

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 9/14/2016
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Public Meeting Date comments address: 7/20/2016 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.
Coal Combustion Residuals

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.
Section 1: Introduction

In PacifiCorp's 2017 IRP Planning Document from the July 20th stakeholder meeting, a section is dedicated to Coal Combustion Residual ("CCR") compliance. The section contains the following language:

- As of October 19, 2015, PacifiCorp had nine surface impoundments and four landfills that are subject to the CCR rule
- PacifiCorp is currently in the process of closing four of the nine impoundments. *However, EPA recently vacated the provisions of its 2015 coal ash rule exempting early closure impoundments. Therefore, PacifiCorp's four early closure impoundments will be subject to additional compliance obligations, including monitoring and possibly remediation requirements.

In addition, Rocky Mountain Power has posted CCR Rule and Compliance Data and Information on its Webpage¹, as the EPA's CCR rule requires. [These documents are hereinafter referred to as the CCR Plans.] PacifiCorp outlines the Company's plans with regard to the Dave Johnston, Hunter, Huntington, Jim Bridger, and Naughton power plants. While this information is helpful, it is incomplete for purposes of integrated resource planning. Specifically, there is a significant lack of detailed information about the full costs of pond and landfill treatment and closure, which represent potentially significant costs for ratepayers. These costs must be thoroughly examined in the IRP in order to demonstrate the prudence of the Company's decision-making.

* Required fields

PacifiCorp representative Chad Teply indicated during the August 26, 2016, IRP stakeholder meeting that the utility does not consider CCR compliance costs high enough to warrant including analysis through the Public IRP process. Rather, he said, information and data will be analyzed through confidential business plan analysis. However, given present examples of CCR cost clean up, future litigation, and the recent failure of CCR containment at one PacifiCorp facility (Carbon Plant) – detailed below – CCR compliance costs are significant, likely to rise, and warrant thorough public analysis.

Furthermore, since the most recent IRP public input meetings, the US EPA – as part of a settlement agreement – vacated a portion of the CCR rule, and, as a result, increased PacifiCorp’s compliance obligations. HEAL Utah requests the following information be considered as part of the public IRP process:

1. More analysis for CCR compliance on the above-mentioned plants, specifically dealing with the necessity and nature of the following possible remedies: pond closure, liner installation, and landfill water monitoring and treatment.
2. Inclusion of analysis for retired facilities regarding projected CCR clean up.
3. Cost estimates for above mentioned projects.
4. Approximate CCR compliance requirements and timelines.

*Specific requests and evidence are presented below.

Section 2: Project details and costs requested to be included in IRP Modeling

Landfill Analysis

PacifiCorp’s CCR Plans state that the following features are covered by the new rules: Dave Johnston Expansion Landfill, Hunter CCR Landfill, Huntington CCR Landfill, and Jim Bridger Industrial Landfill. As noted above, PacifiCorp’s early closure impoundments are now also subject to the new rules.

In the CCR Plans, under “groundwater monitoring and corrective action,” the company indicates these landfills are subject to “Corrective Measure Assessment.” We request a list of possible corrective measures, including:

1. Timeline for landfill closer
2. Closure Plan and post closure plan
3. Cost Estimates for corrective measures and Closure Plan. Please explain whether these costs are capital expenditures or ongoing “run rate” costs, and how they will be incorporated into IRP modeling.

Pond Analysis

PacifiCorp’s CCR Plans state that the following features are covered by the new rules: Dave Johnston 4A and 4B Ponds, Jim Bridger FGD Ponds 1 and 2, Naughton Ash Pond North and South, Naughton FGD Pond 1,2, and 4. As noted above, PacifiCorp’s four early closure impoundments are now also subject to the rule. HEAL requests that these costs cost and project details (cited below) be included in the IRP modeling process.

1. In the CCR Plans, under “Design Criteria,” Documentation of liner type: Structural stability assessment, Structural stability remedial plans

* Required fields

2. Under “Groundwater Monitoring and Corrective Action” :Corrective Measures Assessment,
3. Under “Closure and Post Closure Care”: Closure Plan, Time Extensions, Post Closure Care Plan
4. Under “Retrofit” (Applies only to Dave Johnson 4A and 4B): Retrofit Plan

Notification of intent to Close

The CCR Plans currently state that the Naughton FGD Pond 1 and 2 and Jim Bridger FGD point 1 will be closed. IRP indicates an intention to close “four of the nine impoundments” HEAL would like identification of the fourth intended closure.

Other Coal Plant CCR Obligations

PacifiCorp has listed thirteen CCR compliance obligation projects in both the CCR Plans and the IRP. However, strong evidence and recent events suggest that other PacifiCorp facilities may be subject to additional CCR compliance and/or cleanup obligations outside of the rule.

Carbon Power Plant

On August 4, a flood damaged² an onsite ash landfill, causing the release of more than 400 cubic feet of CCR into the Price River. The retaining wall was designed to withstand a “once in a hundred year flood.” The extent of the damage and contamination is still being reviewed, according to news reports and state documents.

While these clean up activities fall outside of EPA’s coal ash rule, HEAL requests information on the cleanup costs associated with this spill.

