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Attorney for the Commission Staff

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF PACIFICORP'S)
APPLICATION FOR ACKNOWLEDGEMENT) **CASE NO. PAC-E-23-10**
OF THE 2023 INTEGRATED RESOURCE)
PLAN)
) **COMMENTS OF THE**
) **COMMISSION STAFF**
)
_____)

COMMISSION STAFF (“STAFF”) OF the Idaho Public Utilities Commission, by and through its Attorney of record, Chris Burdin, Deputy Attorney General, submits the following comments.

BACKGROUND

On March 31, 2023, Rocky Mountain Power, a division of PacifiCorp (“Company”), filed an application (“Application”) with the Idaho Public Utilities Commission (“Commission”) requesting acknowledgment of the Company’s 2023 Integrated Resource Plan¹ (“2023 IRP”).

The Company represents that it submits the 2023 IRP filing in compliance with Order No. 22299, Case No. U-1500-165, dated January 1989; whereby the Commission ordered biennial filings of the electric integrated resource plan. The Company states that this plan is also submitted

¹ On May 31, 2023, the Company filed its amended final 2023 IRP for the purpose of updating the preliminary IRP filed on March 31, 2023. See Amended IRP Cover Letter describing updates made to the initial filed IRP.

to the Commission as the Resource Management Report on the Company's resource planning status.

The Company represents that the 2023 IRP contains information outlining how the Company has addressed the Commission's integrated resource planning requirements, and the Company requests that the Commission acknowledge the 2023 IRP in accordance with the Commission's rules, and fully support the 2023 IRP conclusions, including the proposed action plan.

In January 1989, the Commission identified the foundational aspects of the current IRP. Order No. 22299. In 1989, the Commission specified the "Resource Management Report"² ("RMR") as the way to publicly document the status of a utility's plan for meeting future resource needs.³ This plan was ordered to be developed and completed on a biennial basis to provide a public report documenting a utility's forecasted resource plan to meet its needs over the next 20-year period. The Commission expected RMRs to "emphasize clarity, understandability, resource capabilities, and planning flexibility." *Id.* Over time this report has evolved and has come to be known as the IRP. For acknowledgement and compliance with Order No. 22299, the Company should examine and discuss each of the following:

- *Load forecast uncertainties;*
- *The effects of known or potential changes to existing resources;*
- *Considerations of demand and supply side resource options; and*
- *Contingencies for upgrading, optioning and acquiring resources at optimum times (considering cost, availability, lead time, reliability, risk, etc.) as future events unfold.*

In the Order, the Commission considered ongoing comprehensive planning essential to good utility management. The Commission recognized that resource planning is the sole domain of utility executives and that only prudence reviews of the utility's plans are needed. As such, the Commission, in response to a filed IRP, only acknowledges that the Company has completed the requirements of the Commission's Order. Recognizing that an IRP is a plan and not a blueprint, the Commission through acknowledgement believes the Company has met the

² U-1500-165 Order No. 22299 - Page 6.

³ Order No. 22299.

requirements of the planning process, and only provides acknowledgment of the IRP, but does not authorize the conclusions or prudence of resources contained in the plan.

STAFF REVIEW

Staff recommends the Commission acknowledge the 2023 PacifiCorp IRP. This recommendation is based on Staff's review of the Company's filed 2023 IRP, as amended, in addition to the participation by Staff in the series of 2023 IRP Stakeholder Meetings. Staff believes the 2023 IRP addresses the requirements outlined in Commission Order No. 22299.

Although Staff recommends the Commission acknowledge the 2023 IRP, it is concerned that recent change in federal policy exposes the Company's customers to higher costs and risks as the Company accelerates its transition away from dispatchable coal-fired generation toward other dispatchable resources. Technological and permitting challenges for implementing the new Natrium Nuclear plants add potential risk and higher cost if these plants are not completed as forecast. Likewise, highly variable natural gas prices relative to more stable priced coal expose customers to higher energy costs in both the near-term and long-term as the Company relies on more natural gas to maintain dispatchable capacity for its system as it transitions away from coal as part of its coal unit conversions and exits.

