- BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH -

PacifiCorp's 2023 Integrated Resource Plan	DOCKET NO. 23-035-10 ORDER

ISSUED: April 17, 2024

SHORT TITLE

PacifiCorp's 2023 Integrated Resource Plan

SYNOPSIS

We acknowledge that PacifiCorp's 2023 Integrated Resource Plan ("2023 IRP") substantially complies with the IRP Standards and Guidelines, with certain important exceptions. Most notably, PacifiCorp's inconsistent and disparate evaluation of the Natrium Demonstration Project ("Natrium"), non-emitting (hydrogen) resource technologies, Carbon Capture, Usage, and Storage ("CCUS") technologies, and new natural gas resources produced a preferred portfolio that likely does not identify the least-cost, least-risk resources. Consequently, we decline to acknowledge the portfolio selection process, the P-MM Preferred Portfolio, and the Action Plan.

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I. INTRODUCTION AND PROCEDURAL HISTORY

On May 31, 2023,[1] PacifiCorp filed with the Public Service Commission (PSC) its seventeenth Integrated Resource Plan ("2023 IRP"), pursuant to the IRP Standards and Guidelines ("Guidelines") adopted in Docket No. 90-2035-01.[2] PacifiCorp requests the PSC acknowledge the 2023 IRP in accordance with PSC rules and fully support the 2023 IRP conclusions, including the proposed action plan ("Action Plan").

The Division of Public Utilities (DPU) and the Office of Consumer Services (OCS) participated in the docket and the following parties intervened: the Utah Association of Energy Users (UAE), Utah Clean Energy (UCE), Western Resource Advocates (WRA), the Interwest Energy Alliance ("Interwest"), Sierra Club, Fervo Energy Company, and Utah Citizens Advocating Renewable Energy.

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[1] On March 28, 2023, the PSC granted PacifiCorp's Request for a two-month extension and preliminary comment phase to file its final 2023 IRP due to changed model inputs that were driven by then-recent material changes, including the Ozone Transport Rule (the "OTR"), the Inflation Reduction Act ("IRA"), resource interconnection rules, the Oregon Clean Energy Plan, and Washington's Clean Energy Transformation Act. According to PacifiCorp, the changes required additional time to implement the accuracy of the model's outputs and did not allow stakeholders to review the model's results, including the Preferred Portfolio, before the 2023 IRP March 31, 2023 deadline. The PSC authorized a preliminary IRP and comment phase to accommodate the filing of a preliminary 2023 IRP on March 31, 2023 (PacifiCorp's submission was filed after business hours on Friday, March 31, 2023 and therefore it was submitted April 3, 2023), comments on the preliminary IRP by April 30, 2023, and the final 2023 IRP filing by May 31, 2023.

[2] *See In the Matter of Analysis of an Integrated Resource Plan for PacifiCorp*, (Report and Order on Standards and Guidelines, issued June 18, 1992), Docket No. 90-2035-01. Future references to Guidelines contained in that order will be referred to by the Guideline number. For example, "Guideline 3" will refer to Guideline 3 from page 19 of that order, without referencing the 1992 order each time the Guideline is referred to in this order.

By December 12, 2023, the following parties filed comments: DPU, OCS, UAE, WRA, Interwest, Sierra Club, and UCE. On January 31, 2024, PacifiCorp, DPU, UCE, and WRA filed reply comments.

A. Summary of the 2023 Integrated Resource Plan

The 2023 IRP presents PacifiCorp's plan to supply energy and capacity to provide for and manage the growing electricity demand in its six-state service territory over the next 20 years. The report identifies PacifiCorp's preferred least-cost, least-risk plan ("Preferred Portfolio") to invest in a portfolio of power plants, transmission facilities, firm power purchases, and demand side management (DSM) resources, including energy efficiency and direct load control. The 2023 IRP identifies the type, timing, and magnitude of resource additions and provides a short-term Action Plan.

The 2023 IRP includes modeling advancements such as a Targeted Portfolio Reliability Analysis that allows the assessment of the reliability of resource portfolios by performing subsequent modeling of renewable resources that are selected in the portfolios that can identify capacity shortfalls. It also includes supplemental studies such as, among others, an energy storage potential evaluation that provides details on energy storage grid services and how they can be configured and sited to maximize benefits.

PacifiCorp selected its Preferred Portfolio,[3] which it asserts is the least-cost plan, adjusting for risk and uncertainty. To serve system-wide peak hour demand over the next 20 years, the Preferred Portfolio identifies cumulative supply additions (both long- and short-term resources) of 1,240 MW of non-emitting peaker resources, 9,113 MW of new wind resources, 7,855 MW of new utility solar resources, approximately 8,260 MW of battery storage, inclusive of 350 MW of long duration battery storage, 4,953 MW of incremental energy efficiency, 929 MW of new direct load control resources, 35 MW of pumped hydro storage, 1,500 MW of nuclear, and, through the 20-year horizon, approximately 390 MW of summer and winter firm power purchases, also referred to as front office transactions (FOT).[4]

The 2023 IRP Preferred Portfolio includes the end-of-life retirement of 1,141 MW of existing coal resources, the retirement of 2,335 MW of coal-fueled capacity with selective noncatalytic reduction retrofits, the transition of 1,770 MW of coal resources to other types of fuel, the end-of-life retirement of 595 MW of natural gas resources, the retirement of 23 MW of non-thermal resources, and the expiration of 22 MW of other resources.

The Preferred Portfolio and Action Plan include the retirement of co-owned coal units, the conversion of several coal units to natural gas, the closure of the Naughton South Ash pond, the development of Natrium, new resource acquisitions

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[3] *See* 2023 IRP, Volume I, at 307-324.
[4] *See id.*, Table 9.31 at 325.

through the 2022 and 2024 All Source Requests for Proposals, as well as continuing development and construction of the Boardman-to-Hemingway 500 kV transmission line, among other action items.[5]

Planned investment in the Preferred Portfolio differs from PacifiCorp's Fall 2022 Business Plan ("Business Plan") primarily due to reductions or delays in the 2020 All Source Request for Proposals wind, solar, and battery storage resources in the Business Plan.[6] The Preferred Portfolio also reflects lower reliance on FOTs. In addition, CO2 emissions over the study period decreased by 9 million tons relative to the Business Plan.[7]

B. The IRP Process and Standard of Evaluation

Utah Code Ann. § 54-1-10 requires the PSC to "engage in long-range planning regarding public utility regulatory policy in order to facilitate the well-planned development and conservation of utility resources." The PSC relies in part on PacifiCorp's IRP process to fulfill this planning requirement to meet the electrical needs of PacifiCorp's Utah service territory. In 1992, the PSC developed and approved the Guidelines that govern the IRP process.[8] PSC acknowledgment of an IRP means it substantially complies with these Guidelines. Such acknowledgment, however, does not constitute PSC approval of any specific PacifiCorp resource acquisition decision or

[5] *See id.*, at 27-33.
[6] *See id.*, at 335-336.
[7] *See id*.
[8] Information on historic PacifiCorp Integrated Resource Plans can be found at the following link: https://psc.utah.gov/electric/historic-integrated-resource-plans/.

strategy for meeting its obligation to serve. Resource approval and cost recovery are addressed in dockets separate from the IRP.

