**REDACTED**
Rocky Mountain Power
Docket No. 23-035-01
Witness: Douglas R. Staples

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

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**REDACTED**
Response Testimony of Douglas R. Staples

December 2023

**Q. Please state your name, business address, and present position with PacifiCorp.**

A. My name is Douglas R. Staples, and my business address is 825 NE Multnomah Street, Suite 600, Portland, Oregon 97232. I am currently employed as a Net Power Cost Advisor in the Net Power Cost Group. I am testifying for PacifiCorp dba Rocky Mountain Power ("PacifiCorp" or "Company").

## QUALIFICATIONS

**Q. Please describe your education and professional experience.**

A. I received a Bachelor of Science degree with a focus on finance from the University of South Florida. first gained employment with PacifiCorp in 2015, though I recently rejoined the Company after pursuing a role in Enterprise Risk Management with Portland General Electric from January 2022 through August 2023. During my tenure with PacifiCorp, I have worked as a senior risk management analyst and I currently work as a net power cost advisor, contributing to various regulatory projects including general rate cases and net power cost filings. Before my time with PacifiCorp, I spent seven years working as a senior risk analyst and a supervisor of the risk management group at NextEra Energy Power Marketing, where I designed reports, provided validation and troubleshooting of risk metrics, and oversaw the quarterly validation of valuation assumptions used in mark-to-market accounting for financial statements. Prior to that, I worked as a principal business analyst for San Diego Gas & Electric. In that role, I was a part of the acting arm of the risk management committee, providing oversight to both San Diego Gas & Electric and Southern California Gas Company.

**Q. Have you testified in previous regulatory proceedings?**

A. Yes. I have previously filed testimony in Washington, Wyoming, California, and Oregon.

**Q. What is the purpose of your testimony in this proceeding?**

A. The Purpose of my testimony is to respond to Daymark's recommendation that the requested energy balancing account ("EBA") recovery be reduced by $13.9 million total Company, or $6.5 million Utah-allocated, for physical power transactions, which Daymark claims were imprudent due to lack of support for the trade purpose.

**Q. Please describe how your testimony is organized**.

A. My testimony begins with an overview of the various types of hedging that the Company performs and the associated goals for the program. Next, I address Daymark's recommended adjustment within the context of PacifiCorp's hedging program and explain why the Company has acted prudently when executing physical power transactions.

**Q. Please summarize your recommendation to the Public Service Commission of Utah ("Commission").**

A. My testimony will show that there is ample evidence that the Company acted prudently, and the Company's front office personnel gave consideration to [redacted] when making their decision to execute the trades that Daymark has identified. It will also show that there is evidence for the reasonableness of those considerations in the Company's record of its activities. Finally, it will show that the trade purpose report documented that the trades were made [redacted]

[redacted] For those reasons, the trades in question were fundamentally reasonable at the time of execution and should be found prudent.

## ROCKY MOUNTAIN POWER'S HEDGING PROGRAM

**Q. What is hedging and what role does it play in utility operations?**

A. Fundamentally, price hedging is an attempt by companies to stabilize costs and/or to manage market volatility. It is certainly used in that fashion in utility operations, but it is well understood that it is not possible to completely remove risk to overall costs or revenues for a variety of reasons. It also is not possible for utilities to hedge perfectly (i.e., optimally), given the imperfect information and imperfect financial instruments available to market participants when they make hedging decisions.

Price hedging is distinct from supply hedging, which is not necessarily intended to manage price volatility risk, but to ensure access to adequate supply and deliverability for the physical operability of the system. All physical purchase transactions can be considered part of a supply hedge portfolio, as they introduce physical length into the system.

