Phillip J. Russell (10445)
JAMES DODGE RUSSELL & STEPHENS P.C.
545 East Broadway
Salt Lake City, Utah 84102
Telephone: (801) 363-6363
Email: prussell@jdrslaw.com

Attorney for the Utah Association of Energy Users

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

PacifiCorp's 2025 Integrated Resource Plan	Docket No. 25-035-22

INITIAL COMMENTS OF THE UTAH ASSOCIATION OF ENERGY USERS

The Utah Association of Energy Users ("UAE") hereby submits the following comments regarding the 2025 Integrated Resource Plan ("IRP") submitted by PacifiCorp ("PacifiCorp" or "Company").

BACKGROUND AND INTRODUCTION

STANDARDS AND GUIDELINES

In 1992 this Commission issued an order establishing "Standards and Guidelines for Integrated Resource Planning for PacifiCorp, Utah Jurisdiction" ("Guidelines").[1] The Guidelines define the IRP as a "process which evaluates all known resources on a consistent and comparable basis" that "should result in the selection of the optimal set of resources given the expected combination of costs, risk and uncertainty."[2] The Guidelines direct PacifiCorp to develop the IRP

[1] *In the Matter of 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 "IRP Guidelines Order"]. A copy of the Commission's IRP Guidelines Order setting forth the Guidelines is filed herewith as UAE Exhibit 1.
[2] *Id*. at 33 (Guideline 1).

"in consultation with the Commission, its staff, the Division of Public Utilities, the [Office] of Consumer Services, appropriate Utah state agencies and interested parties" and requires the Company to "provide ample opportunity for public input and information exchange during the development of its [IRP]."[3] "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."[4]

Once completed, the Company must "submit its IRP for public comment, review and acknowledgement."[5] Stakeholders are given an opportunity to "make formal comment to the Commission on the adequacy of the Plan," and the Commission is to "review the Plan for adherence to the principles stated" in the Guidelines.[6]

IRP PROCEDURAL ORDERS

In response to stakeholder concerns raised during the 2023 IRP process, this Commission issued a series of orders in 2024 that imposed new procedural requirements for the 2025 IRP process and for IRP processes to follow.[7] The procedural requirements applicable to the 2025 IRP process included the requirement that the Company not revise modeling inputs after January 1, 2025 (the "Data Lockdown Date") and that revisions to modeling inputs after that date may only be incorporated in the 2025 IRP Update.[8] The Commission asserted that the Data Lockdown Date

[3] *Id*. at 33 (Guideline 3).
[4] *PacifiCorp's 2023 Integrated Resource Plan*, Docket No. 23-035-10, Order issued April 17, 2024 [hereafter the "2023 IRP Order"] at 30 n.68.
[5] IRP Guidelines Order at 36 (Guideline 5).
[6] *Id*. at 36-37 (Guideline 6).
[7] These orders were issued in Docket No. 23-035-10 and include the Order dated July 11, 2024 ("July 11, 2024 Order") and the Order dated September 24, 2024 ("September 24, 2024 Order").
[8] *See* September 24, 2024 Order at 10.

was "necessary to preserve the utility and integrity of the IRP Process"[9] and "is necessary and appropriate to facilitate effective stakeholder collaboration and participation."[10]

<u>2025 IRP PROCESS</u>

PacifiCorp held the first public input meeting for the 2025 IRP process in January of 2024. From January of 2024 through September of 2024, PacifiCorp hosted a total of 7 public input meetings, all held remotely via Microsoft Teams. Prior to the meetings, PacifiCorp produced meeting materials to stakeholders that provided an agenda for the upcoming meeting as well as substantive information regarding the agenda topics. PacifiCorp filed a Draft IRP on December 31, 2024 in Docket No. 23-035-10. PacifiCorp then held two additional public input meetings in January and February of 2025 before filing the final IRP on March 31, 2025 in this docket.

PacifiCorp's final IRP filing included Chapters 11, 12, and 13, which PacifiCorp describes as the IRP results achieved by strict compliance with the Commission's Data Lockdown Date discussed above. Chapters 11, 12 and 13 are intended to be the Utah-specific versions of the contents of Chapters 1, 8, and 9, respectively, of the 2025 IRP filing. Among other things, the "Utah IRP" does not account for updated expectations regarding the commercial online date for the Natrium project, which affects the timing of other resource additions in the Preferred Portfolio and the timing of actions described in the Action Plan. UAE understands that PacifiCorp is implementing the Action Plan described in Chapter 9, rather than Chapter 13. As such, UAE's comments below make reference to the IRP chapters that include assumptions updated after the Data Lockdown Date.

[9] *Id*. at 9 (internal quotation marks omitted).
[10] *Id*.