II. SUMMARY OF ISSUES ADDRESSED IN COMMENTS

As discussed in more detail below, several parties urge us not to acknowledge this IRP. Many express serious concerns regarding the limited time afforded for their review, evaluation, and meaningful input. The challenges PacifiCorp has faced meeting IRP schedule deadlines are evident in the fact it has requested substantial extensions in each of the last three IRP cycles. Parties contend there was no opportunity for their review and feedback on modeling results and the P-MM Preferred Portfolio before the preliminary 2023 IRP was filed. Consequently, some dispute that the P-MM Preferred Portfolio represents the least-cost, least-risk resource portfolio. Additionally, many parties expressed concern over the suspension of the 2022 All Source Request for Proposals (the “2022 AS RFP”) and its impact on the Action Plan. Finally, several parties, including the DPU and OCS, challenged various specific modeling inputs, assumptions, and studies, asserting:

a) inconsistent or insufficient analysis, or disparate treatment, of resources;

b) insufficient analysis of federal and state incentives and potential savings opportunities from the IRA and the Energy Infrastructure Reinvestment (“EIR”) program;

c) insufficient discussion and analysis of regional transmission planning;

d) inadequate modeling and evaluation of advanced transmission technologies, grid-enhancing technologies ("GET"), and other alternatives to new transmission construction; and,

e) inadequate transparency and discussion related to PacifiCorp's reliability and granularity adjustments.

III. PARTIES' POSITIONS ON ACKNOWLEDGMENT OF THE 2023 IRP

Parties' Comments

DPU, OCS, and UAE recommend the PSC not acknowledge the 2023 IRP. DPU argues 1) its submission was two months late with the last of the supporting documents filed on June 20, 2023;[9] 2) Natrium was included in the Preferred Portfolio without sufficient analysis of costs, timing, and risks to customers in light of the large costs and schedule overruns of other nuclear projects in the country; 3) the 2022 AS RFP was suspended without explaining its impact on the Action Plan;[10] 4) the assumption that non-emitting peaker plant technology will be commercially available by 2030 is inappropriate given the technology is unproven and its operating costs are unknown; and 5) some resources and technologies, like nuclear and non-emitting

[9] DPU Comments, at 2 and 4, filed December 12, 2023 ("DPU Comments"). DPU comments this is the third straight instance the IRP was filed two or more months after the March 31 deadline.

[10] DPU explains the assumptions that served as model inputs may change significantly by the time PacifiCorp performs more modeling, reiterating that "[t]hrough 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 2022 AS RFP [was] … soliciting and evaluating resources to fulfill." *Id.*, at 15 (quoting the IRP, at 35).

peakers, are unjustifiably favored and others, like new natural gas resources and CCUS technologies, are unjustifiably excluded.[11]

OCS argues PacifiCorp failed to meet Guidelines 3, 4.b., 4.e., 4.g., and 4.h. OCS states PacifiCorp did not provide any modeling results to stakeholders for review and feedback until after it had filed the preliminary IRP.[12] Additionally, OCS joins DPU in asserting natural-gas-fired resources were not evaluated on a comparable and consistent basis relative to unproven technologies like Natrium and non-emitting hydrogen peakers. OCS also objects that an appropriate customer rates impact analysis was not provided. Finally, OCS notes the suspension of the 2022 AS RFP may negatively impact system reliability within the next four years, leading OCS to challenge whether the Action Plan reflects least-cost, least-risk resources.

UAE comments PacifiCorp withheld the results of any modeling runs, including the Preferred Portfolio, from stakeholders before filing its preliminary 2023 IRP, contrary to Guideline 3. UAE believes PacifiCorp's actions prevented UAE's reasonable and meaningful participation in the selection of the Preferred Portfolio.[13]

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[11] DPU notes that the CCUS technology was the top-performing variant case using medium gas/medium CO2 assumptions, with a present-value revenue requirement ("PVRR") of $507m under the P-MM Preferred Portfolio. It was also a top performer under various other scenarios. Regarding new gas resources, DPU explains PacifiCorp assumed a 10-year cost recovery period rather than a typical 40-year period (DPU Comments, at 24). This unusual assumption was made without stakeholder input and, to DPU's knowledge, was first announced after PacifiCorp submitted the preliminary IRP.

[12] OCS Comments, at 1-2, filed December 12, 2023 ("OCS Comments").

[13] UAE Comments, at 3, filed December 12, 2023 ("UAE Comments").

UAE also expresses concern about the inclusion of Natrium in the Preferred Portfolio. UAE explains the lack of information about Natrium's cost and performance assumptions impeded any independent evaluation. UAE states PacifiCorp in effect forced the model to select Natrium. This modeling approach cannot be viewed as providing consistent and comparable treatment of competing resources.[14]

UCE recommends the PSC acknowledge the 2023 IRP and explains UCE is encouraged by PacifiCorp's planned increases in wind, solar, and storage resources in the 2023 IRP.[15]

WRA takes no position regarding the acknowledgment of the 2023 IRP. But it joins other parties in asserting that time constraints negatively impacted the accuracy of the modeling and the opportunity for public input. WRA explains that the preliminary 2023 IRP, the final 2023 IRP, and the accompanying supporting workpapers include significant errors — far more than is typical. In WRA's view, many portfolio results don't make sense.[16] These discrepancies, according to WRA,

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[14] *Id.,* at 9.
[15] UCE Comments, at 3, filed December 12, 2023 ("UCE Comments").
[16] As an example, WRA described that several portfolios show inexplicable disparities particularly in early years where system resources should be more or less identical including a comparison of portfolio variant P05-No Nuclear and P06-No Forward Technology. WRA explains that given nuclear and non-emitting peakers are not selected in either portfolio until 2030, the expectation was that the portfolios would differ only in future years but that there were large discrepancies in market purchases appearing in the first three years of the modeling period, despite no difference in system need or expansion options in those early years. WRA Comments, at 11, filed December 12, 2023 ("WRA Comments").

undermine its confidence in the results and support its view the IRP was filed before it was ready for stakeholder analysis.

Interwest recommends either the PSC decline to acknowledge the 2023 IRP or conditionally acknowledge certain parts thereof and the Action Plan.[17] Interwest states the 2022 AS RFP's suspension casts extreme uncertainty over the Action Plan. Interwest calls for increased scrutiny of Natrium and non-emitting peaker resource technologies in the Preferred Portfolio, as they "do not reflect the least cost/least risk" resources".[18] Interwest also recommends the PSC direct PacifiCorp to resume the 2022 AS RFP as soon as possible.