**Q. What is the role of a hedging policy at a utility?**

A. A hedging policy typically sets minimum limits for hedging activity. In most companies, the policy is written to offer both guidelines and flexibility to front office personnel, who are referred to as traders, because it is preferable to have these subject matter experts managing the operational risk dynamically. Documents can be changed but, due to the review and approval requirements of making changes to a hedging policy, they are not dynamic enough to keep pace with volatility that may occur in energy markets. Policies should define minimum acceptable limits to support the goal of delivering safe, affordable, and reliable energy. The remainder of the decisions around hedging and/or procurement are normally managed by front office personnel.

**Q. What role does each type of hedging have in utility operations?**

A. Price hedging can help reduce volatility in power costs, though its impact on net power costs can vary depending on the fixed price of the hedge relative to market conditions. Supply hedging has a slightly different focus and is primarily concerned with ensuring adequate supply is available to meet system obligations.

**Q. Is there any such thing as a perfect hedge?**

A. Yes, but only in financial markets and physical markets for which there is no potential for volumetric variability and the financial products available can perfectly offset the physical and financial risk. Banks and other market makers typically transact in standard contract sizes, so eliminating their open positions (long or short) is easily accomplished.

For companies operating in a utility space, customer loads, generation resource availabilities, energy resource production, and other variable factors can only be forecasted, so it is not possible to perfectly hedge physical or financial risk. Essentially, utilities do not know years or months ahead of time precisely what their load will be, what the hourly shape of the loads will be, what generation resources will be available to serve it, or how sensitive it might be to external factors (macroeconomic factors, ambient temperatures, etc.). There is simply more ambiguity around the precise size and even the overall direction (long or short) of their position, even though forecasts provide reasonable estimates.

**Q. What are the overall goals of PacifiCorp's hedging program?**

A. Energy supply management manages the energy commodity position and utilizes PacifiCorp's assets and liabilities (loads, generating resources, contractual rights, and obligations) to a) ensure reliable sources of electric power are available to meet PacifiCorp's customers' needs, and b) reduce volatility of net power costs for PacifiCorp's customers.

## DAYMARK'S RECOMMENDATIONS

**Q. Based on their review, what does Daymark recommend with respect to the Company's hedging activities?**

A. Daymark recommends a disallowance related to several hedging transactions identified during their audit totaling approximately [redacted] on a Utah-allocated basis. Daymark asserts that these transactions are examples of [redacted] according to the Company's long-term dispatch model. Daymark notes that these were [redacted] and claims the Company misjudged the balance of risk between short and long positions and lacks documentation and analysis to support its decisions. Daymark also proposes an enhanced level of review since [redacted].

**Q. Does the Company object to the overall evaluation methodology employed by Daymark?**

A. No. Daymark makes use of contemporaneously developed documentation provided by the Company in order to assess the reasonableness of the Company's actions based on what it knew or should have known at the time of execution. That, along with a review of adherence to written policies and respect for governance limits form the basis of their review, which is focused on individual transactions and/or operational decisions. This is a reasonable approach to evaluating prudence in the context of utility hedging and operational decisions.

**Q. Please explain the Company's hedging policy and the limits it places on power transactions.**

A. The Company's hedging program, which was modified in July 2021, specifically indicates that its establishment serves [redacted], which serves to limit both price risk and supply risk, as outlined above.

A key feature of the revised hedging program is that the Company developed [redacted]

**Q. How does the Company determine policy compliance?**

A. The company uses a physical dispatch model to determine the level of [redacted]

[redacted]

**Q. Please explain how the Company calculates the physical position.**

A. The Company uses a least-cost algorithm to forecast future operations on an hourly basis, using:

1. load forecast,
2. generation unit characteristics, such as heat rates, ramp rates, stable operating ranges, and startup costs,
3. transmission topology (limitations on the Company's ability to move power across the system), and
4. forward prices for power and gas.