UAE COMMENTS – 2025 IRP

I. PacifiCorp Failed to Comply with the Guideline Requirement to Collaborate with Stakeholders During the Development of the 2025 IRP

PacifiCorp failed to satisfy Guideline 3 when it elected not to share the results of any portfolio modeling runs or the preferred portfolio with stakeholders prior to filing the draft IRP on December 31, 2024, and when it failed to share the preferred portfolio prior to filing its final IRP on March 31, 2025 and, therefore, the Commission should decline to acknowledge the 2025 IRP. Guideline No. 3 requires the Company to develop its IRP "in consultation with the Commission, its staff, the [DPU], the [OCS], appropriate Utah state agencies and interested parties."[11] Guideline No. 3 further requires the Company to "provide ample opportunity for public input and information exchange during the development of its [IRP]."[12] This Commission has previously commented on the Company's obligations under Guideline 3, stating that "[c]ollaboration with stakeholders to develop the IRP is fundamental to the process and such collaboration necessarily includes stakeholders' access to information that allows for reasonable and meaningful participation."[13]

In the 2021 IRP Order, the Commission documented PacifiCorp's "consistent disregard for Guideline 3 since, at least, 2017, despite the PSC admonishing it for failing to satisfy Guideline 3 for the 2017 IRP."[14] The 2021 IRP Order catalogues PacifiCorp's failure to comply with Guideline 3 in each of the 2017, 2019, and 2021 IRP cycles and need not be repeated here.[15] In those cycles, the Commission found that PacifiCorp violated Guideline 3 by failing to provide agendas and

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[11] IRP Guidelines Order at 33 (Guideline 3).
[12] *Id*.
[13] *PacifiCorp's 2021 Integrated Resource Plan*, Docket No. 21-035-09, Order issued June 2, 2022 at 8-9 [hereafter "2021 IRP Order"].
[14] *Id*. at 9.
[15] *Id*. at 9-14.

meeting materials sufficiently in advance of meetings to allow for meaningful stakeholder participation.[16]

In the 2023 IRP Order, this Commission noted PacifiCorp's failure to "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."[17] The Commission went on to express that it was "troubled by the evident lack of collaboration, in particular with respect to key decision points in the IRP planning process," and made it clear that "in all future IRP dockets, Guideline 3 will apply to preliminary IRP disclosures and filings."[18]

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 draft IRP on December 31, 2025. Prior to filing the final IRP on March 31, 2025, PacifiCorp failed to share with stakeholders either the Preferred Portfolio as updated in Chapter 9 or the modeling results of its "end effects" analysis upon which the selection of the Preferred Portfolio was based. PacifiCorp's decision not to share modeling results or methodologies denied stakeholders the required access to information and stakeholders from having reasonable and meaningful participation regarding the preferred portfolio selected by the Company in the 2025 IRP.

PacifiCorp's decision not to share modeling results or portfolios prior to filing the draft or final IRP directly contradicts the Commission's statements in the 2017, 2019, 2021, and 2023 IRP orders in which the Commission has repeatedly reiterated that the IRP process requires information

[16] *See id*.
[17] 2023 IRP Order at 30.
[18] 2023 IRP Order at 31.

exchange and collaboration. In its Order declining to acknowledge PacifiCorp's 2021 IRP, the Commission discussed PacifiCorp's failure to satisfy Guideline 3, stating as follows:

> "The PSC has been clear: 'We view the IRP process as one in which parties are able to provide input and receive information on relevant issues, inputs, models, and results … Therefore, the opportunity for all parties to examine and provide information during the IRP['s] development, rather than after the fact, is an important aspect of the IRP process.'"[19]

Rather than withholding IRP modeling results from stakeholders during the planning process, Guideline 3 obligated PacifiCorp to share the modeling results with stakeholders and then discuss those results with stakeholders.

PacifiCorp's failure to comply with Guideline 3 deprived UAE and other stakeholders an opportunity to evaluate modeling and modeling results and to provide input to PacifiCorp on how to address those challenges. PacifiCorp deprived UAE and others an opportunity to collaborate regarding the portfolio modeling results. As this Commission has previously noted: "Guideline 3 is clear: the IRP is to be developed 'in consultation' with stakeholders who must enjoy 'ample opportunity for public input and information exchange *during the development of [the plan]*.'"[20]

PacifiCorp did not consult with stakeholders during the development of the 2025 IRP with respect to the preferred portfolio prior to filing the draft IRP or filing the final IRP. PacifiCorp's decision not to provide stakeholders access to initial modeling results and to reach conclusions in the draft and final IRP filings deprived stakeholders of the opportunity to collaborate in the IRP process. PacifiCorp has once again failed to satisfy its obligations pursuant to Guideline 3 and, as a result, this Commission should again decline to acknowledge the IRP.