Preferred Portfolio

PacifiCorp's 2023 Preferred Portfolio shows a substantial change in the types and amounts of resources selected from the prior 2021 IRP. These changes are primarily driven by the Inflation Reduction Act enacted in August of 2022 and the Ozone Transport Rule finalized by the EPA in March of 2023. The former creates technology specific tax credits that shift resource economics towards increased amounts of renewable energy generation and energy storage, while the later places increased pressure on the Company to step away from burning coal, which provides relatively low-cost dispatchable capacity. To mitigate this pressure on dispatchable capacity, the Company has increasingly selected conversion of its coal units to natural gas in the short-term as reflected in the Preferred Portfolio. Doing so reduces the amount of carbon dioxide and other types of combustion emissions needed to meet regulatory compliance, but the transition exposes customers to increased price instability and fuel risk by increasing reliance on natural gas. In addition to conversion of its coal units to natural gas, the Company is relying on

significant amounts of battery energy storage systems to provide dispatchable capacity. In the long term, the Company is relying on increased amounts of non-emitting resources for its dispatchable capacity, which carries risk from nascent technologies, such as the Sodium Nuclear plants, and plants that burn hydrogen.

Overall, the 2023 IRP adds both new generation and transmission to meet load over the forecast horizon. The following items represent major capital additions identified within the 2023 IRP.

New Generation

- 9,111 megawatt (“MW”) of new wind resources.
- 8,095 MW of new storage resources, including batteries co-located with solar generation, standalone batteries and pumped hydro storage resources.
- 7,855 MW of new solar resources (most paired with battery storage).
- 4,953 MW of capacity saved through energy efficiency programs.
- 929 MW of capacity saved through direct load control programs.
- 500 MW of advanced nuclear (Sodium Nuclear demonstration project) in 2030, with an additional 1,000 MW of advanced nuclear over the long term.
- 1,240 MW of non-emitting peaking resources that meet high-demand energy needs.

Added Transmission

- New transmission - Aeolus substation to Clover substation (Energy Gateway South).
- New transmission - Longhorn substation to Hemingway substation (Energy Gateway Segment H).
- New transmission - Anticline substation (new) to Populus (Energy Gateway West Sub-Segment D3).
- New transmission - Anticline substation (new) to Shirley Basin substation (Energy Gateway West Sub-Segment D2.2).
- New transmission - Shirley Basin substation to Windstar substation (Energy Gateway West Sub-Segment D1).
- Local transmission upgrades that enable additional renewable energy resources to interconnect to transmission in southeast Idaho, central Utah, central and western Oregon, and central Washington.

Relative to the 2021 IRP, the Company continues to move away from coal-fired generation through natural gas conversions, earlier retirement, or with the addition of more emissions controls. The following list highlights the differences to the Company's coal units seen between the 2023 and 2021 IRPs.

Coal Unit Retirements and Gas Conversion

- 2023 - Jim Bridger Units 1-2, convert to natural gas in 2024 (2021 IRP - Same)
- 2025 - Craig Unit 1 retire (2021 IRP - Same)
- 2025 - Colstrip Unit 3 exit (2021 IRP - Same)
- 2026 - Naughton Units 1-2, convert to natural gas 2026, operate through 2036 (2021 IRP retired 2025)
- 2027 - Dave Johnston Units 3 retirement (2021 IRP - Same)
- 2027 - Hayden Unit 2 retirement (2021 IRP - Same)
- 2028 - Dave Johnston Units 1-2 retirement (retired 2027 in the 2021 IRP)
- 2028 - Craig Unit 2 retirement (2021 IRP - Same)
- 2028 - Hayden Unit 1 retirement (2021 IRP - Same)
- 2029 - Colstrip Unit 4 exit, Colstrip Unit 3 share is consolidated into Colstrip Unit 4 in 2025 (2021 IRP retired 2025)
- 2030 - Jim Bridger Units 3-4, converted to natural gas in 2030, operates through 2037 (retired 2037 without conversion in 2021 IRP)
- 2031 - Hunter Unit 1 retirement, SNCR installed 2026 (outside of 2021 IRP planning horizon, retiring 2042)
- 2032 - Hunter Units 2-3 retirement, SNCR installed 2026 (outside of 2021 IRP planning horizon, retiring 2042)
- 2032 - Huntington Units 1-2 retirement, SNCR installed 2026 (retire 2036 in 2021 IRP)
- 2039 - Dave Johnston Unit 4 retirement (retire 2027 in 2021 IRP)
- 2039 - Wyodak retirement, SNCR installed 2026 (retire 2039 without SNCR in 2021 IRP)