Sierra Club recommends the PSC acknowledge the planned new renewable resources in the 2023 IRP but argues the Plan's coal retirement timelines, gas conversions, and nuclear additions "are extremely risky for ratepayers" and do not warrant acknowledgement.[19] Sierra Club also expresses concern about the suspension of the 2022 AS RFP.[20]

PacifiCorp's Reply

PacifiCorp asserts its 2023 IRP and Action Plan comply with the Guidelines and were developed after substantial stakeholder input. PacifiCorp asserts it held eleven public-input meetings and six state-specific input meetings.[21] The 2023 IRP public-

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[17] Interwest Comments, at 3, filed December 12, 2023 ("Interwest Comments").
[18] *Id.*, at 6.
[19] Sierra Club Comments, at 3, filed December 12, 2023 ("Sierra Club Comments").
[20] *Id.*
[21] PacifiCorp Reply Comments at 12, filed January 31, 2024 ("PacifiCorp Reply Comments").

input process materials covered inputs, assumptions, risks, modeling techniques, and analytical results. PacifiCorp states it considered and implemented the PSC's direction in developing the 2023 IRP. It further asserts the Preferred Portfolio is supported by a detailed analysis of: 1) key inputs and assumptions to inform the modeling and portfolio-development process; 2) a wide range of resource portfolios; 3) a targeted reliability analysis to ensure portfolios have sufficient flexible capacity to meet reliability requirements; 4) evaluation of the resource portfolios to measure comparative costs, risks, reliability, and emission levels; and 5) development of a near-term resource Action Plan required to deliver resources in the Preferred Portfolio.[22]

PacifiCorp asserts the 2023 IRP benefited from various modeling advancements[23] and that through an extensive IRP process PacifiCorp was able to develop a Preferred Portfolio that meets its long-term goals of providing reliable and affordable service to its customers.

IV. DISCUSSION, FINDINGS, AND CONCLUSIONS

A. SUSPENSION OF THE 2022 ALL SOURCE RFP

OCS, DPU, Interwest, and Sierra Club assert the suspension of the 2022 AS RFP in September 2023 is problematic and, according to OCS, violated Guideline 4.e. OCS explains, and DPU agrees, the 2022 AS RFP suspension directly impacts the

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[22] *Id.*, at 4.
[23] See 2023 IRP, Volume I, at 18-19.

assumptions and selection of resources in the 2023 IRP because the types of resources that were expected to emerge from the 2022 AS RFP may no longer be available and may not be ready for commercial operation by the date required. According to OCS, this could result in increased exposure to market price risks, especially in the event of extreme weather like the September 2022 western heatwave.[24]

DPU and Interwest assert the suspension of the 2022 AS RFP raises serious doubts as to whether the 2023 Action Plan can be implemented.[25] Likewise, Sierra Club states it is highly concerned over PacifiCorp's decision to pause the 2022 AS RFP, especially after the 2023 IRP shows an even greater need for new renewable resources than was forecast in the 2021 IRP.[26]

PacifiCorp responds it suspended the 2022 AS RFP in September 2023, after it had filed the 2023 IRP.[27] It explains its decision was based on a stay of the U.S. Environmental Protection Agency's ("EPA") proposed OTR; ongoing EPA rulemaking on greenhouse gas emissions; wildfire risk and associated liability; and, evolving extreme weather risks.[28] It argues that it complied with Guideline 4.e. and that IRP acknowledgment means not that the Action Plan or Preferred Portfolio selections are

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[24] OCS Comments, at 4.
[25] DPU Comments, at 14; and Interwest Comments, at 5-6.
[26] Sierra Club Comments, at 3.
[27] PacifiCorp Reply Comments, at 16.
[28] The OCS argues that all of these factors were known and included in the final 2023 IRP when it was filed on May 31, 2023; and therefore, was surprised PacifiCorp named the same factors as the reason for suspending the 2022 AS RFP in September 2023.

valid into perpetuity but rather, that the IRP and resulting Action Plan are appropriate given the conditions at the time of filing.

We conclude PacifiCorp's decision to pause the 2022 AS RFP substantially impacts the Action Plan and greatly reduces its value and trustworthiness. The PSC recognizes at least some of the reasons PacifiCorp offers for pausing the RFP were known to PacifiCorp at the time it filed its final 2023 IRP in May 2023. Nevertheless, while certain parties recommend the PSC direct PacifiCorp to reinstate the 2022 AS RFP, such proposals are outside the scope of this docket.

B. MODELING ISSUES, ASSUMPTIONS, AND RESOURCE SELECTIONS

1. Consistent and Comparable Treatment of Resources

a. *Natrium*

DPU, OCS, UAE, and Interwest argue that PacifiCorp either forces the selection of Natrium in the Preferred Portfolio or inputs favorable assumptions to ensure the model always selects Natrium. For example, UAE notes that unlike every other generation resource considered in Table 7.1 of Chapter 7 of the 2023 IRP (showing costs and performance information for all supply-side resources), Natrium is not included.[29] Rather, PacifiCorp's cost and performance assumptions for Natrium are unknown to stakeholders. According to UAE, this allows the assumed costs of Natrium to "move" in the model such that they purportedly always provide benefits to

[29] UAE Comments, at 7.

customers.[30] UAE contends this also ensures that Natrium is always selected by the model.[31] PacifiCorp justifies this treatment by stating that it is in commercial discussions with TerraPower and will not move forward unless there are benefits for customers. UAE concludes Natrium's treatment in the model is not consistent and comparable with the treatment of other resources.

DPU states PacifiCorp has never responded to requests for 1) Natrium's costs and performance factors and 2) a timeline with major milestones that shows a path to achieving an online service date of 2030.[32] DPU also contends that since no details are available to stakeholders, it is impossible to evaluate Natrium on a comparable and consistent basis with other resources. DPU concludes that until an agreement is finalized, federal funding is certain, and a timeline is provided, Natrium is a speculative resource that should not be in the Preferred Portfolio.[33]

PacifiCorp responds that its selection of Natrium in the P-MM Preferred Portfolio was based on substantial grants from the Department of Energy (DOE), Natrium's development by TerraPower, the alternative path analysis, the OTR and other federal regulatory requirements, and the obligation to provide least-cost, least-risk portfolios.[34] It explains TerraPower bears all development risks and asserts it has not signed any agreements with TerraPower. It reiterates it will only move forward if

[30] *Id.*, at 9.
[31] *Id.*
[32] DPU Comments, at 21.
[33] *Id.*, at 19.
[34] PacifiCorp Reply Comments, at 35.

Natrium brings value to customers. PacifiCorp indicates the risks associated with Natrium are mitigated because Natrium alternatives require much shorter lead-times than nuclear projects and ample opportunities to meet future electric demand will emerge, before it commits to Natrium.[35] PacifiCorp also reiterates the potential realization of Natrium does not fall within the two- to four-year Action Plan window and explains that Natrium was intentionally limited to years outside of the Action Plan.[36]

b. *Non-Emitting Peaker Plants*

DPU, OCS, and Interwest contend that PacifiCorp favors non-emitting peaker resources (turbines running on 100 percent hydrogen) by assuming they will be available and commercially viable by 2030 even though no such utility scale technology is currently operating. Both DPU and Interwest note the production and transportation plans for hydrogen for utility-scale energy generation are also currently only in the design phase.[37] They explain that while hydrogen could be delivered using a pipeline network from a centralized remote facility, these pipelines do not currently exist. Given these facts, the parties question the selection of the resource for the P-MM Preferred Portfolio.[38] DPU comments it is impossible to

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[35] *Id.*, at 36.
[36] *Id.*, at 37.
[37] DPU comments, at 3 and 22.
[38] In response to a data request, PacifiCorp responded that its modeling of this technology assumes 1) the expense of the needed pipeline, as well as 2) its ability to procure hydrogen at market prices based on forward price curves and projections showing low hydrogen production costs and federal tax credits for 100 percent hydrogen. DPU Comments, at 22-23.

analyze PacifiCorp's cost information since such plants are not commercially operating, and DPU has no way to test any data supporting PacifiCorp's assumptions.[39] DPU adds that the timelines PacifiCorp uses for availability of non-emitting peakers may also be optimistic, and argues that assuming a specific date for this non-emitting resource is speculative.