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[19] 2021 IRP Order at 8-9 (quoting *PacifiCorp's 2017 Integrated Resource Plan*, Docket No. 17-035-16, Order issued March 2, 2018 at 7 [hereafter "2017 Order"]).
[20] 2021 IRP Order at 14 (emphasis in original).

II. PacifiCorp Failed to Treat Resources on a Consistent and Comparable Basis

UAE continues to be concerned about the Company's inclusion of the Natrium demonstration project ("Natrium") in the preferred portfolio.[21] Guideline 1 defines "integrated resource planning" as a "utility planning process which evaluates all known resources on a consistent and comparable basis."[22] 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."[23] As with prior IRP cycles, the 2025 IRP includes the Natrium project in its preferred portfolio[24] but, unlike every other generation resource considered for inclusion in the 2025 IRP, the Company does not include Natrium in the supply-side resource table.[25] Instead, the Company inputs confidential assumptions about the performance and price of the Natrium project into the portfolio models and allows the models to select the resource or not. This confidential price assumption is not shared with any stakeholders in the IRP process. This process fails to evaluate all resources on a consistent and comparable basis and, therefore, fails to comply with Guideline 4(b).

PacifiCorp's use of assumed performance and cost assumptions for the Natrium project is not consistent with or comparable to its use of assumptions for other generation resources considered in developing the IRP. For all generation resources evaluated in the IRP other than the

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[21] UAE submitted comments similar to those in this Section in response to PacifiCorp's 2021 IRP and 2023 IRP. *See PacifiCorp's 2021 Integrated Resource Plan*, Docket No. 21-035-09, Comments of the Utah Association of Energy Users filed March 4, 2022 at 2-4; *PacifiCorp's 2023 Integrated Resource Plan*, Docket No. 23-035-10, Comments of the Utah Association of Energy Users filed Dec. 12, 2023 at 6-10.

[22] IRP Guidelines Order at 33 (Guideline 1).

[23] *Id*. at 34 (Guideline 4(b)).

[24] *See* 2025 IRP Vol. 1 at 10 ("The 2025 IRP preferred portfolio includes the 500 MW advanced nuclear Natrium™ demonstration project, anticipated to achieve online status by the fall of 2031.").

[25] *See id*. at 147 ("At this time the specific cost and performance assumptions for the Natrium advanced nuclear demonstration project are confidential and are not summarized in the supply-side resource table."); *id. at* 149-158 (Tables 7.2-7.11).

Natrium project, PacifiCorp included a generic "proxy" resource in its supply-side resource table. The proxy supply-side resources, and associated assumptions, are shown in Tables 7.2 through 7.11 of Chapter 7 of the 2025 IRP. The supply-side resources shown in these tables identify assumed capital costs and O&M costs for various types of generation resources (e.g., solar, wind, solar or wind plus storage, natural gas, geothermal, and nuclear), each with an assumed capacity, capacity factor, commercial operation year and design life. The assumptions for the resources listed in the supply-side research table are determined based on the known capabilities of mature technologies and existing equipment, on third-party evaluations of generation technologies, on pricing information gleaned from submissions to RFPs, and on PacifiCorp's cost assumptions.[26]

By contrast, the assumed costs and performance capabilities of the Natrium project are not derived from any of the above-referenced resources, and PacifiCorp provides no information as to how any of the assumptions regarding the costs or capabilities of the Natrium project are derived. None of the assumptions regarding the Natrium project are included in the supply-side resource table. Instead, PacifiCorp states that "the specific cost and performance assumptions for the Natrium advanced nuclear demonstration project are confidential and are not summarized in the supply-side resource table."[27] The 2025 IRP includes assertions about certain operating characteristics of the Natrium project, including capacity factor and ramp rate and the efficiency of the storage facility,[28] but no information is provided as to how those characteristics are known. The lack of information about the cost or performance assumptions of the Natrium project prevents any independent evaluation to determine the reasonableness of those assumptions.

[26] *See id*. at 141-145.
[27] *Id*. at 147.
[28] *See id*. at 146-147.

In addition to the fact that PacifiCorp does not include the cost and performance metrics of the Natrium project in the supply-side resource tables, the Natrium project's treatment within the modeling essentially directs the model to select the project. PacifiCorp explained the cost and selection of the Natrium project in response to a stakeholder feedback form, indicating that "no costs associated with Natrium were included in the modeling process given that the Company has not yet reached an agreement with Terra Power."[29] Obviously, telling the IRP model to assume a resource will be free will affect the modeling results. Modeling the Natrium project as though it has no capital or O&M costs is a way of ensuring the model will select the Natrium project in all model runs, regardless of the actual merit of the project. PacifiCorp's explanation for this treatment—that it has not reached commercial terms with Terra Power and that the Company has made certain federal funding and customer protection assumptions—is not a reasonable justification for this modeling treatment. PacifiCorp has not reached commercial terms with any other resource included in the supply-side resource table, but it included proxy prices for those other resources rather than assuming they would be free.

