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Division of Public Utilities

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Recommendation

To: Public Service Commission of Utah

From: Utah Division of Public Utilities

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Date: December 12, 2023

Re: **Docket No. 23-035-10,** PacifiCorp's 2023 Integrated Resource Plan.

Recommendation (Non-Acknowledgement)

The Division of Public Utilities (Division) recommends that the Public Service Commission (Commission) not acknowledge PacifiCorp's 2023 Integrated Resource Plan (2023 IRP).[1] The Division makes this recommendation reluctantly, as it also recommended partial non-acknowledgement of PacifiCorp's 2021 Integrated Resource Plan (2021 IRP), and the Commission ultimately did not acknowledge that IRP. Due to the late filing of the 2023 IRP and other issues discussed below, the Division recommends that the Commission not acknowledge the 2023 IRP.

The Division makes this recommendation for the following reasons:

[1] *PacifiCorp's 2023 Integrated Resource Plan*, Docket No. 23-035-10, 2023 Integrated Resource Plan (Amended Final) Volume 1, and 2023 Integrated Resource Plan Volume II (Amended Final) filed May 31, 2023, [hereafter "2023 IRP, Volume I" and "2023 IRP, Volume II"].

1. The 2023 IRP was filed late. In past comments, the Division has stressed that the value of the IRP as a planning document is diminished when it is not filed on time.[2] The fact that the 2023 IRP has been the third IRP in a row that was filed at least two months late is enough to warrant a non-acknowledgement, even before the other factors below are considered.

2. The suspension of the 2022 All-Source RFP (2022 AS RFP) will likely change the 2023 IRP Action Plan (Action Plan) significantly, which makes it unclear what action plan the Commission would be acknowledging. As of the time of filing of these Comments, Rocky Mountain Power has not informed stakeholders how the Action Plan will be affected by the suspension of the 2022 AS RFP. The Company did discuss some possibilities at the IRP Technical Conference but indicated that it could not yet communicate a new plan.

3. The Division continues to object to the inclusion of the Natrium nuclear plant in the preferred portfolio of the IRP. The Division is not in general opposed to the inclusion of nuclear power in the Company's future, but the costs and timing of the Natrium plant need to be more specifically addressed before the project can be included in the Action Plan, per the Commission's IRP Standards and Guidelines.[3] Given the large cost and time overruns that have plagued other nuclear projects in the U.S., the Company must clearly specify the maximum cost and risk exposure to ratepayers before the Natrium project should be included in the preferred portfolio in order to ensure that the plant's inclusion is part of a least-cost, least-risk portfolio.

4. Similarly, the Company optimistically assumes that non-emitting peaker plant technology (turbines running on 100% hydrogen) will be available and commercial by 2030, even though no utility-scale example of this technology exists as of the time of these Comments. The production and transportation plans for hydrogen for utility-

[2] *See PacifiCorp's 2021 Integrated Resource Plan*, Docket No. 21-035-09, Comments from the Division of Public Utilities filed March 4, 2022, at 6 [hereafter "Division 2021 IRP Comments"], https://pscdocs.utah.gov/electric/21docs/2103509/322709DPUCmnts3-4-2022.pdf.
[3] *Analysis of an Integrated Resource Plan for PacifiCorp*, Docket No. 90-2035-01, Report and Order on Standards and Guidelines issued June 18, 1992 [hereafter "Guidelines"], https://pscdocs.utah.gov/electric/90docs/90203501/121607RprtOrdrStndrdsGdlnes6-18-1992.pdf.

scale energy generation are also still in the design phase. The Division questions the reliance on this unproven technology, especially when other current technologies (natural gas plants) are disfavored, and other similarly nascent technologies (carbon capture utilization and storage (CCUS)) are not considered in a similarly optimistic fashion.

5. Despite the IRP treating the costs and timeline of the Natrium plant and non-emitting hydrogen peaker plants optimistically, other resources (natural gas and coal) are treated pessimistically. This is seen in the assumptions behind the rejection of the preferred portfolio variant P20-JB3-4-CCUS, which was a top performer in the modeling runs. That variant proposes the use of CCUS which, like 100% hydrogen peaker plants, is a technology that is not yet used at the utility scale. However, CCUS is treated differently by the IRP. This disparate treatment runs afoul of Guidelines 1 and 4(b).[4]

Background

The Company's IRP is due on March 31 of each odd-numbered year.[5] On March 2, 2023, the Company asked for a two-month extension to the deadline, seeking permission to file the 2023 IRP by May 31, 2023.[6] The Company said it needed the extra time to adapt the plan to "recent changes in the Ozone Transfer Rule, the Inflation Reduction Act, resource

[4] Guideline 1 states that the IRP is a process "which evaluates all known resources on a consistent and comparable basis…" Guidelines at 36. Guideline 4(b) states that "PacifiCorp's future integrated resource plans will include: … An evaluation of all present and future resources, including future market opportunities (both demand-side and supply-side), on a consistent and comparable basis." Guidelines at 36-37.

[5] The Commission established a March 31 filing date for PacifiCorp's IRP based on the Company's proposed filing date in the docket for the 2008 IRP. See *Acknowledgement of PacifiCorp's Integrated Resource Plan*, Docket No. 09-2035-01, Report and Order issued April 1, 2010 at 5, https://pscdocs.utah.gov/electric/09docs/09203501/6597809203501RO.pdf.

[6] *PacifiCorp's 2023 Integrated Resource Plan*, Docket No. 23-035-10, Rocky Mountain Power's Request for Extension filed March 2, 2023 [hereafter "RMP Request for Extension"], https://pscdocs.utah.gov/electric/23docs/2303510/327193RMPRqstExtnsn3-2-2023.pdf.

interconnection rules, the Oregon Clean Energy Plan, and Washington's Clean Energy Transformation Act."[7] The Commission granted the extension on March 28, 2023.[8]

The Company filed its preliminary 2023 IRP on April 3, 2023, and filed supporting data on April 17, 2023, and May 1, 2023. The Company filed the final version of Volumes I and II on May 31, 2023, and additional supporting data was filed on June 16, 2023, and June 20, 2023.

On September 15, 2023, two days before the final shortlist in the 2022 AS RFP docket was to be released, the Company filed notice that it was suspending the 2022 AS RFP.[9] In a filing made September 29, 2023, the Company provided more details and justification for the suspension, including: 1) a stay of the EPA's Ozone Transfer Rule; 2) an ongoing EPA greenhouse gas (GHG) rulemaking; 3) wildfire risk and liability; and 4) increasing extreme weather risk.[10]

The Company held a Technical Conference for the 2023 IRP on October 24, 2023.[11] Stakeholders submitted questions ahead of the Technical Conference, and many of those questions asked how the suspension of the 2022 AS RFP would affect the Action Plan. At the Technical Conference, the Company stated that it could not yet say when or whether the 2022 AS RFP would be unsuspended. The Company indicated that the Action Plan could change, but that it could not yet provide details of the changes.

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[7] *Id*.
[8] *PacifiCorp's 2023 Integrated Resource Plan*, Docket No. 23-035-10, Order Granting Request for Extension to File issued March 28, 2023, https://pscdocs.utah.gov/electric/23docs/2303510/3274022303510ogrfetf3-28-2023.pdf.
[9] *Application of Rocky Mountain Power for Approval of a Solicitation Process for 2022 All Source Request for Proposals*, Docket No. 21-035-52, Notice of Update to Schedule in 2022 All Source Request for Proposals filed Sept. 15, 2023, https://pscdocs.utah.gov/electric/21docs/2103552/329847RMPNtcUpdtSchdl2022AllSrcRFP9-15-2023.pdf.
[10] *Application of Rocky Mountain Power for Approval of a Solicitation Process for 2022 All Source Request for Proposals*, Docket No. 21-035-52, Rocky Mountain Power's Second Notice of Update to Schedule in 2022 All Source Request for Proposals filed Sept. 29, 2023 [hereafter "Second RFP Update"], https://pscdocs.utah.gov/electric/21docs/2103552/330109RMP2ndNtcUpdtSchdl2022AllSrcRFP9-29-2023.pdf
[11] *PacifiCorp's 2023 Integrated Resource Plan*, Docket No. 23-035-10, Technical Conference (PacifiCorp's IRP, 23-035-10), Oct. 24, 2023, video at: https://www.youtube.com/watch?v=w-c9X1HMFyI&t=3923s [hereafter "IRP Technical Conference"].

General Discussion of Selected 2023 IRP Forecasts

In past IRP comments, the Division has noted that small changes in load forecasts or other model inputs can result in big changes in the action plan. This fact, and the fact that forecasts can change quite a bit from IRP to IRP, cause the Division to urge caution when relying on the IRP to justify large capital expenditures, especially 5-10 years or more into the future.

