

PacifiCorp - Stakeholder Feedback Form

2017 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 2017 IRP, including, but not limited to the process, assumptions, and analysis. In providing your feedback, PacifiCorp requests that the stakeholders identify whether they are okay with the Company posting their comments on the IRP website.

Yes No May we post these comments to the IRP webpage?

Date of Submittal Ausut 24, 2016

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Public Meeting Date comments address: CPP modeling Check here if not related to specific meeting

List additional organization attendees at cited meeting:

Jennifer Gardner; Sophie Hayes; Sarah Wright

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

* CPP Compliance modeling

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.

See submitted comments dated August 24, 2016

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.

Thank you for participating.

* Required fields

Comments of Western Resource Advocates and Utah Clean Energy Regarding Modeling of Clean Power Plan Compliance

August 24, 2016

INTRODUCTION AND SUMMARY

Western Resource Advocates and Utah Clean Energy appreciate the opportunity to provide the following input into the modeling of Clean Power Plan compliance in the 2017 IRP.

During the July 20 IRP Public Input meeting, (1) PacifiCorp provided an environmental compliance update, (2) discussed with stakeholders its intent to base its modeling of the Clean Power Plan on EPA's proposed mass-based Federal Implementation Plan and Model Rule (Federal Plan¹), and (3) requested stakeholder input on its proposed approach.

PacifiCorp explained that its decision to use the Federal Plan is primarily a matter of expedience; the Federal Plan is the only plan with any specificity. PacifiCorp further explained that its decision to model a mass-based compliance approach rather than a rate-based approach rests on two key factors: (1) its perception that state and Federal regulators are leaning toward preferring a mass-based approach, and (2) ease of conducting IRP modeling, given the ability of System Optimizer to construct optimal portfolios subject to emission and cost constraints.

As currently proposed, the mass-based Federal Plan would allocate allowances based on historical generation. The potential for leakage to new units would be addressed through two pools of allowances set aside to provide incentives to (1) construct new renewable generation, and (2) increase generation from existing Natural Gas Combined Cycle (NGCC) units.

WRA and UCE generally support using the proposed mass-based Federal Plan as a starting point, but we recommend PacifiCorp address the potential for leakage through a new source complement rather than through allowance set-asides.

Following the initial portfolio evaluation, we recommend PacifiCorp evaluate the top-performing portfolios under a rate-based compliance approach before selecting the Preferred Portfolio.

Finally our comments include modeling questions we would like addressed at an upcoming public input meeting.

¹ The key difference between the proposed Federal Implementation Plan and the proposed Model Rule is in the renewable resources eligible for compliance. The Model Rule allows the inclusion of a wider range of resources.

DISCUSSION

1. WRA and UCE recommend addressing the potential for leakage by modeling a new source complement rather than allowance set-asides

The proposed federal plan is challenging to model due to the proposed plan's emission allowance "set-asides." Modeling these set-asides – and the portion of them that PacifiCorp would receive – depends not only on actions by PacifiCorp, but also on actions taken by other industry participants in each state. For example, PacifiCorp's portion of the renewable energy set-aside depends not only on how much renewable energy PacifiCorp develops in a state, but by how much is developed by others and by who is entitled to claim the allowances. Similarly, the output-based set-aside would depend on how PacifiCorp and other plant operators dispatch their natural gas units. Finally, under the proposed federal plan, a unit that retires receives its allowance allocation for (approximately) two more years, and then its allowances are folded back into the renewable energy set-aside to be re-distributed to all renewable energy generators. PacifiCorp's retirements will affect renewable energy allowances in each state, and, similarly, the retirement of EGUs owned by other utilities will alter PacifiCorp's renewable allowances. Modeling emissions set asides in an IRP involves too many assumptions for parties to feel confident in the validity of the modeling results.

Given this complexity, rather than attempting to estimate PacifiCorp's portion of allowances from the set-asides, we recommend PacifiCorp assume each state adopts the new source complement. Then, to determine PacifiCorp's portion of the total allowances available in each state, we recommend PacifiCorp base its allocation on its portion of generation in each state over the 2010 – 2012 period.² Our proposed allocation would be analogous to the historic generation-based allocation to EGUs in the federal plan, but would avoid the complicated modeling of set-asides.