Interwest criticizes non-emitting peaking resources' selection in the Preferred Portfolio stating that a 20 percent hydrogen blending ratio is inadequate to achieve emission performance requirements because it achieves only a marginal decrease of 6-7 percent in carbon emissions at the gas generating unit.[40] Additionally, there is evidence a sustained green hydrogen supply-chain does not exist.

In response, PacifiCorp states that its main goal is selecting a Preferred Portfolio with the best combination of expected costs and associated risks and uncertainties.[41] Thus, in creating a 20-year plan, it does not limit resources to only those currently estimated to be commercially viable within the planning horizon. Rather, it considers associated risks when it includes resource options. PacifiCorp believes non-emitting peakers, like nuclear, will achieve wider commercial use outside of the two- to four-year Action Plan window and restricts their selection on that basis. PacifiCorp also explains that the alternative path analysis indicates ample

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[39] *Id.*, at 22.
[40] Interwest Comments, at 11.
[41] PacifiCorp Reply Comments, at 41.

opportunity for adjustment to these proxy resource selections based on future analysis.

c. *CCUS Technology*

DPU contends PacifiCorp's planning is biased against CCUS technologies. For example, DPU states that variant P20 JB3-4 CCUS ("P20") (which includes CCUS technology), was the top-performing variant case using the medium gas/medium CO2 assumptions, with a PVRR of $507 million *under* the P-MM Preferred Portfolio variant (using short-term ("ST") value).[42] Variant P20 was also the top performer under a risk-adjusted cost metric and was third in the CO2 emissions category.[43] It was also the top ST cost performer under both the medium gas/zero CO2 scenario and the high gas/high CO2 scenario, and was the top emission performer under both of these scenarios.[44]

PacifiCorp responds that CCUS technologies have shown significant cost uncertainty and only two major utility-scale CCUS retrofit projects are commercially operating.[45] PacifiCorp conceded the P20 variant was the top performer under both ST and risk-adjusted evaluations, but explained it did not choose it for the Preferred Portfolio because 1) the CCUS assumptions are not based on bids or proposals from CCUS technology companies but are proxy assumptions for project-specific costs and

[42] DPU Comments, at 24.
[43] *Id.*
[44] *Id.*
[45] PacifiCorp Reply Comments, at 39.

operational characteristics; 2) the scale of the proposed CCUS technology has never been demonstrated on a coal plant operating commercially anywhere in the world; 3) while feasibility studies for amine-based CCUS at Jim Bridger ("JB") units 3 and 4 have been done, PacifiCorp currently does not have evaluation or equivalent cost data to that of a front-end engineering and design study; 4) the updated fueling strategy to source coal for JB exclusively from the Powder River Basin has not been previously attempted by PacifiCorp; and 5) other limitations, challenges, and risks. In response to a question about whether these risks were analyzed by its model, PacifiCorp indicated its rejection of the P20 variant in the Preferred Portfolio was more of a judgment call.[46]

d. *New Natural Gas Plants*

According to DPU and OCS, PacifiCorp's planning is also biased against generating facilities fueled by natural gas and coal. For example, DPU states PacifiCorp informed stakeholders for the first time in the April 13, 2023 public input meeting that in most scenarios, the recovery period for the costs of new gas resources is assumed to be 10 years to account for PacifiCorp's perceived risks in investments in new carbon emitting resources.[47] DPU requested results from a portfolio variant assuming instead a 40-year cost recovery horizon as realistically in line with new natural gas resources and PacifiCorp responded by producing variant

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[46] DPU Comments, at 24-25.
[47] *Id.*, at 30.

"P24-Gas 40-year Life" ("P24"). PacifiCorp describes it as a variant of the P-MM Preferred Portfolio that changes the technical life assumption for proxy gas resources from 10 years in the base study to 40 years. According to PacifiCorp, this change produced different results. First, the model selected gas units as replacements for any coal retirements, instead of the nuclear or non-emitting peaking options in the P-MM Preferred Portfolio.[48] Second, the "cost of gas pipelines led the model to keep" the Hunter 2 and 3 coal plants running through 2042.[49] Third, the model selected significantly less early DSM.[50] DPU criticizes PacifiCorp's arbitrary decision to change the expected life of new natural gas plants arguing several natural gas plants are currently in different stages of development across the country.[51] DPU also notes the PSC declined to acknowledge the 2021 IRP for a similar reason — PacifiCorp's unilateral decision to force the model to exclude new natural gas plants altogether. DPU explains the decision to constrain the life of a new natural gas plant resulted in an inappropriate Preferred Portfolio. PacifiCorp responds that for the first time, it allowed the model to endogenously select natural gas conversions for a broader set

[48] *Id.*, at 26-27.
[49] *Id.*
[50] *Id.*, at 27 (DPU referencing the 2023 IRP, Volume I, at 305).
[51] DPU presents a map showing natural gas plants that were announced, in early development, in advanced development and under construction in 2023 which DPU states illustrates that many utilities do not attribute the same risks to natural gas plants that PacifiCorp does. DPU Comments, at 29 (Figure 5 – Planned New Natural Gas Plant (S&P)).

of units. According to PacifiCorp, this enhancement expands opportunities for natural-gas-fired operation compared to prior IRPs.[52]

DPU also challenges the final step PacifiCorp used to select the Preferred Portfolio. After all of the variants were run through the model, PacifiCorp explains its decision to select the P-MM variant as the Preferred Portfolio was driven by "consideration of current policies in motion and unmodeled risks for which ongoing trends recommend the adoption and development of tax-supported renewable projects … ."[53] In response to a request for calculations or other supporting data for these subjective criteria, PacifiCorp stated there were no records or calculations to review.

e. *We Find and Conclude PacifiCorp Failed to Treat Resources on a Consistent and Comparable Basis*.

Guideline 4.b. requires "[a]n evaluation of all present and future resources, including future market opportunities (both demand-side and supply-side), on a consistent and comparable basis." In addition, 4.b.iii. states "resource assessments should include: life expectancy of the resources… ."

We find, based on the evidence, that PacifiCorp overlooked the negative attributes of Natrium in its analysis and withheld confidential costs and performance information that were necessary to compare Natrium on a consistent and comparable

[52] PacifiCorp Reply Comments, at 37-38.
[53] 2023 IRP, Volume I, at 306.

basis relative to other resources. Natrium certainly has potential due to its unique characteristics as described in PacifiCorp's reply comments.[54] However, the IRP contains no discussion of the potential for significant cost overruns or delayed construction timelines typical to the development and construction of nuclear projects. Natrium was selected as a least-cost, least-risk resource in the Preferred Portfolio based solely on its positive, unique attributes. We recognize the sensitivity of PacifiCorp's costs and performance assumptions for Natrium; however, our process provides protections for highly confidential information that may have allowed parties to perform at least a general cost analysis, and PacifiCorp failed to use it. We find it is impossible to compare Natrium with other resources on a comparable and consistent basis without cost and performance assumptions and a realistic assessment of all the potential attributes of Natrium, both positive and negative.