Figure 1 compares the load forecasts from past IRPs.[12] This figure shows that past IRPs have predicted substantial growth that has not been borne out by the actual data (as evidenced by the starting point for each IRPs projection remaining around 60,000,000 MWh, despite earlier predictions of growth). The figure also shows how the 2023 IRP predicts even higher growth than past IRPs. The Company in the past has tended to overestimate its projected load. With the rise of electric vehicle adoption and other factors discussed in the 2023 IRP, the current projection may turn out to be more accurate than past projections. However, the Division urges caution when the model selects new resources to be built (especially nuclear and hydrogen peaker plants, as discussed below in these Comments) based on IRP load projections that have historically turned out too high.

The compound annual growth rate (CAGR) of the forecasted annual system load from 2023 to 2032 is 2.69%.[13] The CAGR of actual system retail sales for the period 2012 to 2021 is 0.30%.[14] This difference should be kept in mind when considering the construction of new resources that are in an action plan to meet the projected growth, especially if paired with the early retirements of resources that are already in place.

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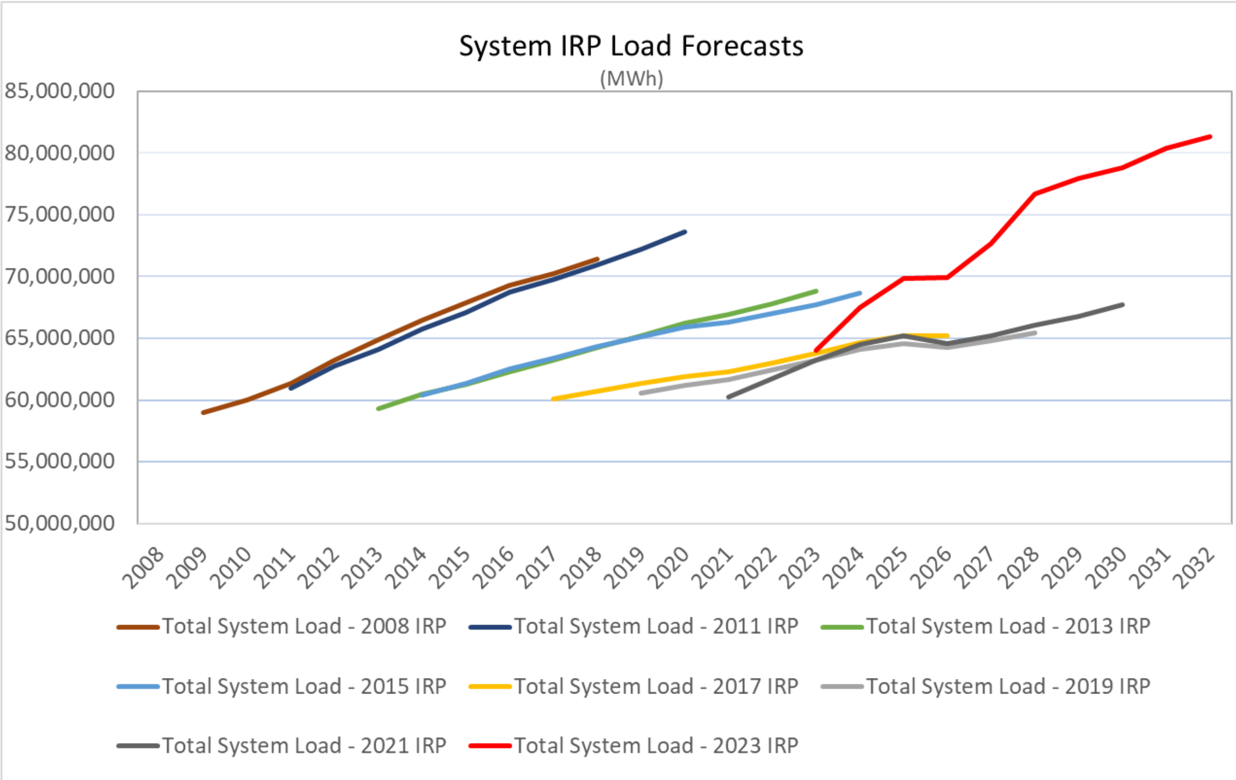
[12] Forecasted annual load is from Table A.1 in the 2023 IRP, Volume II at 2.
[13] Table A.1, 2023 IRP, Volume II at 2.
[14] Based on Table A.6, 2023 IRP, Volume II at 8.

Figure 1 Past IRP System Forecasts

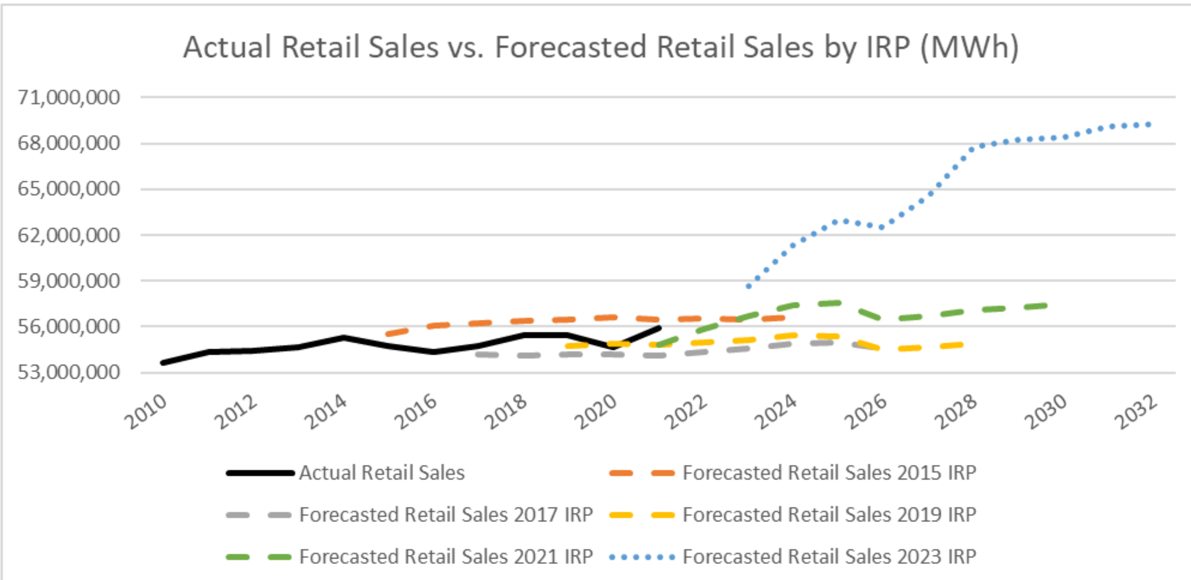


Similarly, Figure 2 below shows actual retail sales for the last ten years, along with projected load from the last few IRPs.[15] The 2023 IRP load forecast is significantly higher for the period 2025 to 2030 than previous IRP projections. Much of this increase is due to projected sales in the Oregon commercial class, with a 7.25% compound annual growth rate projected in that class over the next ten years. The Oregon commercial class goes from a projection of just under 7 million MWh in 2023 to almost 13 million MWh in 2029.[16] If this class does not grow at the projected rate, the sales for 2024 to 2032 may be closer to the projections from previous IRPs. The 2023 IRP projections may turn out to be accurate, but the Commission should be mindful of the history of IRP projections when considering them.

[15] Actual retail sales are weather normalized and come from Table A.6, 2023 IRP, Volume II, p. 8. The IRP projected sales from the 2023 IRP are from Table A.9, 2023 IRP, Volume II at 13.
[16] *See* Table A.10, 2023 IRP, Volume II at 14. The Division asked in a data request about the growth of this class; much of the response was confidential.

The CAGR of the system retail sales in the 2021 IRP was 0.53% for the period 2021 to 2030. The CAGR of the system retail sales in the 2023 IRP is 1.86% for the period 2023 to 2032.[17]