Not surprisingly, the Natrium project was selected by model to be part of the resource portfolios in all scenarios (except the sensitivity case where the model was not allowed to select the Natrium project) because the cost and performance assumptions made it economic for the model to select the project. There can be no confidence in the reasonableness of the inclusion of the Natrium project in any portfolio, including the Preferred Portfolio, until actual cost and performance assumptions of such a project can be provided. The 2025 IRP does not evaluate "all

[29] 2025 IRP Vol. 2 at .pdf page 446; *see also id*. at .pdf page 447 ("[n]o costs associated with Natrium are modeled in the 2025 IRP, given federal funding and customer protection assumptions.").

present and future resources . . . on a consistent and comparable basis,"[30] and the Commission should decline to acknowledge the portion of the 2023 IRP relating to the Natrium project.

In a September 12, 2025 response to a data request, PacifiCorp indicated that it has now executed a power purchase agreement for the output of the Natrium project that is "consistent" with the manner in which it has modeled the project in the 2025 IRP.[31] PacifiCorp further explains that it will seek pre-approval of its decision to enter into this PPA in an upcoming filing with the Commission. UAE cannot evaluate the Company's statement that the treatment of Natrium is "consistent" with the PPA at this time. Given the fact that PacifiCorp had previously indicated that it had not yet reached commercial terms with Terra Power and did not disclose the existence of the PPA until a mid-September 2025 response to a data request, UAE assumes that the PPA was not executed as of the time the 2025 IRP was filed. If that assumption is accurate, then UAE's concerns about PacifiCorp's treatment of Natrium not being on a consistent and comparable basis with other supply-side resources in the 2025 IRP continue to apply.

UAE's comments herein should not be construed to signal UAE's opposition to the Natrium project at this stage. UAE appreciates the information that the Company has provided about the Natrium project to date, but that information is thus far insufficient to reach any conclusions about the project. UAE's comments should also not be taken as criticism of the Company's pursuit of the Natrium project and its efforts to keep confidential any information which might jeopardize the potential procurement of a new resource at a price that will yield ratepayer benefits. UAE's comments simply note that the inclusion of the Natrium project in the

[30] IRP Guidelines Order at 33 (Guideline 1).
[31] *See* PacifiCorp response to DPU data request 1.6, a copy of which is included in Exhibit 2 filed herewith.

IRP preferred portfolio at this point, without sharing key financial and performance information, is not consistent with the Guidelines. UAE looks forward to learning more about the Natrium project as more information is made available.

III. PacifiCorp's Assignment of Jurisdictional Shares of System Resources Improperly Allows Oregon and Washington Policy Preferences to Affect Resource Procurement Decisions

The 2025 IRP utilizes the concept of "jurisdictional portfolios," in which distinct requirements for each jurisdiction are addressed in initial portfolio development before an integrated portfolio is selected. This process is explained in Chapters 9 and 12 of the 2025 IRP. In short, PacifiCorp developed a set of jurisdictional portfolios that accounts for Oregon policy preferences, a separate set that accounts for Washington policy preferences, and another set for Utah, Idaho, Wyoming, and California (UIWC) that do not assume any jurisdictional policy preferences. PacifiCorp then developed a set of "integrated" portfolios that seek to create a single portfolio for the entire system that assigns certain resources to Oregon and Washington in an effort to address their policy preferences. These "integrated" portfolios then assign jurisdictional shares of resources to each of Oregon, Washington, and the UIWC jurisdictions. Resources that otherwise would be acquired for the whole system are "assigned" to Oregon and Washington to satisfy the policy preferences in those states. The end result is that PacifiCorp's effort to account for the state policy preferences in Oregon and Washington takes resource decision-making authority away from Utah for resources that are needed to serve the whole system.