We also find disparate treatment by PacifiCorp of non-emitting resource technologies relative to CCUS technologies. For example, despite the P20 CCUS variant being the top or near the top-performing variant under five different scenarios,[55] PacifiCorp did not select it as a least-cost, least-risk resource in the Preferred Portfolio. The reasons PacifiCorp argues for rejecting CCUS, e.g., that cost assumptions are not based on bids and commercial operation is unproven, apply with

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[54] PacifiCorp Reply Comments, at 36.
[55] *See* DPU Comments, at 24.

equal, if not greater, force to the Natrium and non-emitting resource technologies PacifiCorp includes in the P-MM Preferred Portfolio.

Finally, the use by PacifiCorp of a 10-year life for new natural gas plants was arbitrary and unjustified, and prevented their consistent and comparable treatment relative to other resources. The PSC recognizes risks may exist to natural gas plant lifespans attendant to the OTR and other federal regulations. Such risks are inherent in the planning process and require analysis and articulated reasoning on how best to measure and account for them. In this instance, however, the restriction on useful life is unilateral and arbitrary. Neither the OTR nor any other federal regulation changes the depreciable lives of natural gas plants from 40 to 10 years. Moreover, any Oregon, Washington, and California laws that may impact the lives of new natural gas plants do not apply in Utah. Accordingly, the PSC finds that PacifiCorp did not treat natural gas plant options on a comparable and consistent basis relative to other resources, contrary to Guidelines 4.b., 4.b.iii., and 4.h.

2. Reliability and Granularity Adjustments

Sierra Club requests PacifiCorp clarify its methodology for its reliability adjustments and explain the reason the long-term model produces significant energy shortfalls that must be manually addressed. Sierra Club also requests an opportunity to recommend alternative reliability adjustments, and clarification of the values

PacifiCorp uses in the granularity adjustments.[56] Sierra Club suggests that PacifiCorp base its coal units' granularity adjustments on total fuel costs.[57]

PacifiCorp explains that both reliability and granularity adjustments are specific measures that address specific enhancements and there are no logical alternatives because both procedures are dictated by model math.[58] It further explains that in extreme cases where the adjustments exceed plus or minus $100/kW-year, it limits the adjustment to plus or minus $100/kW-year to prevent the granularity adjustment from overwhelming long-term outcomes based on extreme values driven by conditions that will not be relevant in final reliable portfolios.[59] PacifiCorp comments it makes resource adjustments on the basis of measured deficiencies and by applying calculated resource values to determine the appropriate action to cover deficiencies. It states its approach is specific to stated goals and a direct application of model outcomes to improve results. We find PacifiCorp's explanations to be reasonable and sufficiently responsive to Sierra Club's requests. Therefore, we find that no additional information related to its reliability and granularity adjustments is necessary.

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[56] Sierra Club Comments, at 4.
[57] *Id.*, at 4 and 42.
[58] PacifiCorp Reply Comments, at 19.
[59] *Id.*, at 20.

3. Customer Rate Impact Analysis

In response to OCS's claim that PacifiCorp failed to comply with Guideline 4.g. by not including a customer rate impact analysis, PacifiCorp states that the IRP includes an indicator of customer rate pressure over time among the initial portfolios relative to the P-MM Preferred Portfolio. It explains that Volume II, Appendix J, stochastic simulation results show incremental and cumulative estimated customer rate impacts over the 20-year planning period that apply equitably across all classes of ratepayers.[60] PacifiCorp indicates that while the approach provides a reasonable representation of relative differences in projected total system revenue requirement among portfolios, it is not a prediction of future revenue requirement for ratemaking purposes. PacifiCorp also explains that the IRP is informed by proxy resources where exact costs cannot be known until specific resources are known. We find, based on PacifiCorp's explanation and our review of Volume II, Appendix J, including the figures showing net differences in total system costs, that its analysis meets Guideline 4.g., and no additional analysis is necessary.

4. Miscellaneous Changes to the Presentation of Data

Alternative Portfolio Variants, Cluster Resources, and Scenarios. In response to Sierra Club's request for PacifiCorp to complete model runs of P01-JB3-4 GC, P04-Huntington RET28, and P17-Col3-4 RET25 variants under all of the different pricing

[60] *Id.*, at 22.

scenarios, PacifiCorp responds that because it is constrained from evaluating all studies under all possible conditions, it must prioritize which model variant to analyze. It bases its decisions on the likely investigative value. PacifiCorp states the P01, P04, and P17 results, for example, are so conclusive that further analysis under other, less likely, price scenarios doesn't add likely investigative value. PacifiCorp states that P17, for example, was examined only to determine the cost-effectiveness of an early retirement of both Colstrip units over the optimally selected approach of retiring one unit and continuing the other. PacifiCorp also explains the 2023 IRP evaluates portfolios under five price policy scenarios with attention to investigative value and resource availability. PacifiCorp states it cannot evaluate all studies under all possible conditions and therefore prioritizes cases. At the same time, PacifiCorp asserts, it has been responsive to stakeholder requests, conducting additional studies as time and resources allow.

PacifiCorp explains that the analysis of P18 and P19 likewise was conducted with the understanding that additional resources would likely result in a higher cost PVRR outcome and that the value of the studies was to assess the magnitude of that PVRR impact to determine possible least-regret paths to consider for the Preferred Portfolio. It further explains that the results of the studies supported the selection of the Preferred Portfolio without the additional marginal cluster resources in the East or West.

We find PacifiCorp's explanation that it cannot evaluate all studies under all possible conditions, and therefore prioritizes cases, is reasonable. We also find that PacifiCorp has been responsive to stakeholder requests for alternative and additional model runs, conducting additional studies as time and resources allow, and that running the proposed additional variants would produce more portfolios but would not change the final outcome and, therefore, be of limited value. Based on this, we find it is unnecessary for PacifiCorp to run the requested additional modeling.

Coal fuel costs for JB and pipeline capacity for conversions. We find PacifiCorp's response to the request that it use the base tier pricing from the 2023 JB long-term fuel plan for the JB plant, to be reasonable. PacifiCorp states that the fixed and variable cost structure assumed in the 2023 IRP captures the cost of continuing or ceasing coal-fired operation at JB units 3 and 4. It explains that opportunities to optimize coal supply for particular circumstances are ill-suited for modeling in the IRP and provide limited incremental benefit.

We also find PacifiCorp's response to Sierra Club's request that PacifiCorp provide an assessment of the availability and cost of firm interstate pipeline capacity necessary to supply its planned coal to gas conversions in the 2023 IRP Update, to be reasonable. PacifiCorp explains that due to confidentiality agreements between it and third-party entities, it is unable to disclose any terms on firm interstate pipeline capacity for planned conversions.