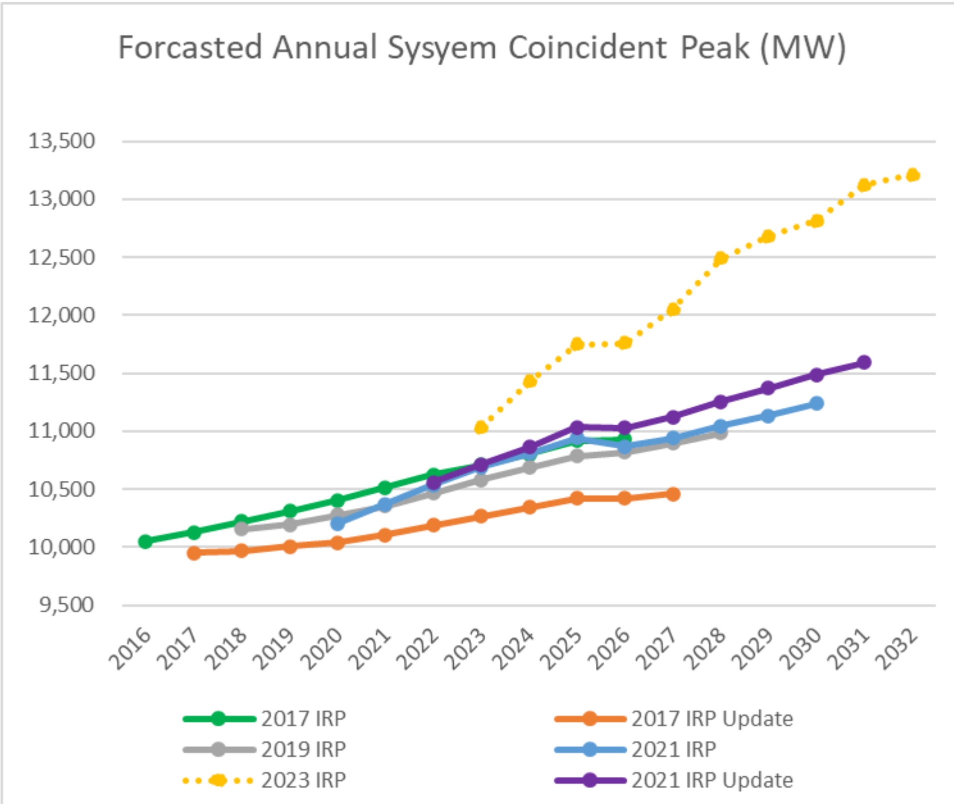
Figure 2 Comparison of IRP Sales Forecasts



Similarly, the coincident peak as projected by the 2023 IRP is significantly higher than the peaks projected in past IRPs, as seen in Figure 3.[18]

[17] Table A.8 in the 2021 IRP, Volume II at 16; Table A.9 in 2023 IRP, Volume II at 13.
[18] Projections from the 2023 IRP are taken from Table A.2, 2023 IRP, Volume II at 3.

Figure 3 Comparison of IRP Projected Coincident Peaks



These figures show that the 2023 IRP projects significantly higher load and coincident peaks than previous IRPs. When these projections are combined with the fact that the Company has historically tended to over-predict load,[19] caution should be used when evaluating the Action Plan, especially for expensive generation resources to be built in 2030 and beyond.

Public Input Process and Timing of the IRP

Even before considering other factors, the fact that the 2023 IRP is the third IRP in a row to be months late is enough to warrant a non-acknowledgement from the Commission. In the past, the Division has noted that one of the main virtues of an IRP is predictability: if parties can rely on the filing date of the IRP, they can schedule their time accordingly. Timely IRP

[19] *See, e.g.*, Division 2021 IRP Comments at 41-48.

filings result in better stakeholder engagement, and therefore late IRPs implicate Guideline 3, which states:

> The IRP will be developed in consultation with the Commission, its staff, the Division of Public Utilities, the Committee of Consumer Services, appropriate Utah state agencies and interested parties. PacifiCorp will provide ample opportunity for public input and information exchange during the development of its Plan.[20]

The Company has struggled to file the IRP on time for the last few IRP cycles. The Division has discussed the detrimental effects of late-filed IRPs in past comments and has stressed that a timely IRP allows stakeholders to budget their time and maximize their input.[21]

Conditions and IRP inputs are ever-changing. The IRP is not meant to give perfect visibility of all conditions at the time of filing. The IRP filing schedule is intended to provide consistent planning cycles using available information. Assumptions, forecasts, and the like should be finalized in time for on-time filing, regardless of new developments. By the time the Commission fully addresses a timely-filed IRP, an update is mere months away. The regularly scheduled IRP processes are adequate to the task of evaluating new developments—they are intended to be. Even where, as here, subsequent developments like the RFP suspension render an IRP of more limited value, there is little to no IRP value lost that cannot be remedied through an update or subsequent IRP.

Late IRPs in 2019, 2021, and 2023

Each of the last three IRPs has been months late. The 2019 IRP filing was delayed twice, first from March 31, 2019, to August 1, 2019, and then from August 1, 2019, to October 18, 2019.[22] The 2021 IRP was also filed months late. The Commission approved a delay of the March 31, 2021, deadline to allow the results of the 2020 All-Source Request for Proposals to be accounted for in the 2021 IRP planning cycle and to address modeling software

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[20] Guidelines at 36.
[21] *See, e.g.*, Division 2021 IRP Comments, at 6 and 67.
[22] *PacifiCorp's 2019 Integrated Resource Plan*, Docket No. 19-035-02, Order issued May 13, 2020 at 1, footnote 2 [hereafter "2019 IRP Order"], https://pscdocs.utah.gov/electric/19docs/1903502/3137781903502o5-13-2020.pdf.

issues.[23] The Company filed the text of the 2021 IRP on September 1, 2021 (five months late). The details of the sensitivity studies were filed on October 1, 2021.

In the present 2023 IRP cycle, the Company filed a Request for Extension on March 2, 2023, stating that changes to the Ozone Transport Rule, the Inflation Reduction Act, and other rules and plans:

> required changes to model inputs and constraints requiring a considerable amount of time to implement and verify the accuracy of outputs. The time delay placed PacifiCorp's ability to provide model output that could be presented to stakeholders for meaningful review in advance of the March 31, 2023, filing deadline in jeopardy.[24]

The Company acknowledged that without an extension, if it filed an IRP on the March 31, 2023, filing date, "stakeholders will not have been given the opportunity for meaningful review in advance of the filing."[25] The Company therefore proposed the following schedule:

- March 31, 2023 – File preliminary 2023 IRP with the Commission on an informational basis with non-confidential information.
- April 30, 2023 – Deadline for stakeholders to submit comments and feedback directly to the Company through the established public input meeting ("PIM") process.
- May 31, 2023 – File final 2023 IRP.

The Division recommended approval of the extension, but "only because an extension is the least objectionable realistic option."[26] The Division disagreed with the Company's assertion that it was "prepared to file the 2023 IRP on March 31, 2023, as required." The Division stated:

> The Company is not prepared to file a complete IRP on March 31, 2023. A complete IRP is one which has had adequate stakeholder feedback and is

[23] The Company filed a request for an extension on February 16, 2021. On March 15, 2021, the Commission approved the Company's request, granting an extension until September 1, 2021. On September 1, 2021, the Company completed the data filings.
[24] RMP Request for Extension at 1.
[25] *Id*.
[26] *PacifiCorp's 2023 Integrated Resource Plan*, Docket No. 23-035-10, Comments from the Division of Public Utilities filed March 10, 2023 at 3, https://pscdocs.utah.gov/electric/23docs/2303510/327253DPUCmnts3-10-2023.pdf.

> accompanied by all relevant data discs. An IRP filed on March 31 would meet neither the IRP guidelines nor past Commission orders.[27]

The Company filed the text of the final 2023 IRP (Volumes I and II) on May 31, 2023. On April 17, the Company filed non-confidential supporting information. On May 1, the Company filed confidential supporting information. On June 16 and June 20, the Company filed final confidential supporting information and final supporting information, respectively. This means that the last of the finalized information was filed more than 11 weeks after the original due date.[28]

In some respects, the Company treated the IRP filed on March 31 as a draft—for example, it stated that a March 31 filing would be a "preliminary filing" that was on an "informational basis," and would allow for "meaningful review" by stakeholders.[29] The implication from this language is that the IRP filed on March 31 was only a draft, and that its results might change based on stakeholder input.

But in other respects, the Company signaled the March 31 IRP should not be considered a draft. On that same date, the Company also filed a news release that could reasonably be interpreted as implying that the IRP filed on that date was unlikely to significantly change in its basic outline.[30] The Company did not include any quotes in the release implying that the results were subject to changes due to stakeholder comment. Furthermore, why would the Company issue such a news release in the first place if it thought the results described therein could change significantly?

Similarly, *The Salt Lake Tribune* posted a story about the filing of the 2023 IRP at 4 p.m. on March 31, 2023.[31] The preliminary IRP was posted on the Company website shortly after the story was filed. Note that the newspaper must have received the information ahead of 4

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[27] *Id*. at 5 (footnote omitted).
[28] The Division has stated in the past, and reiterates now, that it considers the IRP to be fully submitted only when all supplemental files are submitted (not just when the texts of Volumes I and II are submitted).
[29] RMP Request for Extension at 1.
[30] "PacifiCorp's 2023 plan advances a net-zero future," Mar. 31, 2023, available at: https://www.rockymountainpower.net/about/newsroom/news-releases/2023-integrated-resource-plan.html
[31] "End of Utah Coal Power in Sight as Rocky Mountain Power Moves to Renewables and Nuclear," *Salt Lake Tribune*, Mar. 31, 2023, 4:00 p.m., available at https://www.sltrib.com/renewable-energy/2023/03/31/end-utah-coal-power-sight-rocky/.

p.m. to have time to write the story and get the quotes—therefore, the newspaper received information about certain aspects of the IRP results before stakeholders. Furthermore, the fact that the press was informed about coal plant dates on March 31 is further evidence that the "preliminary" IRP was in practice not very preliminary—if the Company expected that meaningful review by stakeholders could change the modeling outcomes of the IRP, why would it release information about the details of the preferred portfolio to the press?