Coal Unit Gas Conversion

Staff believes the Company should review its practices for hedging natural gas fuel supply to reduce exposure to natural gas price volatility as it continues to step away from coal and increases natural gas capacity for dispatchable generation. In the 2023 IRP, the Company continues to adapt to environmental policies to move away from coal at its coal units. To mitigate this pressure and still provide dispatchable capacity, the Company plans to convert several of its coal units to natural gas.

The transition to an increased reliance on natural gas increases customer exposure to price volatility tied to markets for natural gas supply compared to relatively lower cost coal. Exposure to higher net power costs due to increased reliance on natural gas can be seen as recently as last year when a shortage of coal supply drove higher net power costs.⁴

Sodium Nuclear Plants

Staff believes the Company should provide the Commission with regular updates on the Company's progress toward implementing the advanced Sodium Nuclear plants. The 2023 IRP Preferred Portfolio selected 500 MW of advanced Sodium Nuclear as part of a demonstration project in 2030, with an additional 1,000 MW of advanced nuclear over the long term.

The Company has conveyed the benefits of these plants to provide fast ramping dispatchable capacity. However, it is clear that these plants are labeled as demonstration plants because the technology is still in development. In the prior 2021 IRP Preferred Portfolio, the Company indicated that a Sodium Nuclear plant would be in place by 2028. But in this IRP, the Company extended the timeline by two years. Given the importance for this type of resource in the Company's portfolio, Staff is concerned this resource may not be available when expected. The delay could shift resource selections in future IRPs and could inflate the cost of future IRP portfolios due to the uncertainty. The Company needs to use its best effort to determine the actual timing of this resource, so the Company does not get locked into short-term alternatives that are not least-cost and least-risk over the long-term.

Forecast Modeling Advancements

⁴ See PAC-E-23-09 PACIFICORP - APPLICATION FOR APPROVAL OF \$32.5 MILLION ECAM DEFERRAL.

Staff believes the Company has gained increased understanding of its system using the Plexos modeling software. The software allows the Company to conduct long-term capacity expansion modeling, hourly dispatch simulations of resource portfolios, and stochastic modeling. The Company first implemented this software as part of the 2021 IRP and with each IRP, the Company is able to better model the increased complexity of its system and its future resources. The software uses three levels of granularity identified as the Long-term (LT), Medium-term (MT) and Short-term (ST) that work on an integrated basis to inform the optimal combination of resources over the planning horizon by type, timing, size, and location. For example, the software can optimize for the selection of both generation and transmission resources simultaneously. Software used in previous IRPs required separate endogenous modeling of a resource type, such as generation or transmission, to evaluate the timing for adding or removing a specific resource, which may not lead to an overall optimal solution.

The software has also improved the Company's ability to assess system reliability of various resource portfolios. The 2023 IRP incorporated operating reserves in the LT model for capacity expansion and optimizes available resources to meet requirements in all periods, not just at system peak. With significant levels of economic renewable resources being selected in every resource portfolio, the Company is able to model with increased granularity to identify the amount of operating reserves needed to maintain reliable operation of the system.