Carbon. Sierra Club recommends PacifiCorp increase the medium carbon price assumption to reflect recent federal regulations and incorporate the developments in the 2023 IRP Update. According to PacifiCorp, the request is based on a misunderstanding of the medium CO2 price assumption cost function. It explains that the medium CO2 price assumption is a proxy for future drivers. Its CO2 proxy cost forecast represents an established trend of decarbonization into the future and is based on a survey of (then) currently available forecasts. PacifiCorp explains that it is not the role of the proxy cost to drive decarbonization, rather its role is to represent drivers that can be reasonably forecast. It further explains its forecasting of the decarbonization trend will continue into the future. Regarding the request for elimination of "the medium gas price, zero CO2 price ('MN') price-policy scenario or zero CO2 ('LN') price-policy scenarios generally,"[61] PacifiCorp states this would generally eliminate a source of information from the robustness of portfolios that indicates what may occur if the expected case CO2 proxy forecast is not realized. PacifiCorp asserts that while the medium gas price-policy scenario is the most likely, eliminating it or any alternative, as requested, is unnecessary. We find PacifiCorp's response credible. On this basis, we find that it is unnecessary to run the requested analyses.

[61] *Id.*, at 26.

Collocated Resources. UAE recommends the PSC direct PacifiCorp to make its requested changes to Tables 9.31, 9.32, and 9.33, and Figures 9.60 and 9.62 in future IRP filings. UAE's main concern is that the tables lack detail on whether the generation and storage resources shown are collocated or standalone resources. PacifiCorp responds that collocation information is illustrated in Figure I.1 of the 2023 IRP. It lists the portfolio resources selected by location and year, including solar and wind resources that are collocated with storage. PacifiCorp also refers to the discussion on the expansion of collocation opportunities in section III.A.2 – *Process Improvements,* in the 2023 IRP indicating that collocation options are no longer constrained in the modeling. We find PacifiCorp's explanation is responsive to UAE's requests; therefore, we decline to order the requested changes in future IRP filings.

Surplus Interconnection. Sierra Club requests PacifiCorp allow storage to be paired with not only new renewable resources, but also existing fossil fuel resources. According to Sierra Club, this use of a thermal asset with a storage resource "would increase the flexibility of the asset and provide lower emission reliability services, such as spinning reserve" and likely "reduce operating costs as the storage asset could operate more responsively."[62]

PacifiCorp responds that it has modeled surplus interconnection in the 2023 IRP, where storage resource options were available to be selected with potentially

[62] Sierra Club Comments, at 55-56.

any technology or combination of technologies, allowing portfolio optimization to recognize the best location, size, and timing for storage concurrently with considerations of existing technology profiles, and also in tandem with thermal retirement options. PacifiCorp adds that storage options that were not part of a cluster study were considered unconstrained by transmission requirements, such that any amount could be placed at any modeled location on the system. It explains that its strategy has exceeded the requests by allowing the model to make the best collocation determinations endogenously and refers Sierra Club to the IRP discussion of expanded collocation opportunities in section III.A.2 - *Process Improvements*. We find PacifiCorp's response to be reasonable and find that PacifiCorp has already modeled the requested interconnection scenario, and no additional modeling is necessary.

C. PROCESS ISSUES

DPU contends the 2023 IRP was filed after the March 31 deadline for the third IRP cycle in a row, and the continual filing delay disadvantages stakeholders as it compresses their opportunity to review and evaluate the IRP. DPU explains it agreed to PacifiCorp's extension request because it was the least objectionable alternative. OCS, UAE, and UCE also contend that PacifiCorp's failure to provide the modeling results to stakeholders before it filed the preliminary IRP prevented them from having any opportunity to review, evaluate, and provide public input, which OCS and UAE claim violates Guideline 3. DPU and OCS note that even the media knew the modeling results before stakeholders who invest significant time and resources into the IRP planning process. UCE agrees that PacifiCorp should provide the modeling results to stakeholders to allow for sufficient review before filing the IRP. WRA also joins DPU, OCS, UAE, and UCE in the overall concern that time constraints impact not only the ability to appropriately review, evaluate, and provide input, but also lessen the accuracy and quality of the IRP. WRA also asserts the current IRP process and timeline do not work and suggests the PSC make a structural change.

PacifiCorp responds the two-month extension to file the 2023 IRP by May 31, 2023 was necessary to allow PacifiCorp to incorporate recent federal and state law changes such as the OTR, the IRA interconnection rules, and other state regulatory requirements. PacifiCorp asserts that while several parties expressed concern over the requested extension, no one recommended the PSC deny it and notes that stakeholders requested PacifiCorp provide a draft IRP in comments related to the 2021 IRP. PacifiCorp further asserts the extended stakeholder engagement process enhanced the accuracy and comprehensiveness of the IRP that led to a significantly improved analysis in the final 2023 IRP. In sum, PacifiCorp notes that the public input process affords many opportunities for comment and quotes the PSC stating, "'[t]he purpose[] of the process is *not* to allow stakeholder[s] an early preview of what

PacifiCorp has [ultimately] elected to do. The purpose is to allow them an opportunity to provide meaningful feedback at each stage of a collaborative process.'"[63]

Our direction on the interpretation of Guideline 3 has been clear. The opportunity for stakeholders to examine and provide information during the IRP development, rather than after the fact, is an important aspect of the process.[64] The IRP is to be developed in consultation with stakeholders who must have ample opportunity for meaningful feedback and information exchange during the development of the plan and at each stage of the process.[65] In this docket, PacifiCorp did not share its modeling results and the Preferred Portfolio, two of the most critical aspects of the IRP, with stakeholders until after it filed its preliminary IRP on April 3, 2023. This is the first time that PacifiCorp has not provided modeling results and Preferred Portfolio selections before making its IRP public. However, this is also the first time that we have added an extended filing period that included the filing of a preliminary IRP and a comment deadline. In light of the uncertainties created by this new procedure, we do not find PacifiCorp violated Guideline 3. Nevertheless, we

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[63] PacifiCorp Reply Comments, at 11. In quoting the PSC's order about the purpose of the process, PacifiCorp unfortunately misinterpreted our language and quoted it out of context. The PSC was reacting to PacifiCorp's pattern of untimeliness, of presenting meeting materials at the last minute, and of making key modeling decisions without giving stakeholders time to review and provide meaningful input. A major purpose of the IRP Guidelines is to assure PacifiCorp collaborates and shares information with stakeholders before decisions, in particular crucial ones like the selection of the Preferred Portfolio, are made.

[64] PacifiCorp's 2017 Integrated Resource Plan, Docket No. 17-035-16, Report and Order issued March 2, 2018, at 7-8.

[65] *Id.*, at 7.

remain troubled by the evident lack of collaboration, in particular with respect to key decision points in the IRP planning process. Here, parties did not collaborate on the most consequential aspects of the IRP — modeling results and the Preferred Portfolios - before the preliminary IRP became public. Therefore, in this order we provide notice that in all future IRP dockets, Guideline 3 will apply to preliminary IRP disclosures and filings. As we have said before, PacifiCorp must provide parties ample opportunity to review, analyze, and provide meaningful input at all stages of the IRP process. Moreover, this must be done with adequate time for PacifiCorp to evaluate and, as appropriate, apply that input before filing any IRP, whether preliminary or final.