Public Input: The Effect of Late IRPs

Late filing of IRPs lessens the quality and amount of public input. For example, the time needed for evaluation of the 2023 IRP will, as with the 2019 and 2021 IRPs, run up against the filing of the associated IRP update, which is typically filed one year after the "main" IRP.[32] In the present docket, final comments on the 2023 IRP are due January 31, 2024. Within two months of that date, the Company will likely file the 2023 IRP Update.[33]

The Company has indicated that the 2023 IRP Update may be stakeholders' first chance to see modeling updates that reflect the suspension of the 2022 AS RFP, and the plan that may incorporate the suspension.[34] Some stakeholders expressed a belief that comments on the 2023 IRP are pointless, since the Action Plan has likely changed in some as-yet-unknown manner; the Division discusses this topic in the section below titled "Suspension of the 2022 AS RFP."

Furthermore, it is not evident that the delays significantly improved the accuracy of the 2023 IRP filing, in part because the planning environment and IRP inputs continue to change. For example, the RFP remains suspended, and Company action on that front is expected soon. Another recent change is that in early December of 2023, the Biden administration released new rules regarding methane releases at oil and gas facilities.[35] The point is that major

[32] The Company's 2019 IRP was so late that there was no point in filing a 2019 IRP Update. *PacifiCorp's 2019 Integrated Resource Plan*, Docket 19-035-02, Rocky Mountain Power's Notice filed Nov. 13, 2019, https://pscdocs.utah.gov/electric/19docs/1903502/311014RMPNotice11-13-2019.pdf

[33] The Company stated: "our IRP update will be filed in early…Spring '24". IRP Technical Conference at 10:34.

[34] The Company indicated as much in the 2023 IRP Technical Conference. *Id.* at 1:00:44.

[35] *See, e.g.*, "US lays out plan at COP 28 to slash greenhouse gas methane from oil and gas," Reuters, Dec. 2, 2023, at https://www.reuters.com/sustainability/climate-energy/us-lays-out-plan-cop-28-slash-climate-super-pollutant-oil-gas-2023-12-02/

changes that affect the IRP are always occurring, and these changes rarely, if ever, merit a delay in the RFP process. Chronic late filings do not in general result in an improved RFP; they instead result in stakeholders being unable to rely on the schedule, and run afoul of Guideline 3, which requires the Company to provide “ample opportunity for public input and information exchange during the development of its Plan.”

Public Input: Meeting Materials

With respect to other timing and public input issues, the Company has improved its response. In its Comments on the 2021 IRP, the Division criticized the Company’s public input process. Among other concerns, the Division noted that the Company failed to provide meeting materials far enough in advance.[36] The Company improved this issue for the 2023 IRP. In general, the Company provided slides three days ahead of each meeting.[37] The Division commends the Company for improving this metric.

Public Input: Conclusion

Even though the Company improved some aspects of its public input process, the Division believes that the chronic lateness of the IRP violates Guideline 3 by harming the amount and quality of stakeholder input.

Although the Company may not have expected the modeling results of the IRP to change from the preliminary IRP to the final IRP, the action plan that ultimately arises from the next iteration of modeling results will likely change the 2023 Action Plan significantly, due to factors outside of the 2023 IRP, namely the suspension of the 2022 AS RFP. The fact that so many relevant changes have occurred since the 2023 IRP’s filing illustrates the folly of delays intended to capture all new information. Delays provide little guarantee of an improved product but disrupt the process, inconvenience the parties, and jeopardize timely updates (which can provide up-to-date information).

[36] *See* Table 3 of Division 2021 IRP Comments at 10.
[37] In some cases, it was closer to two and a half days.

Suspension of the 2022 AS RFP

A separate and independent reason that the Division recommends non-acknowledgement of the 2023 IRP is that the suspension of the 2022 AS RFP could significantly alter the 2023 IRP Action Plan. It is difficult for the Commission to even know what action plan it would be acknowledging. Similarly, it is difficult for stakeholders to know how to evaluate the 2023 IRP in comments, since the Action Plan is almost certain to be altered.

On September 29, 2023, the Company filed in Docket No. 21-035-52 its Second RFP Update.[38] In this notice, the Company suspended the 2022 AS RFP, with no details on when (or whether) the Company would reinstate the 2022 AS RFP.

In a theoretical sense, the suspension of the 2022 AS RFP should not affect how the Commission evaluates the 2023 IRP. As the Company noted in the 2023 IRP Technical Conference, in general, the IRP action plan is the vehicle that launches the RFP process, not the other way around.[39] The 2022 AS RFP arose from the 2021 IRP Action Plan, and the 2023 IRP results in its own action plan.[40] However, when it comes to the Commission's (and other stakeholders') evaluation of the 2023 IRP, the suspension of the 2022 AS RFP does have an effect—a big effect—because the 2023 IRP Action Plan is now likely to be significantly altered.

The Division recognizes that there is always a lag between the drafting of the IRP and the enactment of the action plan resulting from that IRP, and that the Company should not be faulted for this. For example, suppose a hypothetical IRP called for roughly 500 MW of new solar resources in 2026 and 500 MW of new wind resources in 2026.[41] If, at the time of the drafting of the RFP resulting from that IRP, prices for new solar and wind resources had

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[38] *See* Footnote 10.
[39] IRP Technical Conference at 8:38.
[40] The 2023 IRP Action Plan is summarized in Chapter 10 of the 2023 IRP; Volume I, at 345.
[41] The Division acknowledges that the IRP action plans do not in general dictate specific MW amounts that will go into the resulting RFP. For example, the 2021 RFP Action Plan Item 2d simply stated that "PacifiCorp will issue an all-source Request for Proposals (RFP) to procure resources that can achieve commercial operations by the end of December 2026." 2021 IRP, Volume I at 325.
However, the preferred portfolio in a given IRP does envision specific MW amounts of resources acquired in specific years. *See, e.g.*, 2021 IRP, Volume I, Table 9.18 at 309. The RFP will in general use the preferred portfolio as a guideline, updated with the conditions at the time of the drafting of the RFP.

changed, it would be routine for the Company to adjust its RFP to seek instead (for example) 400 MW of new solar resources and 600 MW of new wind resources, and this change would be unobjectionable if operational needs could be met with the change.

However, what the Company has done with the 2022 AS RFP is a different category of change, for two major reasons. First, not only has the Action Plan most likely been changed, but the basic assumptions that led to it have been changed drastically. Second, the Action Plan has likely been changed not merely in detail (e.g., a minor change in the balance of renewables sought), but in kind (e.g., the possibility of a large addition of resources to a future RFP, resources that were previously assumed to already be in place).

The assumptions that served as model inputs may have changed significantly by the time the Company performs more modeling. The 2023 IRP states on p. 35:

> Through the end of 2026, the 2023 IRP preferred portfolio includes an additional 745 MW of wind and an additional 600 MW solar co-located with storage, for which the 2022AS RFP is currently soliciting and evaluating resources to fulfill.[42]

The Company, in its response to DPU Data Request 4.1, confirmed that the modeling in the IRP assumed that the 2022 AS RFP resources were in place in 2026 (using proxy wind and solar resources from the cluster study instead of actual bid values). However, if the 2022 AS RFP is cancelled rather than suspended, those resources that were assumed to be already in place may need to go into the new action plan or be replaced via some other method.

At the IRP Technical Conference, the Company indicated it had not decided what path to take regarding the 2022 AS RFP. The Company mentioned several possible options, including:

1. Unsuspending the 2022 AS RFP (without refreshed bids). Note that if this option is to be taken, the Company would likely have had to unsuspend the RFP before

[42] The IRP language actually reads "Through the end of 2026, the 2021 IRP preferred portfolio includes…", but the Company in response to DPU Data Request 4.1 confirms that this should read "the 2023 IRP".

November 21, 2023, before the bids expired. Since this did not happen, the Division assumes a restart of the RFP without refreshed bids is not practical.

2. Unsuspending the 2022 AS RFP (with refreshed bids). The Company stated in the IRP Technical Conference that if the unsuspension happened after November 21, the bidders would be allowed to refresh prices and commercial operation dates.[43] It is not clear whether completely new bids from other projects that did not bid into the original RFP would be allowed under this scenario. It is also not clear when the target commercial operation dates in the RFP would be.

3. Cancelling the 2022 AS RFP. In this scenario, the 745 MW of wind resources and 600 MW solar resources co-located with storage could either be folded into an RFP resulting from the 2023 IRP (or the 2023 IRP Update) or could be replaced in part or in full by the resources described in option 4 below.

4. Obtaining resources for 2025 through 2027 outside the 2022 AS RFP process. In the IRP Technical Conference, the Company stated that it will continue to evaluate resource and reliability options outside the RFP process.[44] These possibilities include short-term hydro contracts and other bilateral options, storage resources, and other short-term miscellaneous front-office transactions.