The UIWC Full Jurisdictional Portfolio shows that new utility-scale solar resources are added in each of 2028, 2029, 2030, and 2031 and new storage resources are added in each of 2028, 2029, and 2030.[32] After PacifiCorp integrated this portfolio to account for policy preferences of Oregon and Washington, however, resources that had been included in the UIWC full jurisdictional portfolio were assigned to Oregon and Washington. This shift in resource allocation is illustrated in Table 9.11 of the 2025 IRP,[33] which shows that the solar and storage resources added from 2028-2030 are assigned to Oregon and Washington, but not to any of the other UIWC jurisdictions.[34]

The 2025 IRP states that resource decisions for the resources assigned to each jurisdiction in Table 9.11 may only be made by the jurisdiction to which a resource is assigned. Specifically, the 2025 IRP states that "only the jurisdictional portfolios that determine the selection of a given resource are eligible to participate in that resource,"[35] and that "States are only able to impact the disposition of resources in which they have an active share."[36] So while the UIWC Full Jurisdictional Portfolio reflects system resource needs in the absence of Oregon and Washington policy preferences, decisions regarding resource procurement for those system resource needs have been shifted only to Oregon and Washington. Since the issuance of the 2025 IRP, PacifiCorp has implemented solicitation processes in Oregon and Washington to acquire resources that will be situs assigned to those jurisdictions.[37] PacifiCorp has not initiated a solicitation process in Utah, apparently concluding that regulatory decisions regarding the procurement of resources identified in the 2025 IRP Preferred Portfolio should be limited to Washington and Oregon.

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[32] *See* 2025 IRP Vol. 1 at 225, Table 9.7.
[33] *See id*. at 244, Table 9.11.
[34] This assignment of resources affects avoided cost calculations for any methodology that utilizes the Preferred Portfolio as a baseline for comparison.
[35] 2025 IRP Vol. 1 at 211.
[36] *Id*. at 182.
[37] *See, e.g.*, https://www.pacificorp.com/suppliers/rfps.html (providing information for 2025 Washington Situs RFP and 2025 Oregon Situs RFP).

The assignment of resources to a "jurisdictional share" is new to the 2025 IRP. UAE acknowledges that diverging policy preferences expressed by the state jurisdictions in which PacifiCorp operates makes system planning extremely difficult. However, Utah should not be cut out of procurement decisions for resources needed by the system to satisfy Oregon and Washington policies preferences. The Commission should decline to acknowledge the 2025 IRP because the jurisdictional portfolio approach assigns resources that would otherwise be procured for customers in all jurisdictions are allocated to individual jurisdictional portfolios, thereby depriving the Utah stakeholders input in procurement decisions.

IV. A Modeling Error Affected Proxy Resource Prices in the Supply-Side Resource Table

Prices utilized by PacifiCorp in the supply-side resource table were affected by a modeling error in PacifiCorp's use of data from the Annual Technology Baseline (ATB) workbook produced by the National Renewable Energy Laboratory (NREL). PacifiCorp stated as follows in response to a data request from Western Resource Advocates on this point:

> PacifiCorp is aware of the difference between the National Renewable Energy Laboratory (NREL) capital expenditure (CAPEX) costs reported in tab "Summary_CAPEX" of NREL's 2024 Electricity Annual Technology Baseline workbook and the CAPEX costs presented on tab "Cost Forecasts" of PacifiCorp's "Public_SSR_Database_Summary_Tab_2025" workbook. CAPEX costs in PacifiCorp's 2025 Integrated Resource Plan (IRP) supply-side resource table were presented in real 2024 dollars (2024$) based on the technology costs in the first year available, as listed in the supply-side table, while NREL's CAPEX costs are presented in commercial operation year.
>
> Modeling in the 2025 IRP incorrectly applied factors based on 2024 commercial operation date (COD) technology costs. In the 2025 IRP supply-side resource table, escalation rates for each proxy resource option did not align with the earliest commercial operation year, but instead, all escalation rates began in 2025, rather than in the first year available, as intended. PacifiCorp identified and corrected this error following the completion of the 2025 IRP modeling . . . .[38]

[38] PacifiCorp response to WRA data request 2.6, a copy of which is included in UAE Exhibit 2 filed herewith.

Essentially, the supply-side resource table sought to incorporate a forecast of CAPEX costs for wind and solar resources from the NREL ATB. The NREL ATB reflected CAPEX cost declines over time starting with the first year that the resource could be built. So, if a solar resource could be built by 2028, the NREL ATB assigned a CAPEX cost for 2028 and showed declining costs each year following that. PacifiCorp utilized this forecast of CAPEX costs for wind and solar resources, but instead of assigning the NREL ATB CAPEX costs to years beginning with the year when projects could reach COD, PacifiCorp assigned those costs (and the declining costs thereafter) starting in 2025. The result of this error was that wind and solar resources in the supply-side resource table have lower CAPEX and lower total resource costs than they would have in the absence of the error.