Boardman to Hemingway ("B2H")

The Company's Certificate of Public Convenience and Necessity ("CPCN") for construction of the B2H transmission line was recently granted in Final Order No. 35839. The 2023 IRP modeled the B2H transmission line as a resource, with its expected in-service date in the summer 2026. B2H will give the Company an increase in capacity of approximately 818 MW from east-to-west and 300 MW from west-to-east within its service territory. The in-service date aligns with the Company's expected capacity deficiency in summer 2026 identified in the Company's load and resource balance. Amended IRP Volume 1, Table 6.11 at 165. However, Staff is concerned that the B2H in-service date could also be delayed given the current circumstances characterized by long lead times for construction and unresolved land easements issues. The Company did not model any strategies or contingencies for a potential delay of B2H in the 2023 IRP. If a delay were to occur, it would reduce the amount of available capacity

between the Company's Balancing Authority Areas ("BAAs"). Staff believes the Company should have considered strategies to address potential delays in the capacity provided by B2H.

Western Resource Adequacy Program ("WRAP")

The Company briefly mentioned its involvement in the WRAP within its IRP.⁵ When queried if the Company assumed any benefits of participation in WRAP in its 20-year planning horizon, the Company stated that as the program was still under development, it did not specifically consider it as a mechanism for maintaining system reliability. Staff believes that this assumption is reasonable at this time. However, the Company should begin forecasting the benefits of WRAP when it is projected to become a binding participant in the next IRP to ensure excess capacity beyond what is needed is not identified in the next IRP. The Company should be able to model the capacity benefits of WRAP by participating (i.e., reduced Planning Reserve Margin) and reduce the amount of reserve resources needed at that time within the planning horizon.

Private Generation

The Company provided the Private Generation Study performed by DNV in the summer of 2022 included as Appendix L.⁶ For Idaho, the study assumed the net billing structure to be the same as Utah's current billing structure. The Company stated, "In anticipation of future changes to export rates, the Company elected to align with export credit rates used in Utah since system sizes, monthly exports, and modeled production are similar." *See* Company's response to Staff Production Request No. 6.

The results of the Private Generation Study,⁷ show that Idaho residential customers would have an "Average Propensity to Adopt"; while commercial, industrial, and irrigation customers would have a "Low Propensity to Adopt." Amended IRP Volume at 307. In its response to Staff Production Request No. 7, the Company stated that if the DNV study modeled Idaho with its current net billing structure, it would forecast an increase in solar adoption and a decrease in solar + battery adoption. The Company recently filed its on-site generation study with the

⁵ Amended IRP Volume 1 at 43; 120.

⁶ Amended IRP Volume 2 at 249.

⁷ Appendix L: Private Generation Study: Table 3-12 at 7; Figure 4-15 at 19.

Commission on June 29, 2023, Case No. PAC-E-23-17. Due to the current case, the Company has yet to file for a change to its export credit rate.

Demand Side Management (“DSM”)

The Company has a mature portfolio of Energy Efficiency (“EE”) and Demand Response (“DR”) programs that it deploys to reduce and reshape loads. Because these programs are designed around cost-effective selections, they reduce the cost the Company incurs to serve customers.

EE Programs

In its Preferred Portfolio, the Company identifies cumulative short-term EE selections of 2,298 gigawatt-hours (“GWh”) of energy and 799 MW of capacity by 2026 on a system level. 2023 IRP Vol I at 32. Compared to the Company’s 2021 IRP EE selections of 2,017 GWh of energy and 603 MW of capacity, the 2023 IRP represents a 12% increase in energy and 33% increase in capacity. Idaho specific resource selections show a continuous increase across the forecast horizon. The 2023 IRP forecast begins consistent with the 2021 IRP at 12,000 megawatt-hours (“MWh”) in 2023, but quickly out paces the previous forecast with 499,899 MWh selected by 2042. The 2023 forecast for EE capacity remains consistent with the 2021 forecasts with a cumulative capacity of 4,953 MW by 2042.

DSM Avoided Costs

As part of the resource selection process, the Company considers DSM resource options alongside other supply side resources. In order to provide a direct comparison, the Company uses a series of avoided cost value streams to estimate the value of DSM savings. Following the completion of the IRP, the separate avoided cost values streams are combined with the load profiles of selected DSM measures to produce “DSM avoided costs.” The DSM avoided costs are then used to develop program offerings and to evaluate the performance of the programs in the Company’s bi-annual prudence filings. Because of the long-term implications, Staff conducted an analysis on the avoided costs derived from the IRP process. In its Supplemental response to Production Request No. 1, the Company identified avoided cost value streams of avoided energy, avoided reserves, transmission and distribution deferral credits, risk reduction credits, and generation capacity deferral credits used when defining the DSM avoided costs.