The Division notes that only Option 1 (unsuspending the 2022 AS RFP without refreshed bids) is likely to result in an action plan that reflects the Preferred Portfolio as found in Tables 9.31 and 9.32 of the IRP. Options 2 through 4 result in action plans that differ significantly from the one envisioned in those tables. Option 2 may result in different commercial operation dates, and the resources in years 2025 and 2026 may look very different than those in the tables. Options 3 and 4 could result in a significantly different action plan. For example, if the Company pursues Option 4 and procures short-term transactions in lieu of the 2022 AS RFP resources, it will need to run the modeling again to

[43] IRP Technical Conference at 25:00.
[44] IRP Technical Conference at 16:00.

determine a new preferred portfolio, since the assumptions will have changed because the resources from the 2022 AS RFP will not be in place.

Thus, the Action Plan will likely change, but the Company cannot yet say exactly how it will change. It is unclear whether the 2022 AS RFP resources will instead be rolled into a 2024 AS RFP, whether front-office transactions will be increased, whether resources outside the RFP will be pursued, or some combination of these options. The Division recommends non-acknowledgement because it is not clear what the Commission would be acknowledging. Guideline 4(e) states that the IRP will include:

> An action plan outlining the specific resource decisions intended to implement the integrated resource plan in a manner consistent with the Company's strategic business plan. The action plan will span a four-year horizon and will describe specific actions to be taken in the first two years and outline actions anticipated in the last two years. The action plan will include a status report of the specific actions contained in the previous action plan.[45]

In the 2023 IRP, the status report of the 2021 IRP Action Plan items related to the 2022 AS RFP states: “A final shortlist is expected by late Q2 2023 or early Q3 2023 with resources contracted by the end of Q4 2023.”[46] This will not happen, but it is not clear what the replacement plan will be. Other specific items in the Action Plan will change, probably significantly. This is another reason the Division recommends non-acknowledgement of the 2023 IRP.

Treating Resources Comparably

The Division acknowledges that it is challenging for the Company to follow Guideline 4(b) considering how many different types of resources are available. However, in the Division’s opinion, the Company treats certain resources optimistically (renewables, battery storage, the Natrium plant, and hydrogen non-emitting peakers) and other resources pessimistically (natural gas, coal, and CCUS technologies). The Company therefore violates Guideline 4(b). The Guideline in question reads as follows:

[45] Guidelines at 23-24.
[46] 2023 IRP, Volume I at 358.

4. PacifiCorp's future integrated resource plans will include: …

b. An evaluation of all present and future resources, including future market opportunities (both demand-side and supply-side), on a consistent and comparable basis.

i. An assessment of all technically feasible and cost-effective improvements in the efficient use of electricity, including load management and conservation.

ii. An assessment of all technically feasible generating technologies including renewable resources, cogeneration, power purchases from other sources, and the construction of thermal resources.

iii. The resource assessments should include the life expectancy of the resources, the recognition of whether the resource is replacing/adding capacity or energy, dispatchability, lead-time requirements, flexibility, efficiency of the resource and opportunities for customer participation.[47]

With the Guideline in mind, we discuss how specific resources are treated.

The Natrium Plant

The Company is optimistic about Natrium costs and timelines. In its Comments regarding the 2021 IRP, the Division expressed concern about the uncertainties of the technology and of the ultimate costs to ratepayers for the Natrium plant.[48] These questions have still not been answered, and the Division renews those concerns. The Company's response to concerns about cost continues to be that it has not yet entered into any contractual agreements with TerraPower, and that any agreements will only be entered into if the costs and risks are minimized for ratepayers.[49] However, since no details are available to stakeholders (as no contract yet exists), it is impossible for stakeholders to evaluate the

[47] Guidelines at 19-22.
[48] Division 2021 IRP Comments at 20-29.
[49] *See* "Wyoming nuclear plant on track despite industry setback, developer says." *Oil City News*, Nov. 21, 2023, https://oilcity.news/community/energy-community/2023/11/21/wyoming-nuclear-plant-on-track-despite-industry-setback-developer-says/: "Progress is being made in developing commercial agreements between PacifiCorp and TerraPower." PacifiCorp spokesman Dave Eskelsen told WyoFile via email. "But PacifiCorp does not anticipate finalizing such agreements prior to the end of 2023."."

plant. Furthermore, the plant's viability may depend on government grants that are dispensed during each federal budget process:

> The U.S. Department of Energy's 50-50 construction cost support — which is currently estimated at $2 billion — is a grant and won't fall on either TerraPower or ratepayers to pay back, Navin said. However, it's doled out in pieces and relies on Congress to include the appropriations in its annual budget approvals.[50]

Until the agreement with TerraPower is finalized and the federal funding is certain, the Natrium project should not be in the preferred portfolio.

Nonetheless, the Company continues to be optimistic regarding the timeline for the plant. For example, TerraPower is expected to file with the Nuclear Regulatory Commission (NRC) by March 31, 2024, the Construction Permit Application (CPA) for the Natrium reactor.[51] Looking at the last couple nuclear plants approved in the U.S., the timeline from submitting a license application to approval of the license application was around four years.[52] If TerraPower's licensing process took four years, it would not be able to begin

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[50] *Id. See also* "U.S. Department of Energy Announces $160 Million in First Awards under Advanced Reactor Demonstration Program," US Office of Nuclear Energy, Oct. 13, 2020:

> Congress appropriated $160 million for the Fiscal Year 2020 budget as initial funding for these demonstration projects. Funding beyond the near-term is contingent on additional future appropriations, evaluations of satisfactory progress and DOE approval of continuation applications.

https://www.energy.gov/ne/articles/us-department-energy-announces-160-million-first-awards-under-advanced-reactor

[51] Public Outreach Meeting on the Forthcoming TerraPower Construction Permit Application. NRC Docket No. 99902100, Accession No. ML23306A210, Nov. 2, 2023, at: https://www.nrc.gov/reactors/new-reactors/advanced/who-were-working-with/licensing-activities/pre-application-activities/natrium.html (click on link "Natrium pre-application documents (NRC Docket 99902100)").

[52] There appear to be two main ways to obtain a license for a nuclear plant: the traditional two-step process, or a combined license process:

> In the past, nuclear power plants were licensed under a two-step licensing process. This process required both a construction permit and an operating license. In 1989, the NRC established an alternative licensing process that essentially combines a construction permit and an operating license, with certain conditions, into a single license. Under either process, before an applicant can build and operate a nuclear power plant, it must obtain approval from the NRC.

See Nuclear Power Plant Licensing Process (NUREG/BR-0298, Revision 2), https://www.nrc.gov/reading-rm/doc-collections/nuregs/brochures/br0298/index.html.

For Virgil C. Summer Units 2 and 3, South Carolina Electric & Gas Company (SCE&G) submitted its application for combined licenses (COLA) on 3/27/2008, and an NRC decision was issued on 3/30/2012. *See* at https://www.nrc.gov/reactors/new-reactors/large-lwr/col/summer.html#col.

Similarly, for Vogtle Units 3 and 4, Southern Nuclear Operating Company (SNC) submitted its application for combined licenses on 3/28/2008, and the NRC issued a decision on 2/09/2012. *See* https://www.nrc.gov/reactors/new-reactors/large-lwr/col/vogtle.html.

construction until April 1, 2028. For the plant to be in service by the end of 2030, as indicated in the preferred portfolio in Table 9.32 on page 327 of the IRP, the plant would need to be built in two and a half years. The Division considers this timeline to be very optimistic.

TerraPower is apparently pursuing a traditional two-step licensing process, under which it can receive approval of its construction license before it receives approval of its operating license. The idea of the two-step process is that construction can begin sooner. However, this method also entails risk—for example, what are the risks of beginning construction before an operating license is approved? And who bears the risks?

In a data request, the Division asked the Company to provide a plausible timeline for the Natrium plant, with all major NRC permitting milestones, that would have the plant online by 2030. The Company responded:

> The Company objects to this request to the extent it is seeking speculation. Without waiving the foregoing objection, PacifiCorp responds as follows:
>
> While PacifiCorp and TerraPower continue to work together to progress the Natrium facility toward commercial operations by the end of 2030, no commercial agreement has yet been reached. As a result, PacifiCorp cannot provide meaningful reporting on TerraPower's Natrium plant schedule.[53]

A nuclear plant should not be in the preferred portfolio until its schedule is less speculative. Even if the approval of the construction application takes only two years, that means construction would start in April of 2026. Can a nuclear plant of untested design be built in four years? Vogtle Units 3 and 4 took over ten years to construct.[54] Virgil C. Summer Units

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There are many variables that could affect the timing of approval of nuclear licenses, and the Division does not presume to predict how long TerraPower's licensing process will take. TerraPower appears to be applying for the license under the traditional two-step process, with construction and operating licenses obtained separately.

[53] *PacifiCorp's 2023 Integrated Resource Plan*, Docket No. 23-035-10, Rocky Mountain Power's Responses to DPU 5th Set Data Requests 5.1-5.3, Nov. 22, 2023 (Response to DPU DR 5.2).