Modeling errors that affect prices in the supply-side resource tables have the potential to skew the results of portfolios selected from those resources. When a resource price is artificially low in the supply-side resource table, the model may select too much of that resource and not enough of another resource. When the pricing error is in the near-term portion of the IRP planning horizon—such as the error at issue here—the modeling error could affect the near-term resource procurement activities in the Action Plan. UAE cannot say at this stage whether the Preferred Portfolio or the Action Plan were affected by the modeling error, but it is possible that they were. This possibility should be considered as the 2025 IRP is used, whether as a justification for resource acquisitions or for avoided cost modeling purposes. The error at issue here would not, of course, be a reason to postpone a resource solicitation because the solicitation will yield actual resource costs. However, the modeling within any such solicitation should be updated to eliminate the error so that any resources selected do not appear to have artificially high or low system values.

UAE does not recommend that the Commission decline to acknowledge the IRP as a result of the modeling error. The effects are unknown and can be remedied. Rather, UAE simply recommends that the Commission exercise caution in how the 2025 IRP and the Preferred Portfolio are used going forward and require that modeling errors such as the one described herein be remedied before use in avoided cost modeling and other settings.

V. PacifiCorp Selected the Preferred Portfolio Based Solely on Flawed "End Effects" Modeling

UAE recommends that the Commission decline to acknowledge the Preferred Portfolio and Action Plan because the "end effects" modeling utilized by PacifiCorp to select the Preferred Portfolio is flawed and was given undue weight in the selection of the Preferred Portfolio. As in past IRPs, PacifiCorp developed "base" portfolios that were optimized for certain price-policy scenarios.[39] PacifiCorp then developed variants of each "base" portfolio and compared the performances of base and variant portfolios in model runs utilizing the different price-policy scenario forecasts during the planning horizon.[40] Tables 9.34 to 9.37 of the 2025 IRP[41] provide the results of this modeling and show the present-value revenue requirement (PVRR) of each model run in each scenario. A review of this information illustrates that the portfolio selected by PacifiCorp as the preferred portfolio was not the least-cost portfolio during the planning horizon.

The Commission's IRP guidelines require that the PacifiCorp's IRPs include "[a] 20-year planning horizon."[42] In response to a requirement imposed by Washington state, the 2025 IRP

[39] The price-policy scenarios are described on page 207 of Volume 1 of the 2025 IRP.
[40] PacifiCorp also created separate jurisdictional portfolios and integrated them as described in Chapter 9 of the 2025 IRP and as discussed in Section III, above.
[41] *See* 2025 IRP Vol. 1 at 260-262.
[42] Utah IRP Guidelines at 35 (Standard 4(d) ("PacifiCorp's future integrated resource plans will include: (d) A 20-year planning horizon.")).

includes a 21-year planning horizon rather than the traditional 20-year horizon.[43] UAE takes no issue with PacifiCorp's use of a 21-year planning horizon in the 2025 IRP.

In the 2025 IRP, the Company selected as the preferred portfolio the Integrated Base MN portfolio, which is the portfolio optimized to the MN (medium gas, no CO_2) price policy scenario. Surprisingly, the Integrated Base MN portfolio ranks only fourth in the ST model run in this MN scenario and second when adjusted for risk.[44] The Integrated Base HH portfolio performs better than the Preferred Portfolio in the MN model run and when adjusted for risk. In fact, the Integrated Base HH portfolio costs $106 million less on a risk adjusted basis than the Company's chosen portfolio under MN (medium gas, no CO_2) price policy assumptions.[45] The Integrated Base HH portfolio also performs better than the Preferred Portfolio in the scenario with LN (low gas, no CO_2) price policy assumptions (by $236 million)[46] and in the scenario with HH (high gas, high CO_2) price policy assumptions (by $3 billion)[47] over the 21-year planning horizon. During the 21-year planning period in the ST model run, the Integrated Base MN portfolio selected by the Company as the Preferred Portfolio ranked fourth in the MN price policy scenario, fifth in the LN price policy scenario, and eighth in the HH price-policy scenario. By contrast, the Integrated Base HH portfolio ranked second in the MN scenario, third in the LN scenario, and first in the HH scenario in those same model runs.[48] That is, the Integrated Base HH portfolio considerably outperforms the Company's chosen portfolio in every price policy scenario over the 21-year planning horizon.

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[43] *See* 2025 IRP Vol. 1 at 181 n.1.
[44] *See id*. at 260, Table 9.34.
[45] *See id*., Table 9.34.
[46] *See id*., Table 9.35.
[47] *See id*., Table 9.35.
[48] *See id*. at 260, Tables 9.34-9.36.

