiCorp Response:

There are a number of factors that contribute to economic assessment of retail customer benefits. While labor cost are a specific fixed-cost of generation resources, cost savings could also be realized through reduced run-rate maintenance costs, reduced run-rate capital costs, reduced fuel costs, and reduced emissions costs. There is potential for net benefits if replacement costs, and their impact on system operations, is lower than cost savings from retired facility.

9. What about taxes on wind and solar? If they are raised, has that been factored in?

PacifiCorp Response:

PacifiCorp's models account for the current Wyoming wind tax and has not quantified the potential impact of different or higher wind tax in its analysis.

10. Is the goal to get out of generation and go to transmission?

PacifiCorp Response:

No. The integrated resource planning process is used to develop a least-cost, least-risk preferred portfolio that includes the best combination of resources to meet customer load requirements over the twenty-year study period.

11. Washington, Oregon and California - no more coal or gas by what date?

PacifiCorp Response:

California's Senate Bill 100 establishes a goal of 100 percent of retail sales of electricity in California to come from eligible renewable resources and zero-carbon resources by December 31, 2045. Oregon has an emissions performance standard applied to new financial commitments limited to 1,100 lbs CO₂/megawatt hour (MWh). Oregon's Senate Bill 1547 among other things requires the elimination of coal from Oregon's allocation of electricity, as reflected in retail rates, by 2030. Washington has an emissions performance standard applied to new financial commitments limited to 970 lbs CO₂/MWh. It is important to note that PacifiCorp's 2019 IRP models price-policy scenarios based on its view of a potential federal price on carbon and is not driven by state-specific policies.

12. Once subsidies go away, does power go back up?

PacifiCorp Response:

Please refer to the company's response to item 3 above.

13. Gas plant, does it take less people to run? At Naughton, is using resident gas cleaner?

PacifiCorp Response:

Generally speaking gas plants require less employees to operate assuming a unit of similar size. PacifiCorp assumes that the reference to "resident gas" in this question is "pipeline quality gas." Yes, use of pipeline quality natural gas will produce less emissions at Naughton, driven not only by the properties of gas but also due to the limited dispatch associated with a converted unit.

14. What type of input data was used in evaluating each RMP unit? What were not included?

PacifiCorp Response:

Generally, data sets reflect projects of forward looking operating costs, including run-rate maintenance costs, run-rate capital costs, fuel costs, decommissioning costs, and as applicable, emissions costs. These assumptions are based on forward-looking budgets, mine plans, known coal contracts with assumptions for future years, planned overhauls of units, permitted emissions capability of respective generation units, forecasted tax repair, PacifiCorp's recent filed 2018 depreciation study depreciable life of units, and PacifiCorp's weighted average costs of capital.

15. In using wind generation, was renewal of tax incentives included?

PacifiCorp Response:

No, PacifiCorp modeled the existing production tax credit schedule and sunset of credits for proxy wind resources.

16. In utilizing natural gas, were any additional costs included such as storage, availability, etc., or just the base cost?

PacifiCorp Response:

PacifiCorp's natural gas proxy resources cost assumptions were updated for the 2019 IRP as discussed in the third-party consultant report and information provided for the gas-fueled supply side-resource table found at the following location on PacifiCorp's website: www.pacificorp.com/es/irp/irpsupport.html. These costs reflect estimates of burner-tip costs, which include both fixed and variable natural gas transportation costs to deliver natural gas to a facility.

17. In closing RMP's units were environmental closing and remediation costs included?

PacifiCorp Response:

Yes, costs associated with environmental remediation of closing a unit were included, as applicable.

18. Is wind generation and solar generation compatible with existing transmission line location and line configuration?

PacifiCorp Response:

PacifiCorp's models account for existing transmission rights with optionality to select transmission upgrades, with associated costs, as needed to facilitate the optimized combination of resources to meet customer load requirements over

the twenty-year study period. Models also take into account brownfield locations and the option to locate replacement resources at these locations.

19. Has RMP accrued shut down costs associated with each unit and are those costs on RMP's books? How does this factor in to this IRP?

PacifiCorp Response:

Decommissioning costs are included in PacifiCorp rates and are collected over the life of a generation unit. As part of generally accepted accounting principles, PacifiCorp is required to accrue asset retirement obligation (ARO) on its financial books reported for securities and exchange purposes. A dollar per kilowatt (kW) assumption of cash decommissioning costs is included in the IRP that is applied per the timing of the assumed retirement assumption thus producing a time value of money impact as a result of the projected cash costs of decommissioning.

20. Where will RMP get the hpower to replace decommissioned units? Is it sufficient and at the right times?

PacifiCorp Response:

The System Optimizer (SO) model selects resources to ensure there is sufficient capacity, accounting for increased need when units are assumed to retire. The type, timing, and location of replacement resources varies by case and over time. Further, in the on-going coal studies, PacifiCorp continues to evaluate whether the capacity being added to the system over time is of the right type (i.e., ability provide operating reserves) and in the right location. The 2019 IRP analysis will develop a least-cost, least-risk preferred portfolio that will identify any proxy resources needed to meet load requirements over the twenty-year study period. No decisions have been made at this time regarding early retirement of units and proxy replacement resources.

21. At what point do natural gas costs exceed coal costs for generation (including cost of emission compliance)?

PacifiCorp Response:

See response to item 1 above.

22. Are there any costs associated with reclamation paid to the Kemmerer Mine in the present contract?

PacifiCorp Response:

There are no direct reclamation responsibilities in PacifiCorp's present contract for Kemmerer Mine coal. Westmoreland, the owner of Kemmerer mine is responsible to set aside funds for reclamation of Kemmerer Mine based on the present coal contract.

23. What is the most critical component in the cost calculation for Naughton which resulted in the costs to shut it down? Can it be remedied?

PacifiCorp Response:

PacifiCorp is continuing to model and analyze options for Naughton. Until the analysis is completed, it is unclear what the economics will show. No decisions have been made at this time.

24. Where does Naughton fall with respect to other RMP units in cost of generation, mercury emissions, and CO2 emissions?

PacifiCorp Response:

Generally, the operating costs for Naughton units are above the average operating cost across the coal fleet. Emissions are a function of plant efficiency, dispatch, installed controls, and unit size, and therefore it is difficult to compare these metrics across the fleet. However, overall emissions rates for CO₂ and mercury are similar to other units.

25. How do you design the system to guarantee power to the consumer?

PacifiCorp Response:

PacifiCorp is committed to delivering safe and reliable power to its customers at a reasonable rate. PacifiCorp achieves this by continuously updating its resource plans and transmission plans, on both a long-term (i.e., the IRP) and short-term basis (i.e., real-time operations). From an IRP modeling perspective, PacifiCorp performs extensive analysis to ensure that it is planning to procure sufficient resources to meet reliability obligations (i.e., operating reserves, frequency response, voltage control, etc.) while accounting for risk and uncertainties.

26. The Kemmerer area has had coal fired power for at least 50 years. It is reliable and environmentally friendly as the Naughton plant burns the best coal available. As a stakeholder, the City of Kemmerer wishes to assert its right to accept coal fired power only.

PacifiCorp Response:

PacifiCorp appreciates the comment and feedback.

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.

Click here to enter text.

Recommendations: Provide any additional recommendations if not included above - specificity is greatly appreciated. Click here to enter text.

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

Thank you for participating.