Wyodak

PacifiCorp appears to be taking the position that the Wyodak facility is not subject to CCR regulations, because its coal ash impoundment is located in the bottom of an alleged coal mine excavation. EPA’s regulations do apply to CCR surface impoundments, which are defined as, “CCR surface impoundment or impoundment means a natural topographic depression, man-made excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the unit treats, stores, or disposes of CCR. PacifiCorp submitted a “permit to construct” application to the State of Wyoming to construct a CCR surface impoundment at the Wyodak facility.

HEAL request believes that the Wyodak CCR unit is subject to the regulations and requests an explanation from PacifiCorp for why the plant has not complied with the CCR regulations.

* Required fields

Section 3: Cost Estimates and Comparisons

The below numbers, while they vary widely, show that CCR compliance costs can be considerable. Clearly, given the number of facilities covered by the IRP, and the number of CCR features at those facilities, PacifiCorp and its ratepayers face potentially very high costs to comply with new CCR rules. It is appropriate that the company detail and estimate those liabilities within the IRP.

A recent UBS report³ estimated that CCR landfill and pond closure costs can vary greatly depending on the processing of the ash, type of storage, geographic features based on the location of the facility. However, the report did give a basic cost estimate range of \$100,000-300,000 per acre for total cleanup and closure costs for a single pond or landfill. Cost can be driven up by structural integrity issues and the extent of ground water impact. Provisions for citizen lawsuits introduce a degree of cost uncertainty. By example, PacifiCorp's Huntington power plant is subject to a RCRA citizen suit for its coal ash disposal practices.

Using these estimates applied to Jim Bridger's⁴ FNG pond # 2 which is 266 acres cleanup costs for the pond alone can range anywhere from \$26 to 80 million for one pond.

Another report put together by Bank Track⁵ found the following cost estimates:

1. Closure costs of \$100,000-\$200,000 per acre to fit landfills with a composite cap. (The cost of capping ponds would be higher due to the additional cost of de-watering ash slurry.)
2. Stranded asset costs of up to \$1 million per acre from accelerated pond and landfill closure (depending on the unused capacity of each pond to be closed)
3. Capital costs of \$10-30 million per plant for fly ash conversion if a plant is required to convert from wet to dry handling of fly ash.
4. Capital costs of \$20-40 million per boiler unit for bottom ash conversion if a plant is required to convert from wet to dry handling of bottom ash.
5. Capital costs of \$80 million per plant (or \$120 million if a plant disposes of flue-gas desulfurization wastes in its wastewater) for additional wastewater treatment capacity if a plant is required to phase out the use of ash ponds for wastewater disposal.

Other Examples

Rawhide Energy Station

Cost estimates by Technical Firm AECOM for the Rawhide Energy Station owned by Platte River Power Authority' Rawhide plant have put close-in place: Bat ponds, Sluice Water Pond, and PRS ponds have an estimated total cost of \$38 million. Primarily due to filling materials and transportation. The ash monofill at Rawhide is 125 acres in size.

Colstrip Power Plant

The Washington Utilities and Transportation Report found that CCR remediation costs for closure of Colstrip Units 1 and 2 to be between \$82 and 142 million. The report admits that it did not take into account a number of factors that could drive up costs including the following:

1. Environmental laws or regulations not yet promulgated
2. Amendments to existing laws or regulations that require greater stringency for certain
3. Constituents associated with the operation of Colstrip Units 1 & 2,
4. Accidental leaks or spills that have not yet been identified
5. Litigation
6. State or federal negotiated or mandated requirements

*A Sierra Club filing⁶ has estimated cleanup costs and liabilities could reach \$500 million.

Section 4: Timelines

The EPA has mandated, under its CCA rules, that as of October 17, 2016, PacifiCorp must meet the following criteria:

1. Identify “unlined ponds”
2. Initial written closure plan for existing ponds
3. Initial written post closure plan for existing ponds
4. Compile construction info on existing ponds
5. Initial run-on and run-off control systems plans
6. Initial inflow design flood control system plans

Therefore, given these requirements, the company should have sufficient information from which to detail its CCR cleanup liabilities within the current IRP modeling process.

Section 5: Conclusion

HEAL Utah requests that PacifiCorp incorporate much more detailed CCR data in the IRP environmental compliance cost modeling. In addition, given the cited examples above, HEAL Utah requests that CCR modeling and data be used and be made available in the public IRP process.

*Citation numbers correspond to numbers in Data Support section of IRP comment form.

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.

¹ <http://www.pacificorp.com/env/ccr-data.html>

² <http://www.sltrib.com/news/4228919-155/utah-environmental-regulators-reviewing-spill-of>

³ Attachment 2 in email: UBS report

⁴https://www.berkshirehathawayenergyco.com/ccr/assets/pdf/ppw/JB/JB_FGD_Pond_2/Operating_criteria/Annual_engineering_inspection/2015%20Annual%20Inspection%20Jim%20Bridger%20FGD%20Pond%202.pdf

⁵ http://www.banktrack.org/manage/ems_files/download/coal_risk_update_july_2013/coal_risk_update_07_2013_vhigh.pdf

⁶ <http://www.utc.wa.gov/docs/Pages/DocketLookup.aspx?FilingID=151500>

Recommendations: Provide any additional recommendations if not included above - specificity is greatly appreciated.

[Click here to enter text.](#)

Thank you for participating.