D. MISCELLANEOUS REQUESTS RELATED TO THE 2025 IRP

Modeling extreme weather events.

The OCS and DPU recommend PacifiCorp include in its modeling the effects of long-lasting extreme weather events. OCS specifically cites the September 2022 heatwave and the February 2021 Texas extreme cold event as examples of the types of weather events that should be modeled in order to identify potential system reliability issues. PacifiCorp responds that it already models several weather scenarios, and will continue to model them in upcoming IRP cycles. It explains that it not only considers climate change within its baseline forecast, but within multiple load forecast scenarios. As an example, PacifiCorp states that the 1-in-20-year extreme weather scenario evaluates peak weather impacts using the most extreme peak observed over the past 20 years. PacifiCorp also states the 20-year normal weather scenario evaluates the weather impacts on load assuming weather is consistent with the average temperatures observed over the prior 20 years.

We find PacifiCorp's modeling of weather scenarios amply addresses OCS's concerns. To the extent other methodologies for modeling extreme weather events arise, we encourage PacifiCorp to study and discuss them with stakeholders during the IRP planning process.

Modeling GET.

OCS asserts the IRP model does not, but should, contain a process to evaluate GET or other advancements to maximize the efficiency of the grid. OCS explains that by avoiding construction of very costly transmission lines or transmission interconnection activities, GET could enable the development of lower cost Preferred Portfolios. Likewise, Interwest recommends that PacifiCorp include GET in future IRPs.

PacifiCorp responds that Chapter 4 and Appendix E of the 2023 IRP review the potential for reconductoring with advanced conductors as well as using other GET. It states it considers and identifies network upgrades using advanced conductors and GET wherever feasible, and this approach provides adequate analysis for the long-term. We find the 2023 IRP sufficiently evaluates GET as evidenced in Chapter 4 and Appendix E. We therefore decline to direct PacifiCorp to perform additional analysis in this area.

Modeling Enhanced Geothermal Systems ("EGS").

UCE recommends PacifiCorp consider evaluating EGS technologies in the 2025 IRP cycle. UCE explains that Utah is home to the Utah Frontier Observatory for Research in Geothermal Energy ("FORGE") project[66] which is sponsored by the Department of Energy for developing, testing, and accelerating breakthroughs in EGS. UCE states that Fervo Energy is developing the 400 MW Cape Station project in Beaver County, Utah that is expected to go online in 2028. UCE concludes that EGS should be added to other emerging technologies like Natrium and non-emitting (hydrogen) resources that PacifiCorp evaluates.[67]

PacifiCorp responds that it studied and updated geothermal technologies as an option in the 2023 IRP, but they were not selected in the Preferred Portfolio. PacifiCorp states it intends to continue to include geothermal options and update its costs and technical assumptions in future IRPs and remains open to considering geothermal competitive bids in its RFP processes.[68] We find, based on PacifiCorp's explanation, that it has considered, and intends to continue to consider, EGS as another emerging technology for evaluation in future IRPs.

[66] UCE Comments, at 7.
[67] *Id.*, at 8.
[68] PacifiCorp Reply Comments, at 31-32.

Federal and state incentives.

Sierra Club recommends PacifiCorp apply tax bonus credits for "energy communities" to all qualifying communities and correct inaccuracies and update its supply side resource workpapers to include the investment tax credits and production tax credits granted under the IRA for storage resources.[69] PacifiCorp responds it will continue to pursue opportunities to share government funding updates with stakeholders.[70] PacifiCorp also states that not all resources planned in the 2023 IRP over the 10-year period qualify for EIR, as Sierra Club appears to imply.

For example, PacifiCorp explains that only company-owned resources would be expected to qualify, and this would exclude non-owned purchase power agreements selected by the RFP process.[71] PacifiCorp reiterates that the long-term IRP is based on proxy resource selection. PacifiCorp asserts that cost-saving opportunities, such as those provided by federal incentives, are addressed during the acquisition process and will manifest through an all-source RFP. PacifiCorp encourages stakeholders to actively monitor PacifiCorp press releases to look for new funding developments.

We find PacifiCorp's response is reasonable. No additional analysis on federal and state funding opportunities is necessary in the IRP. We find that incentive-based

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[69] Sierra Club Comments, at 3.
[70] PacifiCorp Reply Comments, at 29.
[71] *Id.*

savings opportunities associated with specific resources are more appropriately considered in the acquisition approval regulatory process.

Participation in Regional Transmission Planning.

Interwest contends that solar-rich regions of PacifiCorp's service territory could provide valued capacity and energy diversity and recommends PacifiCorp include in the next IRP detailed participation updates regarding coordination between NorthernGrid and WestConnect regional planning authorities.[72] Additionally, Interwest suggests the PSC direct PacifiCorp to participate in and report on other transmission planning efforts such as the Western Transmission Expansion Coalition. Interwest further recommends that PacifiCorp include an analysis of potential interconnection points to other utilities.[73]

PacifiCorp responds that participation in regional planning authorities is important and that it is an active member of NorthernGrid and coordinates with WestConnect through NorthernGrid via Interregional Coordination meetings.[74] PacifiCorp points to Volume I, Chapter 3 - Planning Environment, of the 2023 IRP for information on the Western Energy Imbalance Market, Extended Day-Ahead Market, the WRAP, "Markets+" a Southwest Power Pool day-ahead market offering, and other developments to demonstrate it takes an active role in regional planning. It also states

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[72] Interwest Comments, at 25.
[73] *Id.*
[74] PacifiCorp Reply Comments, at 43.

that collaborating with other utilities is a common practice in transmission planning, and where feasible, collaborations with other utilities can be used to inform the IRP.[75]

The PSC finds the IRP sufficiently discusses and analyzes PacifiCorp's participation in regional planning and provides adequate information on PacifiCorp's regional market participation and the significant benefits that current energy imbalance market participation brings to customers. The PSC finds it is not necessary to require the requested additional analysis.

Integration costs reporting.

Interwest urges PacifiCorp to study and report in the 2025 IRP the costs of inflexible thermal resources in assigning integration costs.[76] PacifiCorp explains that integration costs represent the incremental cost of holding reserves for additional renewable resources. It states that the number of reserves required is reduced because wind and solar resources are added to a pool of reserve requirements that includes load, wind, solar, and non-dispatchable thermal and hydro resources.[77]

PacifiCorp explains that using a pool of reserves to cover variations reduces the reserve requirement. For example, higher than expected wind output may offset lower than expected solar output, load may drop at the same time as wind output, and both circumstances can result in a reduced need for reserves to be deployed.[78]

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[75] *Id.*
[76] Interwest Comments, at 30.
[77] PacifiCorp Reply Comments, at 44.
[78] *Id.*

PacifiCorp states that as part of the 2025 IRP, it intends to develop updated reserve requirements for load, wind, solar, and non-dispatchable resources, and will present the analysis and results as part of the public input process for stakeholder feedback. PacifiCorp adds that as part of model optimization, PLEXOS ensures these reserve requirements are met by dispatchable resources specific to a given portfolio, where portfolios with more dispatchable resources can fulfill those requirements at lower cost.[79] As a result, integration costs are embedded within the reported cost results. PacifiCorp states that portfolio results do not have a dollar per megawatt-hour integration cost added for wind and solar generation, as these costs are part of the core optimization calculation and in any case differ widely across portfolios and future conditions.