[54] *See* Issued Combined Licenses and Limited Work Authorizations for Vogtle, Units 3 and 4, *NRC*, at https://www.nrc.gov/reactors/new-reactors/large-lwr/col/vogtle.html.

2 and 3 were abandoned after approximately four years of construction, with the units less than 40% complete.[55]

Additionally, the response to the data request is an objectionable attempt to avoid answering the question asked. The question might have been easily answered by estimating the length of time necessary for each known step, with appropriate caveats. Instead, the answer is legalistic rather than helpful; the Company should be able to articulate timelines of new resources proposed in its preferred portfolio, especially resources using new technologies. If the Company cannot or will not describe how a piece of its preferred portfolio might be built in time, it is not clear how the Commission could conceivably find that resource to be part of a least-cost, least-risk portfolio. If the Company knows more about the timeline than it is willing to say, its lack of candor presents even larger problems for regulators.

Therefore, the Division considers a start date of 2030 for the Natrium plant to be very optimistic. In its 2021 IRP Comments, the Division also expressed concerns about the possibility of cost overruns. The Company's response may again be that it will only enter a contract with TerraPower if the timing and price are advantageous to the customers. This answer sidesteps the fact that decisions about other resources may be based on the nuclear plant's inclusion in the preferred portfolio. Thus the 2023 IRP and the 2023 IRP Update might fail to pick other new resources, or may retire an existing resource, based on a nuclear plant that may not be built in time. Decisions this momentous ought not to be built on such shakable ground.

In a data request, the Division asked the Company when it would enter a contract with TerraPower. The Company responded that although no agreement or timeline has been set, it "expects that such an agreement would be executed prior to approval of the construction permit application…"[56] Only when that agreement is executed and a concrete timeline is in place, which can then be studied by stakeholders, will the Natrium plant will be

[55] *See* "Utilities ditch reactors that launched U.S. nuclear renaissance," Reuters, July 31, 2017, at https://www.reuters.com/article/us-usa-nuclear-south-carolina-idUSKBN1AG22S/
[56] Rocky Mountain Power's Responses to DPU 5th Set Data Requests 5.1-5.3, Nov. 22, 2023 (Response to DPU DR 5.3).

an appropriate candidate for the preferred portfolio. Until then, its costs and timeline are speculative, and it should be modeled as an alternative, no matter how meritorious it may ultimately prove to be.

Non-Emitting Peaker Plants

It is difficult to evaluate the Company's proposed construction times and costs for hydrogen-fueled non-emitting peaker plants, as no such plants are in commercial operation and there is thus no historical data to consult. The Division's understanding is that although there are no utility-scale 100% hydrogen peaker plants in operation, some utility-scale projects that have turbines that use 25-30% hydrogen (mixed in with natural gas) are in the works.[57] However, any cost estimates regarding utility scale peaker plants using hydrogen, especially 100% hydrogen, are speculative, for many reasons. First, the technology is nascent and unproven. There are inevitably roadblocks and issues that can drive up costs with any new technology. Second, the source of the hydrogen fuel is yet unknown. Hydrogen can be produced using an electrolysis method or some other technique at or near the plant in question, with a production facility that is primarily for the generating plant in question.[58]

Hydrogen could also be delivered to a generation facility by a more robust pipeline network from a centralized remote facility, similar to the delivery of natural gas. Such hydrogen pipelines do not currently exist; however, the Company has assumed in the IRP that this fuel resource will be available, as shown below.

In response to a data request by the Division, the Company stated the following:

> PacifiCorp's 2023 Integrated Resource Plan (IRP) did not model any specific hydrogen production facilities but instead assumed a pipeline expense. A study was reviewed with onsite liquified hydrogen storage in tanks that was more expensive.

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[57] *See, e.g.*, "Mitsubishi Power delivers Hydrogen-Ready Gas Turbines to "IPP Renewed" Project in Utah to meet Decarbonization Goals in the Western US," *Mitsubishi Power Americas,* July 28, 2023, https://power.mhi.com/regions/amer/news/20230727 (projects using 30% hydrogen said to be coming online in 2025).

[58] See, e.g., "Ready for the Energy Transition: Hydrogen Considerations for Combined Cycle Power Plants," Power, Oct. 29, 2021 at https://powermag.com/ready-for-the-energy-transition-hydrogen-considerations-for-combined-cycle-power-plants/.

> …
> For modeling purposes in PacifiCorp's 2023 Integrated Resource Plan (IRP), hydrogen was assumed to be procured at market prices and no production technology or source was identified. Because of federal tax credits for 100 percent green hydrogen production, the provider of the Company's forward price forecasts for electricity and gas projected that hydrogen production costs would be relatively low. However, for the 2023 IRP, the market price for hydrogen was assumed to be higher, no less than the natural gas price plus the assumed medium greenhouse gas (GHG) cost for natural gas, i.e. burning 1 million British thermal unit (MMBtu) of either fuel would have the same overall cost. Hydrogen has an energy density that is one-third that of natural gas, therefore three times the volume must be delivered to achieve the same level of energy as natural gas. The projected hydrogen pipeline capacity cost was therefore set at three times the current rates for natural gas pipeline capacity.[59]

The Division has no way of knowing whether these estimates, and the associated costs listed in Tables 7.1 and 7.2,[60] are accurate. However, the overall assumptions and the resulting preferred portfolio are optimistic in the sense that they are about an unproven technology with no track record of costs.

Some particular assumptions also seem optimistic (e.g., assuming that because hydrogen has one-third the energy density, it will have just three times the pipeline costs, despite the uncertainties regarding the extent of, and lack of economies of scale regarding, hydrogen pipelines). Natural gas turbines and associated pipeline distribution systems have decades of safety and cost assumptions upon which to base decisions. There is no such data for hydrogen-fueled turbines, utility-scale hydrogen production, or hydrogen pipelines. In that sense, the 2023 IRP is optimistic about non-emitting hydrogen peaker plants.

The timelines used for non-emitting peaker may also be optimistic. This technology does not currently exist at the utility scale, especially for 100% hydrogen-fueled peakers, and assuming a specific date for an operational generation facility is speculative. When will the technology be commercial? How will such a plant be permitted and what safety measures

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[59] *PacifiCorp's 2023 Integrated Resource Plan*, Docket No. 23-035-10, Rocky Mountain Power's Responses to DPU 2nd Set Data Requests 2.1-2.9, Oct. 12, 2023 (the quotes above are from the responses to DPU DRs 2.2 and 2.3).
[60] 2023 IRP Volume 1 at 181-188.

might be required? What pipelines or production facilities might be built? Where? When, and at what cost?

The Company is Pessimistic about Natural Gas and CCUS Assumptions

The Company makes optimistic assumptions about the Natrium plant and hydrogen peaker plants but makes pessimistic assumptions about natural gas and coal resources. This is most plainly seen in its treatment of variant P20 JB3-4 CCUS. "CCUS" stands for "carbon capture usage and storage," which is a technology that attempts to capture and store CO_2 and other emissions from generation that produces GHGs. The technology is early in its development, but testing of CO_2 storage is underway.[61]

That variant was the top-performing variant case using the medium gas/medium CO_2 assumptions, with a PVRR of $507 million under the preferred portfolio P-MM (using ST value). Variant P20 JB3-4 CCUS was also the top performer under a risk-adjusted cost metric and was third in the CO_2 emissions category.[62] The P20 variant was also the top ST cost performer under both the medium gas/zero CO_2 scenario and the high gas/high CO_2 scenario, and was the top emission performer under both of those scenarios.[63]

The Company noted that variant P20 JB3-4 CCUS was the top cost performer under both ST and risk-adjusted evaluations, but stated that the variant was not chosen as the preferred portfolio for several reasons, including:

- "The CCUS assumptions included in the updated variant are not based on bids or proposals from CCUS technology companies but are proxy assumptions for project-specific costs and operational characteristics."
- "The scale of the proposed CCUS technology in P20-JB3-4 CCUS (699 MW) has never been demonstrated on a coal plant commercially anywhere in the world."

[61] "Carbon Storage FAQs," National Energy Technology Laboratory, https://netl.doe.gov/carbon-management/carbon-storage/faqs/carbon-storage-faqs.
[62] *See* Table 9.14 of the 2023 IRP, Volume I at 268.
[63] *See* Tables 9.16 and 9.17 of the 2023 IRP, Volume I at 269.