As a starting point, WRA has developed a simplified estimate of the allowances that PacifiCorp could receive in each state where it operates, for a total of 366,047,000 allowances over the 2022 – 2030 period.³

² In the proposed federal plan, the basic EGU allocation is determined based on generation over the 2010 – 2012 period.

³ Calculation was developed by 1) summing the allowances each EGU or partially-owned EGU would receive under the federal plan; 2) scaling those allowances up to reflect the entire existing source cap over the 2022 – 2030 period (i.e., dividing by 0.9, because the proposed federal plan allocates 90% of allowances to EGUs); and 3) scaling the total allowances to reflect inclusion of the new source complement. Energy Strategies and Fovea, LLC, in partnership with the Center for the New Energy Economy (CNEE) at Colorado State University, built and maintain a Clean Power Plan Evaluation Model for twelve Western States and two tribal jurisdictions (the Western States Clean Power Plan Evaluation Model). WRA utilized this model and the data therein to develop this table. The model is available at <http://www.westernstatecppmodeling.org/>.

	PacifiCorp's EGU Allowances Under the Proposed Federal Plan (2022 – 2030)	States' Total EGU Allowances Under the Proposed Federal Plan (2022 – 2030)	PacifiCorp's Share of EGU Allowances Under the Proposed Federal Plan	Total State Allowances Under the Existing & New Source Standard (2022 – 2030)	PacifiCorp's Share of Allowances Under the Existing and New Source Standard (2022 – 2030)
Arizona	12,902,500	249,588,000	5%	308,276,148	15,936,395
Colorado	10,120,029	247,811,000	4%	308,845,266	12,612,527
Montana	6,524,042	104,021,000	6%	117,660,932	7,379,518
Utah	136,502,036	215,337,000	63%	245,687,309	155,741,085
Wyoming	142,083,004	292,397,000	49%	329,197,450	159,965,261
Oregon	5,230,969	65,192,000	8%	81,596,661	6,547,270
Washington	6,364,571	88,415,000	7%	109,255,398	7,864,771
Total	319,727,151	1,262,761,000		1,500,519,164	366,046,827

To test the sensitivity of the portfolio selection to allowance allocation, we recommend PacifiCorp evaluate the top-performing portfolios assuming it receives 10% fewer allowances than initially modeled.

Aside from the difficulty and uncertainty in attempting to model the Federal Plan, it is important that PacifiCorp include the emissions associated with new sources in the compliance analysis for two additional reasons:

- New sources are likely to be regulated as existing sources at some point in the future and therefore would, under a mass-based system, be included under a future emissions cap.
- If the federal plan is not used then States will have to demonstrate to EPA that they are preventing emissions leakage between regulated existing sources and new sources. It is not at all clear today what such a showing might require. States may choose to adopt the new source complement, both because it leads to a better environmental outcome and is simpler to implement.

2. WRA and UCE recommend PacifiCorp test the robustness of the best-performing portfolios against a rate-based standard

While states in PacifiCorp’s region may currently be trending toward a mass-based approach, there is significant uncertainty as to states’ ultimate compliance frameworks. In addition, EPA may determine that the federal plan will be a rate-based plan. While states may opt for the compliance framework that provides the greatest number of trading partners, other considerations such as cost of compliance may drive states in different directions. If the federal plan is a rate-based plan, it may be the most desirable compliance framework, even for states not subject to the federal plan. Therefore, we recommend PacifiCorp evaluate its final pool of portfolios with the best cost risk metrics for their ability to comply under the subcategory-specific rate-based compliance framework, which is EPA’s model rule for complying with the rate-based standard. Testing against the state rate standards would also be helpful.

3. Please explain the role of allowances in the operation of System Optimizer

WRA and UCE have the following questions about the role of allowances in the operation of System Optimizer, which we request PacifiCorp address at an upcoming public input meeting.

- Does System Optimizer optimize subject to a strict emissions cap or do allowances play a role in the selection of an optimal portfolio?
- If System Optimizer models allowances, does the model allow PacifiCorp to purchase allowances to meet emissions limits in selecting an optimal portfolio? Does the model allow PacifiCorp to over-comply and sell allowances in selecting an optimal portfolio?
- If System Optimizer allows PacifiCorp to model allowances in selecting an optimal portfolio, does PacifiCorp limit the extent of over or under compliance it allows?
- If System Optimizer models allowances, how is the price of an allowance determined? Is the cost of an allowance an input value that PacifiCorp forecasts?
- Does System Optimizer allow banking of allowances?