PacifiCorp selected the Integrated Base MN portfolio as the Preferred Portfolio, however, because of its performance in a model run that assumed the MN price policy scenario and also considered "end effects." The 2025 IRP states that "cases eligible to become the preferred portfolio which report the possibility of significant end-effects are further evaluated to determine if a portfolio represents significant long-term costs or risks compared to other eligible portfolios."[49] PacifiCorp further states that "[e]nd effects were applied to all portfolios run under the MN price-policy for a 5-year period after the study horizon, results of which can be seen in this table."[50] In that "end effects" model run using the MN price-policy scenario, the Integrated Base MN portfolio outperforms the Integrated Base HH portfolio by $51 million.[51] The Company's selection of the Integrated Base MN portfolio despite its somewhat mediocre performance during the planning period is based entirely on its performance when "end effects" are considered. As such, the "end effects" modeling deserves considerable scrutiny, and UAE recommends that the Commission decline to acknowledge the Preferred Portfolio and the Action Plan for at least the following reasons.

1. *<u>"End Effects" modeling was performed only in the MN price policy scenario</u>*

As noted above, the Company conducted its "end effects" modeling *only* in the MN price policy scenario, and not in either the HH or LN scenarios. The preferred portfolio should represent the least-cost, least-risk plan to reliably serve load. If end effects are to be considered in the selection of the preferred portfolio, they should be considered using all of the same price policy assumptions utilized during the planning period.

[49] *See id*. at 187.
[50] *Id*. at 260.
[51] *See id*., Table 9.34.

2. *<u>"End Effects" modeling is flawed</u>*

While PacifiCorp asserts that "end effects" modeling is necessary to measure potential risks after the conclusion of the planning horizon, the "end effects" modeling it performed does not do that. PacifiCorp has explained that its end effects modeling assumed that the final year of the planning period—the 21st year in the 2025 IRP's planning period—was repeated for five additional years under the medium gas/zero CO_2 assumptions.[52] PacifiCorp asserts that end effects modeling is necessary because "[i]f a portfolio was more expensive in early years of the horizon, but much less expensive later this would be important information to consider when evaluating the risk to consumers. A portfolio which was less expensive early due to tax credits could become very expensive when tax credits expire, posing a risk to consumers."[53] UAE agrees that this consideration is worth exploring, but disagrees with PacifiCorp's method of doing so.

As an initial matter, PacifiCorp's modeling of capital costs already addresses this issue by levelizing those costs over the life of the resource.[54] As it has for several IRP cycles, PacifiCorp used real levelizion of capital costs for resource investments to address "end effects" concerns in the 2025 IRP.[55] Real levelization depicts capital-cost-related revenue requirements as being lower than they actually are in the initial years after a project comes into service by spreading capital

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[52] *See* PacifiCorp's response to WRA data request 3.1(c) ("[E]nd effects are based on a static continuation of the costs in the final year of the study horizon."). A copy of RMP's response to WRA's 3.1 is included in UAE Exhibit 2 filed herewith.
[53] *Id*. (RMP response to WRA DR 3.1(d)).
[54] *See* 2025 IRP Vol. 1 at 196 (discussing use of nominal levelized revenue requirement costs for capital cost recovery).
[55] *See, e.g.*, 2025 IRP Vol. 2 at 49 ("PacifiCorp used a 21-year study period (2025-2045) for portfolio modeling, and a real levelized revenue requirement methodology for treatment of end effects."); 2023 IPR Vol. 2 at p. 65 ("PacifiCorp used a 20-year study period (2023-2042) for portfolio modeling, and a real levelized revenue requirement methodology for treatment of end effects."); 2021 IRP Vol. 2 at p. 58 ("The company considers end-effects in its use of Real Levelized Revenue Requirement Analysis, as summarized in Volume I, Chapter 8 (Modeling and Portfolio Evaluation Approach) and uses a 20-year planning horizon.")

costs out equally over the life of the resource. The use of real levelization of capital costs in IRP modeling obscures the actual revenue requirement effects in any given year of the planning period. PacifiCorp models nominal values for production tax credits (PTCs), however, so that all PTC benefits are realized in the first 10 years after the resource is placed into service. This mismatch between how the revenue requirement effect of capital costs and PTC benefits are modeled in the 2025 IRP may overstate the value of portfolios that generate high levels of PTCs.[56] To address this issue, PacifiCorp should model PTCs and capital costs in a uniform manner—using both nominal values or levelized values, or both.

PacifiCorp's use of levelized capital costs in portfolio modeling means that revenue requirement impacts in any single year of a portfolio will not reflect actual expectations in that year. PacifiCorp's "end effects" modeling, which repeats the revenue requirement impacts of a single year the planning period, provides little value in determining the actual revenue requirement impacts of the portfolios at issue in the 2025 IRP. Contrary to PacifiCorp's stated intentions, repeating the revenue requirement results from a single year of the planning period does not measure the effects *after* the planning period. Any given portfolio developed in the 2025 IRP could require large investments (or yield large revenue requirement benefits) in the years immediately after the planning period, and these large investments (or benefits) would not be captured in PacifiCorp's "end effects" modeling exercise. UAE questions the value of a modeling exercise that simply repeats the results for a single year of the planning period, and states that this does not provide any insight into what might happen after the planning period has ended.