**Q. Are there aspects of the long-term position report that seem to be ignored in Daymark's testimony?**

A. Yes. Daymark states that the Company was imprudent because it was [redacted]. However, Daymark's recommendation ignores the conditions that were present at the time the Company made the transactions. At the time of the transactions, factors existed outside of the long-term position reports that were relevant to the [redacted] of the Company's system. Daymark's recommendations do not appropriately consider certain aspects of the long-term position report including:

1. The information is from a P50 report, meaning it includes a P50 forecast of the peak hour;

2. The availability of the generation fleet includes adjustments for high temperatures, also known as ambient derates, which cannot be accurately forecasted in a granular fashion in the model inputs;
3. The equivalent forced outage ("EFOR") rate is spread equally across the 12 months when forecasted; and,
4. The market was sending strong signals that power scarcity was anticipated, increasing the likelihood of a reliability event.

I further explain each of these factors and why they were taken into consideration by the Company's traders when making the decision to [redacted] when the Company was [redacted]

**Q. Please explain what a P50 report is.**

A. The Company's P50 report is created on a daily basis by the risk management group in order to [redacted], but it comes with some important limitations. P50 reports are designed to be median condition reports, meaning the Company can reasonably assume that approximately half of the time loads will be higher than depicted in the report, and approximately half of the time loads will be lower than depicted in the report. Importantly, this is true of not just the overall load level in a month or calendar year, but in the peak hour as well. Furthermore, loads can be higher than forecast and resources can be lower than forecast at the same time in actual operations, which can create or exacerbate a load-resource balance issue.

**Q. Please explain how Daymark used the P50 report in its review.**

A. Daymark relied on the P50 report in its claims that the Company was imprudent because the Company's trader was [redacted][1] However Daymark's conclusion does not account for the fact that if the risk of [redacted] This leaves the Company open to a possible event where its position is shorter than the forecast, compromising the Company's ability to serve customers in [redacted]. The Company's traders must be given the extra flexibility required to manage the uncertainty of the position in a manner they believe is prudent and in keeping with the goal of providing safe, reliable, affordable power.

**Q. Please explain what ambient derates are.**

A. Generating units have limited operational capabilities based on ambient temperatures. As a general rule, hot weather decreases the maximum dependable output level of thermal generators. This means that hot weather tends to impact the Company twice since it simultaneously increases customer demand while decreasing the output capabilities of the generating resources upon which the Company relies to meet that demand.

[1] DPU Exhibit 2.3, Daymark Energy Advisors EBA Audit Report at 97 (Nov. 7, 2023).

**Q. Please explain how ambient derates are reflected in the Company's long-term position report.**

A. Ambient derates were applied only to the months of June through August during 2022 (this has recently been expanded to include September), but the derate is applied on an average basis, and not shaped to match the anticipated temperatures, either by month or by hour. The fundamental issue is that, while this is a practical choice from a modeling and forecasting perspective, it does not account for [redacted] This is a known issue, but there is no easy way to correct it since it would require an hourly temperature forecast, including an ambient derate function that scales the size of the derate, months or years into the future. The Company's Front Office personnel are aware of the inherent limits of forecasting and factors it into decisions on when to [redacted] in the forward market.

**Q. How are forced outages represented in PCI?**

A. The EFOR rate is applied to each generator in the PCI study to represent the likelihood that a resource is unable to perform when called upon. It essentially provides a "haircut" to output capabilities in the amount of the annualized probability of forced outage multiplied by the generator's maximum dependable output, resulting in a probabilistic annual generation forecast, which is important for the calculation of a gas requirement. However, those rates are applied in a uniform fashion across all months in the forecast period. This conflicts with the operational reality, where plants either perform or don't perform, and [redacted] This is also a factor that is considered by the Company's front office personnel when [redacted] in the forward market.

**Q. Please explain what the market conditions were indicating at the time when the power hedges identified by Daymark were being executed.**

A. The market was sending strong signals that scarcity was the primary driving factor in setting prices, and weather forecasts were calling for widespread heat in the Western United States. As Daymark notes in their testimony, these trades were executed at times "of high prices and high price volatility" but it is worth exploring in greater detail what that means.[2]

**Q. How is a market price for power typically set?**

A. Traditional economics would indicate that the market, or clearing price, for power is the marginal cost of production for the last incremental megawatt-hour ("MWh") of power sold in the open market. Given that plants are dispatched in an ascending cost order, meaning the more economic units are dispatched first, but as demand increases, the cost of power will escalate accordingly.