- "While the Company has carried out and received feasibility studies for amine-based carbon capture at Jim Bridger Units 3 and 4, it does not currently have evaluation or equivalent cost data to that of a front-end engineering and design (FEED) study."
- "The updated fueling strategy to source coal for Jim Bridger exclusively from the Powder River Basin has not been previously attempted by PacifiCorp."
- Other miscellaneous limitations, challenges, and risks.[64]

The Division asked during the IRP Technical Conference whether these risks were weighed by any sort of modeling analysis, but the Company indicated that the rejection of this variant as the preferred portfolio was more of a judgment call.[65]

The Division does not dispute any of the bulleted challenges/uncertainties with CCUS technology, but notes that the listed bullet points also apply to the Natrium project and/or the 100% hydrogen peaker plants:

- The Natrium costs and hydrogen peaker plant costs are not based on bids or proposals.
- The Natrium technology and 100% hydrogen peaker plants have never been demonstrated commercially at the utility scale.
- To the Division's knowledge, no FEED or equivalent studies were the sources of costs for the Natrium project or hydrogen peaker plants.
- The fuel source strategies for the Natrium project and hydrogen peaker plants have never been attempted by any utility, let alone by the Company.

The Natrium/hydrogen peaker plant technologies are treated optimistically, whereas the CCUS technology is treated pessimistically.

[64] 2023 IRP, Volume I at 296-7.
[65] IRP Technical Conference at 1:17:00.

The 2023 IRP also treats natural gas and coal pessimistically in other ways. In the 2021 IRP, the Company did not allow the model to choose new natural gas plants at all. The Division objected,[66] and this omission was one of the reasons the Commission declined to acknowledge the 2021 IRP. In the 2023 IRP, the Company allows new natural gas to be selected, but urges caution:

> In response to stakeholder feedback, new natural gas proxy resources were made available for selection in the Initial Portfolios. There are however considerable stranded-cost risks associated with planning a system that is reliant on new natural gas resources with depreciable lives ranging between 30 to 40 years (i.e., a new gas-fired resource placed in service in 2030 would be depreciated as late as 2070). It is not feasible to assume new natural gas resources can obtain the permits needed to site and operate such a facility in many parts of PacifiCorp's service territory.
>
> Further, PacifiCorp observed that in the 2020AS RFP there were no bids for new natural gas resources. Therefore, when considering current state policies and the consistent trajectory of federal policy over the past 10-20 years, careful consideration must be given to natural gas selections and location among the competing portfolios.[67]

The Company also assigned shorter recovery periods to new natural gas plants. In the 2023 April 13 IRP Public Input Meeting, the Company stated that in most scenarios, new gas is available to be endogenously selected by the model, and that "recovery of new gas resource cost is assumed to be achieved in ten years to account for identified risk in investments and new emitting resources."[68] The Division asked about this ten-tear assumption, and as a result the Company ran variant "P24-Gas 40-year Life" (Variant P24).The Company describes Variant P24 as follows:

> The P24-Gas 40-year Life portfolio is a variant of the P-MM portfolio that changes the technical life assumption for proxy gas resources from 10 years in the base study to 40 years. In this scenario, the model selects gas units as replacements for any coal retirements instead of the nuclear or non-emitting peaking options in the P-MM portfolio. Additionally, the cost of gas pipelines led the model to keep Hunter 2 and 3 as coal through 2042. In addition to the

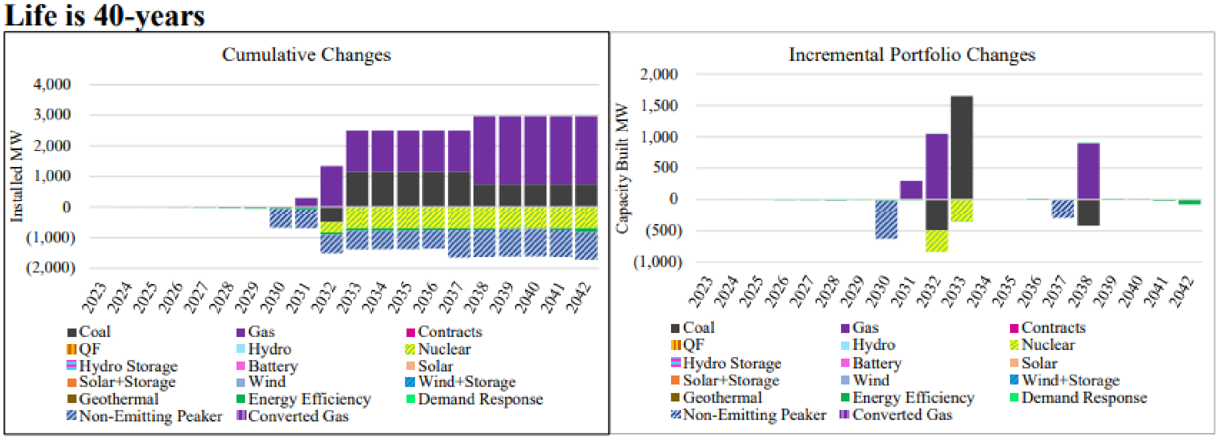
[66] *See* 2021 Division IRP Comments at 31-41.
[67] 2023 IRP, Volume I at 241-242.
[68] IRP Public Input Meeting, April 13, 2023, 2:23:00 of part 1, https://www.youtube.com/watch?v=gPqQSJyO-DE.

reduction in nuclear and non-emitting peaking technology, the model selected significantly less early DSM.[69]

Thus, the decision to change the technical life of a gas plant from an arbitrary 10-year term (due to fears that gas plant may be disfavored in the future) to a 40-year term (appropriate for how long a physical plant might last) results in dramatically different portfolio. Nuclear and non-emitting peakers are decreased, and early coal retirements are pushed back, as seen in Figure 9.44 from the IRP.

Figure 4 Variant P24

Figure 9.44 - Increase/(Decrease) in Resources when Proxy Natural Gas Resource Life is 40-years



This is another example of a natural gas/coal assumption being treated pessimistically. The Division agrees that renewables and batteries (in some combination) will play an increasingly dominant role in the next 30 or 40 years. However, other options should not be foreclosed by making unwarranted assumptions. These assumptions stack the deck against natural gas and coal. The Company should be running these scenarios in a more neutral fashion, so that the consequences of state and federal policies can be more easily seen and considered in their context.

As shown below, natural gas plants are still being built across the country and should not be dismissed as unworkable—clearly the utilities building them do not think they will be obsolete in ten years. The ten-year payback period is also a violation of Guideline 4(b)(iii),

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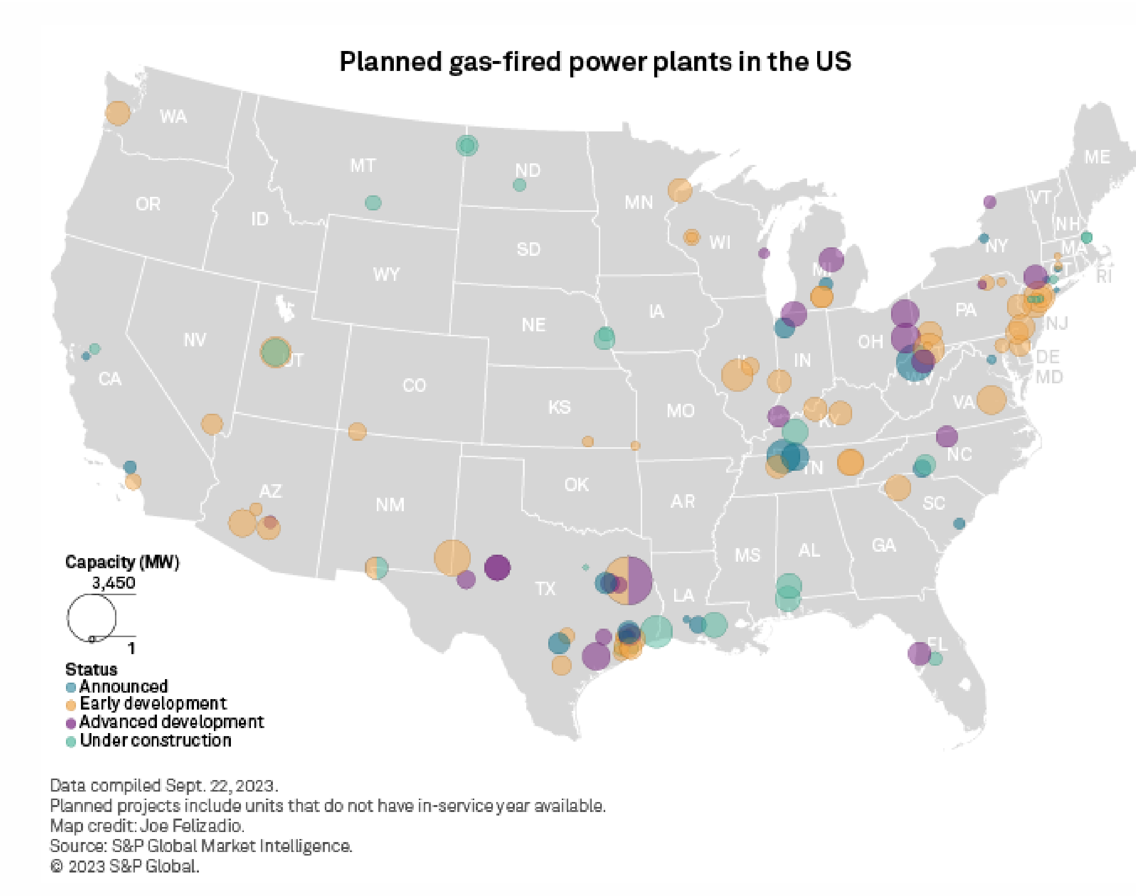
[69] 2023 IRP, Volume I at 305.

which states that "resource assessments should include: life expectancy of the resources."[70] The Division's understanding is that Variant P24 is the only one that models new natural gas plants with a 40-year life. Therefore, all other variants fail to follow this life expectancy guideline.