Additionally, the Company provided data for the identified avoided cost values and a description of the methodology to derive the DSM avoided costs. Staff was able to use this data to verify inputs and methodology supporting the DSM avoided costs that will be used in the coming DSM programs.

DR Programs

In the Company’s 2023 IRP, the Preferred Portfolio shows a system level decline in forecasted DR resource selections with a cumulative capacity of 929 MW. Relative to the Company’s 2021 IRP forecast, this represents a 264% decrease in DR capacity. The Company states this decrease is due to improved accounting and removal of over-lap between programs and end-uses. 2023 IRP Vol I at 16. Despite the reduction in forecasted DR capacity, beginning in 2025, the 2023 IRP Preferred Portfolio shows significantly more Idaho DR selections than the previous IRP. A summary of the Idaho near-term DR selections can be found in Table No. 1 below. 2023 IRP Vol II at 115.

Cumulative 2023 IRP Preferred Portfolio Selections for Idaho DR										
MW by year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Summer	0	0	4.1	13.1	18.8	19.8	20.1	20.5	20.7	20.7
Winter	0	0.4	1.3	2.5	3.0	3.3	3.3	3.3	3.3	3.3
Cumulative 2021 IRP Preferred Portfolio Selections for Idaho DR										
MW by year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Summer	0.5	9.5	1.9	0.5	1.3	4.3	5.9	2.0	2.4	2.1
Winter	0.5	0.9	0.3	0.5	1.2	1.8	1.9	2.0	1.8	2.1

Table No. 1: Comparison of 2023 and 2021 IRP Preferred Portfolio Idaho demand response selections.

In Table 7.5 of the 2023 IRP, the Company listed a “C&I – third party” program as planned and assumes that new DR program offerings will become available starting in 2025 to account for program design, regulatory approval, and program implementation. 2023 IRP at 208. In 2022, the Company’s Wattsmart Business DR program was approved in Order No. 35787. The Company’s Application targets the C&I – third-party DR potential estimated at 15 MW by 2027, which matches the ramp up time described in the IRP. Accounting for the estimated capacity of its newly approved program, the Company’s 2023 IRP shows approximately 7 MW of additional DR selections after 2027. Staff looks forward to reviewing the Company’s filings to expand its DR capacity at that time.

Action Plan

The action plan from the 2023 IRP is developed to address actions the Company needs to execute within the next two-to-four years to implement its Preferred Portfolio. Because the Commission only acknowledges the IRP, Staff believes that most of the resources included in its IRP portfolios should be considered as proxies. To obtain Commission approval requires additional process and subsequent filings to ensure prudence determinations of specific resources before cost recovery occurs.

STAFF RECOMMENDATION

Staff recommends that the Commission acknowledge the Company's 2023 IRP. Staff also recommends the following:

1. The Company review its practices for hedging natural gas fuel supply to mitigate fuel-supply risk as it continues to step away from coal and into increased use of natural gas for dispatchable generation;
2. The Company should keep the Commission informed with regular updates on the Company's progress toward implementation of the Sodium Nuclear plants;
3. The Company should consider strategies to address potential delays in the capacity provided by the B2H transmission line; and
4. The Company should begin forecasting the benefits of WRAP when it is projected to become a binding participant in the next IRP.

Respectfully submitted this 14th day of September 2023.



Chris Burdin
Deputy Attorney General

Technical Staff: Rick Keller
Kimberly Loskot
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CERTIFICATE OF SERVICE

I HEREBY CERTIFY THAT I HAVE THIS 14th DAY OF SEPTEMBER 2023, SERVED THE FOREGOING **COMMENTS OF THE COMMISSION STAFF TO ROCKY MOUNTAIN POWER**, IN CASE NO. PAC-E-23-10, BY E-MAILING A COPY THEREOF, TO THE FOLLOWING:

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