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[56] *See In the Matter of the Voluntary Request of Rocky Mountain Power for Approval of Resource Decision to Repower Wind Facilities*, Docket No. 17-035-39, Response Testimony of Kevin C. Higgins (filed April 2, 2018) at lines 473-496 (criticizing PacifiCorp modeling of wind repowering projects that utilizes levelized capital costs and nominalized PTCs).

3. *<u>PacifiCorp's selection of the Preferred Portfolio Gives "End Effects" Modeling Undue Weight</u>*

PacifiCorp's selection of the Intermediate Base MN portfolio as the Preferred Portfolio gives undue weight to the "end effects" modeling, particularly given that other portfolios clearly performed better in the ST model runs focused on the 21-year planning period and the "end effects" modeling was performed only in MN price policy scenario. As noted above, and as reflected in Tables 9.34-9.36 of the 2025 IRP, the Integrated Base HH portfolio outperforms the Integrated Base MN portfolio in each price policy scenario in the ST model runs, as well as in the Risk Adjusted model run in the MN price policy scenario. In fact, the Integrated Base HH portfolio shows at least $100 million of savings over the Integrated Base MN portfolio in every price policy scenario during the planning period, with a low of $105 million of savings in the MN risk adjusted model and a high of $3 billion in savings in the HH model run. The ***only*** model run in which the Integrated Base MN portfolio outperforms Integrated Base HH is in the MN price policy scenario with "end effects," where the Integrated Base MN portfolio shows savings of $51 million over the Integrated Base HH portfolio. By these measures, the Integrated Base HH portfolio appears to be less risky than the portfolio selected by PacifiCorp as the preferred portfolio when all modeling outcomes are considered. PacifiCorp seems to have selected the Integrated Base MN portfolio solely because it outperformed other portfolios in the MN model run with end effects—the only model run in which "end effects" were considered. UAE is concerned that the "end effects" modeling was given undue weight over other modeling results.

For all of the foregoing reasons regarding PacifiCorp's use of "end effects" modeling, UAE recommends that the Commission decline to acknowledge either the Preferred Portfolio or the Action Plan.

CONCLUSION

UAE appreciates the opportunity to file these comments regarding PacifiCorp's 2025s IRP. UAE makes the following recommendations:

- The Commission should decline to acknowledge the 2025 IRP because PacifiCorp failed to comply with Guideline 3;
- The Commission should decline to acknowledge the portion of the 2025 IRP relating to the Natrium project because PacifiCorp failed to comply with Guideline 1;
- The Commission should decline to acknowledge the 2025 IRP because the jurisdictional portfolio approach assigns resources that would otherwise be procured for customers in all jurisdictions are allocated to individual jurisdictional portfolios, thereby depriving the Utah stakeholders input in procurement decisions; and
- The Commission should decline to acknowledge the Preferred Portfolio and Action Plan in the 2025 IRP because PacifiCorp failed to select the least-cost, least-risk portfolio and gave undue weight to a single, flawed "end effects" modeling run.

DATED: September 26, 2025.

Respectfully submitted,

By: Phillip J Russell
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Phillip J. Russell
JAMES DODGE RUSSELL & STEPHENS P.C.

Attorney for UAE

Certificate of Service
Docket No. 25-035-22

I hereby certify that a true and correct copy of the foregoing was served by email on September 26, 2025 on the following:

ROCKY MOUNTAIN POWER	
Joseph Dallas	joseph.dallas@pacificorp.com
Max Backlund	max.backlund@pacificorp.com
	datarequest@pacificorp.com
	irp@pacificorp.com
DIVISION OF PUBLIC UTILITIES	
Chris Parker	chrisparker@utah.gov
Madison Galt	mgalt@utah.gov
Patricia Schmid	pschmid@agutah.gov
Patrick Grecu	pgrecu@agutah.gov
	dpudatarequest@utah.gov
OFFICE OF CONSUMER SERVICES	
Michele Beck	mbeck@utah.gov
Bela Vastag	bvastag@utah.gov
Robert Moore	rmoore@agutah.gov
	ocs@utah.gov
WESTERN RESOURCE ADVOCATES	
Sophie Hayes	sophie.hayes@westernresources.org
Karl Boothman	karl.boothman@westernresources.org
Nancy Kelly	nancy.kelly@westernresources.org
Jessica Loeloff	jessica.loeloff@westernresources.org
SIERRA CLUB	
Rose Monahan	rose.monahan@sierraclub.org
Matt Gerhart	matt.gerhart@sierraclub.org
Thomas Phillips	thomas.phillips@sierraclub.org

/s/ *Phillip J. Russell*