The Division agrees that new natural gas plants are unlikely to be built in Washington, Oregon, or California, given those states' GHG policies. However, such plants could possibly be built in some areas of Utah, Idaho, or Wyoming; at the very least, the Company should address this possibility. In its 2021 IRP Comments, the Division noted that new gas plants were planned across the country and concluded that new natural gas plants should still be included as modeling possibilities. The graphic below is taken from a recent S&P Global article and clearly shows that new natural gas plants are being built throughout the US.[71]

[70] Guidelines at 37.
[71] "Path to net-zero: Natural gas investments collide with utility climate pledges," *S&P Global,* Nov. 8, 2023, https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/path-to-net-zero-natural-gas-investments-collide-with-utility-climate-pledges-77634604.

Figure 5 Planned New Natural Gas Plant (S&P)



The Company's assumption of a 10-year life span for natural gas plants also illustrates a point the Division has made in the past—small assumptions or changes in inputs can have a large impact on the resource mix ten years down the road, and so all IRP stakeholders should guard against certainty regarding the preferred portfolio.[72] The Company should be hesitant to make irrevocable resource decisions, especially large purchases or early shutdowns of existing plants, based on modeling runs that have high sensitivity to inputs. As shown in Figure 4 above, a change in the recovery period for new proxy gas plants resulted in a significantly different lowest-cost portfolio.

Of course, the Division recognizes the headwinds fossil-fueled resources face and understands the arguments against them. But only by the Company following IRP

[72] *See* Division 2021 IRP Comments at 20 and 46.

guidelines will all parties have sufficient information to weigh all relevant factors and advocate accordingly, instead of relying on the utility to analyze the factors for them.

Some of the Most Consequential IRP Decisions Have Little or No Stakeholder Input

The Division does not begrudge the Company the ability to act unilaterally in many of its operational decisions. The Company must have latitude in certain circumstances to act, and then seek a prudency determination of its action later, if required. However, the IRP process is intended to be more collaborative, or at the very least, visible. Key decisions and assumptions should be made out in the open so that stakeholders can provide input. Several decisions in the 2021 IRP and now the 2023 IRP have been opaque, and have been made with little or no stakeholder input. In the 2021 IRP one of the main assumptions made in the dark was the decision to not include new natural gas in the modeling. The Commission did not acknowledge the 2021 IRP in part because of that decision.[73]

In the 2023 IRP, several key decisions were also made without much or any stakeholder input. One has already been mentioned: the decision to model new natural gas plants using a 10-year cost recovery time rather than a physical lifetime. To the Division's knowledge, this was first disclosed at the April 13, 2023 IRP Public Input Meeting. The Company stated in the meeting that "recovery of new gas resource cost is assumed to be achieved in ten years to account for identified risk in investments and new emitting resources."[74] The statement did not appear in the printed meeting materials. This was communicated to stakeholders on April 13, after the draft IRP had already been submitted, and after the press release and *The Salt Lake Tribune* article discussed above. The Division requested a model run using a more reasonable recovery time, and the Company did so, resulting in variant "P24-Gas 40-year Life," as discussed above. The Division's understanding is that variant P24 is the only variant to use a 40-year life for natural gas plants. This clearly had a

[73] *PacifiCorp's 2021 Integrated Resource Plan*, Docket No. 21-035-09, Order issued June 2, 2022, at 15-17, https://pscdocs.utah.gov/electric/21docs/2103509/324294210350906-2-2022.pdf.
[74] IRP Public Input Meeting. April 13, 2023, 2:23:00 of part 1, https://www.youtube.com/watch?v=gPqQSJyO-DE.

significant effect on modeling (see Figure 4 in these Comments), and so should have been a topic of stakeholder discussion.

Another important step where the Company used an opaque process was after the variants had been run through the model. Using the result in Tables 9.14 through 9.17, the Company selected the preferred portfolio variant as follows:

> In consideration of current policies in motion and unmodeled risks for which ongoing trends recommend the adoption and development of tax-supported renewable projects, P-MM is determined as the preferred portfolio.[75]

At the IRP Technical Conference, the Division asked if there are any calculations or records for this determination, or if it was more of an eyeball test, and the Company said there were no materials for review.[76] Therefore, one of the most important choices made in the IRP, which of the top-performing variants to choose as the preferred portfolio, was made opaquely and with no stakeholder input.

The Division would not expect the Company to be required to adopt the top-performing variant as its preferred portfolio, regardless of the Company's comfort level with that variant. However, there should be more stakeholder input at this step—as the process stands now, there is a lot of stakeholder input on various topics throughout the IRP process, but at a crucial step, the Company chooses a variant based on internal deliberations, with no reviewable methodology. As the Division noted in an earlier section of these Comments, case P20-JB3-4 CCUS was a top performer, finishing first in both ST PVRR and risk-adjusted PVRR, while also performing much better in the CO_2 emissions rankings than the selected preferred portfolio. Similarly, case P01-JB3-4 GC (early conversion of Jim Bridger 3 and 4 to gas-fired) performed better than the preferred case in all Table 9.14 metrics. The Division recommends that in future IRPs, the Company should solicit and consider more stakeholder input on this step. It should also clearly explain its rationale with specific reference to other portfolios.

The lateness of the filing of the IRP adversely affected the chances for input in this area. The April 3, 2023, draft filing of the IRP was the first time stakeholders had seen the

[75] 2023 IRP, Volume I at 306.
[76] IRP Technical Conference at 1:16:40.

information in Table 9.14, and at that point, the Company had seemingly already made its preferred portfolio decision and provided a summary of the preferred portfolio to *The Salt Lake Tribune* for the March 31 article.

Another crucial step in the 2023 IRP that lacked any stakeholder input is the decision to suspend the 2022 AS RFP. The Division concedes that it is difficult to judge whether this is even an issue that falls under the umbrella of the acknowledgement of the 2023 IRP. As the Company noted in the 2023 IRP Technical Conference, in general, the RFP details arise out of an IRP action plan. For example, the 2022 AS RFP arose out of the 2021 IRP Action Plan, not the current IRP. So, in that sense, any decision the Company makes about the 2022 AS RFP should not impact the acknowledgment of the 2023 IRP. On the other hand, the Action Plan may be—in fact is likely to be—changed significantly because of the suspension of the 2022 AS RFP, as discussed above in these Comments.

The Division’s understanding is that the decision to suspend the 2022 AS RFP was not reached based on performing modeling runs with updated input—for example, an updated cost of debt that reflects the wildfire costs. Rather, the suspension resulted from the Company surveying the factors as discussed in their 2022 AS RFP Suspension Notice.

The Company’s decision to suspend the 2022 AS RFP did not on its own violate the Standards and Guidelines. The Division is not suggesting that the Company should have involved stakeholders in the decision to suspend the 2022 AS RFP. However, the fact remains that the suspension of the 2022 AS RFP is a major decision that affects the Action Plan and was made with no stakeholder input. Whatever the merits of the reasons for this lack of input, it makes it difficult for stakeholders to provide comments on the present IRP. It also is a reason for the Commission to not acknowledge the IRP because the Action Plan is very likely to be significantly altered due to the suspension of the 2022 AS RFP. While a failure to acknowledge an IRP might sometimes have consequences, it is not intended to be punitive toward the utility. When events outstrip the process, the utility can, and does, continue to act even if the IRP has become less relevant because of those events.

Conclusion

The Division recommends that the Commission not acknowledge the 2023 IRP. This recommendation is based on two independent reasons. First, due to the suspension of the 2022 AS RFP, the assumptions behind the 2023 IRP Action Plan have changed, and stakeholders do not know how these changes have affected the Action Plan. Therefore, it is not clear what action plan the Commission would be acknowledging. Second, due to its unequal treatment of the nuclear and non-emitting peaker resources as compared to coal and gas, the IRP runs afoul of the Guidelines, most notably Guidelines 3 and 4(b). This recommendation is made somewhat reluctantly, as the Division is appreciative of the improvements and work put into the IRP, and the suspension of the 2022 AS RFP was beyond the IRP team's control.

However, the Natrium plant costs and schedule are too speculative for that resource to be in an action plan; the resource should be evaluated after a contract is in place. Similarly, the 2023 IRP treats 100% hydrogen peaker plants optimistically, but coal and natural gas pessimistically. All resources should be treated on a comparable basis for the effect of state and federal policies to be seen and evaluated more clearly.

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