**Q. What do periods of extremely high pricing and volatility indicate in a market with these types of dynamics?**

A. Once market prices go past what is a reasonable incremental cost of generation for a baseload generation unit, a reasonable way of viewing that market is that it is primarily driven by fear of scarcity, as opposed to dispatch economics. If the market is

[2] DPU Exhibit 2.3, Daymark Energy Advisors EBA Audit Report at 97 (Nov. 7, 2023).

anticipating and signaling scarcity, that means that there may not be [redacted], which is why [redacted].

**Q. What sort of market activity was the Company experiencing during 2022?**

A. Importantly, [redacted] Please note that these purchases net of sales figures have all been prepared using exclusively day-ahead and real-time transactions, [redacted] Confidential Figures 1 through 3 below provide more detail.

[redacted]

[redacted]

[redacted]

**Q. How does this information about the conditions that the Company was experiencing provide important context around the actions taken by the Company's traders?**

A. This information provides context on how the factors mentioned above can and do impact actual operations and establishes that the decisions made by Rocky Mountain Power's front office personnel are fundamentally reasonable, informed by expertise and grounded in the reality of ensuring [redacted] This is what is indicated when the Company refers to its pursuit of a "least-cost, least-risk" solution. [redacted]

**Q. How does this relate to Daymark's contention that there wasn't sufficient documentation of trade rationale related to these transactions?**

A. The Company's documentation specified that the purpose of those trades was to [redacted] In addition, Daymark acknowledges that the markets in which the Company was transacting are [redacted]. Combined with the very real [redacted] concerns of the Company's front office personnel, outlined above, failing to execute these transactions may [redacted]. That is the reason the trade purpose report specifically calls out [redacted] as one of the primary factors in deciding to execute the hedges, and why these should be considered [redacted] hedges.

**Q. Does the fact that these transactions have [redacted] as opposed to [redacted] disqualify them from being considered [redacted] hedges?**

A. No. As mentioned earlier in my testimony, all [redacted] are reliability hedges in some sense, and the goal of the Company's hedging program is not solely to manage power costs. Ensuring reliability and deliverability of energy is an equally important goal. The fact that these are [redacted] does not change that. In addition, a [redacted] is inherently reasonable if the Company is concerned that it may [redacted], since those conditions tend to result [redacted]

**Q. Why does the Company not provide the additional detail in its position report to include the additional factors considered by front office personnel?**

A. In some cases, there simply is not a practical way to get the type of granular data that would be required into the model (ambient derates being the easiest example to point to). In other cases (load, for example), including a P90 or P95 value in place of a P50 value would overstate other model outputs and lead to unintended consequences, like a gas requirement that is too high. Essentially, the P50 forecast makes the most sense for the majority of the Company's needs, and the added flexibility allows front office to manage [redacted] in a manner that reflects their expert judgement about [redacted].

## SUMMARY AND RECOMMENDATION

**Q. Please summarize your argument and recommendation.**

A. The Company disagrees with Daymark's specific recommendation for a disallowance related to a [redacted] There are factors of which the front office personnel are aware, but which resist inclusion in the long-term position report, and those factors are primarily related to [redacted]. Those factors – for which there is evidence in the Company's record of its actual operations – were weighed by front office personnel, who judged that it was prudent and in keeping with PacifiCorp's [redacted] goals to pursue [redacted] length in order to hedge uncertainty around [redacted]. That rationale was recorded in the trade purpose report. For those reasons, the Company recommends that the Commission acknowledge that those trades were reasonable at the time of execution and reject the proposed disallowance.

**Q. Does this conclude your response testimony?**

A. Yes.