The PSC finds PacifiCorp's explanation that integration costs are embedded within the reported cost results satisfies Interwest's request. Other than PacifiCorp's plan to develop updated reserve requirements and the presentation of its analysis as part of the 2025 IRP public input process, we find that no other analysis at this time is necessary.

[79] *Id.*, at 44-45.

E. PROPOSED STRUCTURAL CHANGES TO THE IRP PROCESS

We recognize this is the third cycle in a row that PacifiCorp has requested and received additional time to finalize its IRP. WRA provides evidence that since 1992, almost half of the IRPs were filed after significant delay and only three were unequivocally timely filed.[80] In this instance, the 2023 IRP, its Action Plan, and Preferred Portfolios were developed in the context of rapidly changing laws and energy policies. This necessitated an extension of the schedule to provide some opportunity for stakeholders to review the modeling results and the Preferred Portfolios. The two-month extension turned out to be too short. Both DPU and WRA note that non-confidential supporting information was not made available to stakeholders until April 17, 2023, confidential information supporting the filing was made available on May 1, 2023 after the April 30, 2023 comment deadline, and final confidential supporting information was filed on June 16 and June 20, 2023. The last of the finalized information was filed more than 11 weeks after the 2023 IRP original due date.

It is evident once again in this IRP cycle that the current IRP planning process, even with the authorized extensions, does not provide sufficient time 1) for PacifiCorp to develop an effective IRP, and 2) for stakeholders to review, evaluate, and provide

[80] WRA states, "[o]f the fifteen planning cycles [since] 1992, three were unequivocally timely; one provided a partial filing on the required date but added an addendum three months later; three were late by days rather than months; but six, close to half, were more significantly delayed … rang[ing] from one month to two-and-a-half years with a median delay of five months." WRA Comments, at 6.

meaningful input at all phases of IRP development. Consequently, we direct DPU, and invite OCS and other IRP participants, to file in this docket by May 30, 2024 recommendations concerning changes to the IRP schedule that will better provide PacifiCorp and all IRP participants adequate time to meet the public collaboration and participation objectives of the Guidelines and described in this and prior IRP orders. We will issue an order outlining the next steps in our consideration of changes to the IRP schedule after reviewing parties' recommendations.

F. THE P-MM PREFERRED PORTFOLIO AND THE LEAST-COST, LEAST-RISK RESOURCE

The fundamental objective of the IRP planning process is to arrive at the least-cost, least-risk resources otherwise known as the Preferred Portfolio. As discussed in detail above,[81] the disparate and inconsistent treatment of Natrium, non-emitting resources, new natural gas plants, and CCUS technologies, resulted in a Preferred Portfolio that fails to withstand scrutiny. Most parties recommended we not acknowledge the 2023 IRP, in part, due to the lack of analytical consistency. DPU put it best that "… small assumptions or changes in inputs can have a large impact on the resource mix ten years down the road … ."[82] The impact of consequential decisions like a dramatic change in the cost recovery period for new proxy gas plants is even greater and should not be made arbitrarily and unilaterally. For these reasons, we

[81] *See* Section IV.B.1. of our Order.
[82] DPU Comments, at 29.

find and conclude the portfolio selection process, and the P-MM Preferred Portfolio, lack credibility and do not acknowledge them.

G. THE ACTION PLAN

The 2023 Action Plan identifies specific actions PacifiCorp intends to take over the next two- to four-year period to deliver resources included in the Preferred Portfolio. PacifiCorp requests that we acknowledge and express support for this Action Plan. Utah Admin. Code R746-430-1 defines "Action Plan" and outlines the contents and supporting information and analysis required. It also states: "Nothing in these rules requires any acknowledgment, acceptance[,] or order pertaining to the Action Plan submitted." Despite that provision, for clarity we state explicitly that we decline to acknowledge or approve the Action Plan submitted with the 2023 IRP. We agree with parties who assert the suspension of the 2022 AS RFP must certainly and substantially impact the Action Plan, yet, on this record we have no way to know exactly how or to what precise degree. Additionally, as with the Preferred Portfolio, the unjustified inconsistencies in the modeling of various resource types cast serious doubts as to the trustworthiness of the resulting Action Plan. In particular, we find the decision to model a 10-year technical life for a proxy new natural gas plant impacts near-term decisions that could prevent customers from potentially attaining significant savings starting in the 2028-2030 period.[83] This finding is corroborated by

[83] *See* Figure 9.45, 2023 IRP Volume I, page 306.

DPU, OCS, and several other parties that urge us to refrain from acknowledging the Action Plan.[84]

V. SUMMARY AND CONCLUSIONS

We recognize the substantial body of quality work completed by PacifiCorp in preparing the 2023 IRP. PacifiCorp filed extensive documentation and workpapers with the 2023 IRP. The level of detail is useful, and the information provided is well organized. We encourage PacifiCorp to continue to provide such detailed back-up data and workpapers in future IRPs.

We also appreciate the diligent efforts and thoughtful comments provided by all parties. We recognize the frustration expressed by many participants with the limitations on their opportunities to provide timely feedback at each stage of the planning process.

After fully considering the 2023 IRP and the parties' comments and reply comments, we acknowledge that, with the exceptions noted, PacifiCorp substantially adhered to the Guidelines in developing its 2023 IRP. Nevertheless, the identified exceptions are of such significance they undermine our confidence in the portfolio selection process, the P-MM Preferred Portfolio, and the Action Plan. Accordingly, we do not acknowledge these aspects of the IRP.

[84] *See e.g.,* Section IV.A. and IV.B.1. of our Order.

VI. ORDER

We direct DPU, and invite OCS and other IRP participants, to file in this docket by **Thursday, May 30, 2024**, recommendations concerning changes to the IRP schedule that will better provide PacifiCorp and all IRP participants adequate time to meet the Guidelines' public collaboration and participation objectives, including those described in this and prior IRP orders.

DATED at Salt Lake City, Utah, April 17, 2024.

/s/ David R. Clark, Commissioner

/s/ John S. Harvey, Ph.D. Commissioner

Attest:

/s/ Gary L. Widerburg
PSC Secretary
DW#333432

Notice of Opportunity for Agency Review or Rehearing

Pursuant to Utah Code Ann. §§ 63G-4-301 and 54-7-15, a party may seek agency review or rehearing of this order by filing a request for review or rehearing with the PSC within 30 days after the issuance of the order. Responses to a request for agency review or rehearing must be filed within 15 days of the filing of the request for review or rehearing. If the PSC fails to grant a request for review or rehearing within 30 days after the filing of a request for review or rehearing, it is deemed denied. Judicial review of the PSC's final agency action may be obtained by filing a Petition for Review with the Utah Supreme Court within 30 days after final agency action. Any Petition for Review must comply with the requirements of Utah Code Ann. §§ 63G-4-401, 63G-4-403, and the Utah Rules of Appellate Procedure.

CERTIFICATE OF SERVICE

I CERTIFY that on April 17, 2024, a true and correct copy of the foregoing was served upon the following as indicated below:

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