

PacifiCorp - Stakeholder Feedback Form

2023 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 2023 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 August 24, 2022

*Name: Logan Mitchell

Title: _____

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Phone: _____

*Organization: Utah Clean Energy

Other signatories: Shannon Anderson, PRBRC;
Sophie Hayes, WRA; Rose Monahan, Sierra Club

Address: _____

City: _____ State: _____ Zip: _____

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

List additional organization attendees at cited meeting: _____

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

- Assess how methane leakage mitigation policies will affect natural gas portfolio

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.

Natural gas is composed of 95% methane, and methane is a potent greenhouse gas that has a 100-year Global Warming Potential (GWP) of 30 times that of CO₂. Since methane has an atmospheric lifetime of only 12 years, the GWP is concentrated in the near term and therefore the 20-year GWP of methane is 83 times that of CO₂. This makes methane a key target for reducing near-term climate forcing and is why the Biden administration created the U.S. Methane Emissions Reduction Action Plan and launched the Global Methane Pledge, a commitment from 121 countries to reduce methane emissions by 30% by 2030. As part of the US plan, the EPA is developing New Source Performance Standards for the oil and gas industry. In addition, Congress created a “Methane Emission Reduction Program” (Sec. 60113) in the Inflation Reduction Act of 2022 to incentivize companies to reduce fugitive methane emissions (“leakage”) from natural gas infrastructure. This program includes a methane leakage fee will be \$900/ton in 2024, \$1200/ton in 2025, and \$1500/ton in 2026 and thereafter for facilities that report greater than 25,000 tons of CO₂ equivalent of greenhouse gases emitted per year.

Quantifying methane leakage is a rapidly evolving area of scientific research, however recent studies have found that leakage rates are much higher than EPA estimates. While the EPA estimates that methane leakage is 1.5% of total natural gas production, a 2018 synthesis of leakage rates in natural gas production basins across the US found average leakage

* Required fields

rates of 2.3%, and as measurement techniques improve, higher leakage rates are being observed, such as 7% in the Uinta Basin in Utah and 9% in the Permian Basin in New Mexico. A very recent study of leakage from offshore gas platforms in the Gulf of Mexico found leakage rates that ranged from 24% to 66%. These high natural gas leakage rates have a major climate impact and represent serious environmental externalities borne by PacifiCorp ratepayers. For example, using a 20-year GWP, the 7% leakage rate in the Uinta Basin in 2019 (approximately 256,000 tons of methane) has CO₂-equivalent emissions of 21.8 Million Metric Tons, which is greater than all transportation emissions in Utah (18.5 MMT CO₂) and equivalent to 3/4 of the emissions from the electric power sector (28.4 MMT CO₂). In addition to environmental impacts, large leakage rates also represent lost revenue that increase consumer prices and exposure to future leakage fees. For example, at today's natural gas prices of \$9.00/MMBtu the leaked gas from 2019 would be worth \$119 Million, and if leakage fees of \$1500/ton were applied, the fee would be \$384 Million.

Since New Source Performance Standards and methane fees may impact natural gas prices, this should be accounted for in resource planning. PacifiCorp's current methodology for forecasting future natural gas prices includes three gas price scenarios and potential greenhouse gas emission costs. In addition to those factors, we request that PacifiCorp and their consultants at Siemens PTI consider how addressing leakage could impact future prices and present this information at a public input meeting. Where available, PacifiCorp should utilize the best available science to include more accurate accounting of high leakage rates for localized gas production. We recommend that PacifiCorp use at least one scenario with leakage rates of at least 2% that is consistent with the lowest observed leakage from recent scientific studies, and also consider how higher leakage rates could magnify these effects. We request updates throughout the planning process as PacifiCorp learns more about how new standards and fees are likely to impact PacifiCorp's fuel supply.

Finally, we request that PacifiCorp determine if they own or operate any Applicable Facilities as defined in Methane Emissions Reduction Program that would be subject to methane leakage fees and provide a summary of these Applicable Facilities at a future public input meeting. The bill defines the term 'applicable facility' to mean any facility within the following industry segments, as defined in subpart W of part 98 of title 40, Code of Federal Regulations:

- (1) Offshore petroleum and natural gas production.
- (2) Onshore petroleum and natural gas production.
- (3) Onshore natural gas processing.
- (4) Onshore natural gas transmission compression.
- (5) Underground natural gas storage.
- (6) Liquefied natural gas storage.
- (7) Liquefied natural gas import and export equipment.
- (8) Onshore petroleum and natural gas gathering and boosting.
- (9) Onshore natural gas transmission pipeline.

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.

Latest GWP figures from the IPCC AR6 (Table 7.15):

https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Chapter07.pdf

US Methane Emissions Reduction Action Plan: <https://www.whitehouse.gov/wp-content/uploads/2021/11/US-Methane-Emissions-Reduction-Action-Plan-1.pdf>

Global Methane Pledge: <https://www.globalmethanepledge.org/>

EPA's proposed New Source Performance Standards: <https://www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry/epa-proposes-new-source-performance>

* Required fields

Inflation Reduction Act of 2022, section 60113 “Methane Emissions Reduction Program”:

<https://www.congress.gov/bill/117th-congress/house-bill/5376/text>

Alvarez et al 2018, synthesis of US methane leakage: <https://www.science.org/doi/10.1126/science.abj4351>

Lin et al 2020, Uinta basin methane leakage: <https://www.nature.com/articles/s41598-021-01721-5>

Chen et al 2022, Permian basin methane leakage: <https://doi.org/10.1021/acs.est.1c06458>

Ayasse et al 2022, Gulf of Mexico methane leakage: <https://doi.org/10.1088/1748-9326/ac8566>

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

- 1) We request that PacifiCorp and their consultants at Siemens PTI examine how new source performance standards and methane leakage fees could impact future natural gas prices and present this information at a public input meeting. We recommend that PacifiCorp use at least one scenario with leakage rates of at least 2% that is consistent with the lowest observed leakage from recent scientific studies, and also consider how higher leakage rates could magnify these effects.
- 2) We request that PacifiCorp determine if they own or operate any Applicable Facilities as defined in Methane Emissions Reduction Program that would be subject to methane leakage fees and make this information available at a future public input meeting.

PacifiCorp Response:

1.)

- Currently, Siemens PTI has not reflected the impact of the Methane emissions fee in our overall Natural Gas price outlook for September 2022 as the Methane emissions fee is found to be negligible.
- However, the Congressional Budget Office (CBO) expects to collect ~\$0.7B/yr to ~\$1.8B/yr in Methane Emission Charge from 2026-2031.
- Applying CBO’s Methane Emission charge per year to total natural gas production in the US (~100 billion cubic feet per day today), yields a natural gas price impact of ~\$0.02--\$0.05/MMBtu.
- The overall impact of the Methane emissions fee is ~1% or less and therefore negligible in the long-term natural gas price forecast.
- The company will consider a scenario with leakage rates of at least 2% although the findings are lower.

2.) PacifiCorp does not own or operate any Applicable Facilities as defined by the Methane Emissions Reduction Act.

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

Thank you for participating.

* Required fields