

CONFIDENTIAL SUBJECT TO PROTECTIVE ORDER  
Exhibit No. DRS-1CT  
Docket UE-230482  
Witness: Douglas R. Staples

**BEFORE THE WASHINGTON  
UTILITIES AND TRANSPORTATION COMMISSION**

WASHINGTON UTILITIES AND  
TRANSPORTATION COMMISSION,

Complainant,

v.

PACIFICORP dba  
PACIFIC POWER & LIGHT COMPANY

Respondent.

Docket UE-230482

**PACIFICORP**

**REDACTED**

**REBUTTAL TESTIMONY OF DOUGLAS R. STAPLES**

**May 2024**

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**ATTACHED EXHIBITS**

CONFIDENTIAL Exhibit No. DRS-2C—Appendix E from PacifiCorp’s Energy Risk Management Policy

CONFIDENTIAL Exhibit No. DRS-3C—Appendix F from PacifiCorp’s Energy Risk Management Policy

1 I. INTRODUCTION AND QUALIFICATIONS

2 Q. Please state your name, business address, and current position with PacifiCorp  
3 d/b/a Pacific Power & Light Company (PacifiCorp or Company).

4 A. My name is Douglas R. Staples and my business address is 825 NE Multnomah  
5 Street, Suite 600, Portland, Oregon 97232. I am currently employed as a Net Power  
6 Cost Advisor in the Net Power Cost Group.

7 Q. Please describe your education and professional experience.

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

1 **Q. Did you offer direct testimony in this docket?**

2 A. No.

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

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

6 **II. PURPOSE OF TESTIMONY**

7 **Q. What is the purpose of your rebuttal testimony in this case?**

8 A. My rebuttal testimony has several sections, each with its own purpose. First, I discuss  
9 the nature of price hedging and how it works. Next, I explain the genesis of the  
10 Company's hedging program and discuss the role of prudence reviews generally.  
11 Following that, I talk about how the Company hedges, how it hedged during the  
12 deferral period, and how that hedging activity reflects differences from prior years,  
13 before explaining how the Washington Inter-Jurisdictional Allocation Methodology  
14 (WIJAM) functions to shelter Washington customers from spot price volatility.  
15 Finally, I respond to the Alliance of Western Energy Consumers' (AWEC) review of  
16 the Company's gas and power hedging program.

17 **III. WHAT IS PRICE HEDGING AND HOW DOES IT WORK?**

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

19 A. Fundamentally, price hedging is an attempt by companies to stabilize costs and/or to  
20 manage market volatility. It is certainly used in that fashion in utility operations, but it  
21 is well understood that it is not possible to completely remove risk to overall costs or  
22 revenues for a variety of reasons that I will discuss below. Neither is it possible to  
23 hedge perfectly (*i.e.*, optimally), given the imperfect information and imperfect

1 financial instruments available to market participants when they make price hedging  
2 decisions.

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

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

9 A. A hedging policy typically sets minimum and/or maximum limits for hedging  
10 activity. In most companies, the policy is written to offer flexibility to traders (*i.e.*,  
11 front office personnel) because it is preferable to have subject matter experts  
12 managing risk dynamically. Documents can be changed but, due to the review and  
13 approval requirements of making changes to a hedging policy, they are not dynamic  
14 enough to keep pace with volatility that may occur in energy markets. Policies should  
15 define minimum acceptable limits and points beyond which the utility does not wish  
16 to go under most conditions. The remainder of the decisions around hedging are  
17 normally managed by front office personnel.

18 **Q. What role can hedging have on net power costs (NPC)?**

19 A. While hedging can help reduce volatility in power costs, its impact on NPC can vary  
20 depending on the fixed price of the hedge relative to market conditions. If the fixed  
21 price of the hedge is higher than prevailing spot market prices, hedging can lead to  
22 increased NPC. Conversely, if the fixed price is lower than prevailing market prices,  
23 hedging can result in reduced NPC.

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

2 A. Yes, but only in financial markets and physical markets for which there is no  
3 potential for volumetric variability and the standard products available can perfectly  
4 offset the risk. Banks and other market makers typically transact in standard contract  
5 sizes, so eliminating their open positions (long or short) is easily accomplished. For  
6 companies operating in a utility space, loads, resource availabilities, variable energy  
7 resource production, and other factors can only be forecasted imperfectly, so it is not  
8 possible to perfectly hedge risk to overall costs. Essentially, utilities do not know  
9 years or months ahead of time precisely what their load will be, what the hourly shape  
10 will be, what resources will be available to serve it, or how sensitive it might be to  
11 external factors (macroeconomic factors, ambient temperatures, etc.).

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

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

18 **Q. Public Counsel opines that Company failed to justify its hedging practices in  
19 contradiction of the Commission's order in the Power Cost Only Rate Case  
20 (PCORC)<sup>1</sup>. How do you respond?**

21 A. This is a somewhat mystifying claim. The direct testimony of Company witness  
22 Ramon J. Mitchell was almost entirely dedicated to the topic of hedging, addressing it

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<sup>1</sup> Public Counsel Witness Earle, Exh. RLE-1T at 7, 11-15 (Mar. 28, 2024).

1 directly and at length. PacifiCorp has worked to provide discovery to the parties early  
2 in this proceeding prior to the Commission opening an adjudication, and is now fully  
3 responding the issues raised by the Parties. Public Counsel is both premature in their  
4 judgement and factually incorrect.

5 **IV. THE HISTORY OF PACIFICORP'S HEDGING PROGRAM**

6 **Q. How were the current natural gas hedging limits created?**

7 A. The [REDACTED] were developed in hedging  
8 collaboratives with interested stakeholders during 2012. The general feedback during  
9 those sessions was that the Company should [REDACTED]  
10 [REDACTED] As a result, the Company set  
11 [REDACTED]  
12 [REDACTED]

13 **Q. What events led to the 2012 hedging collaborative that eventually resulted in the**  
14 **natural gas hedge limits articulated in the Company's past and current hedging**  
15 **policy?**

16 A. The Company had executed long-dated natural gas hedges in 2007 and 2008, to  
17 comply with the established minimum hedge levels [REDACTED]  
18 [REDACTED]  
19 [REDACTED]  
20 [REDACTED]  
21 [REDACTED]  
22 [REDACTED]  
23 [REDACTED]

1 [REDACTED]

2 **Q. Has the Company revised its hedging policy since the 2012 hedging collaborative**  
3 **process was completed?**

4 A. Yes. The Company made additional revisions to its hedging policy in 2021 that

5 [REDACTED]

6 [REDACTED] Those  
7 changes were conveyed and presented to parties in Washington, as well as the other  
8 states that PacifiCorp serves.

9 **Q. Were any changes made to the natural gas limits as a consequence of the hedging**  
10 **policy update made in 2021?**

11 A. No. As noted above, there was a [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 [REDACTED] are exactly the same. Those [REDACTED] have  
16 been in place and unchanged since May 22, 2012.

17 **Q. How were the current power hedging limits developed?**

18 A. Company personnel recognized that the former program was providing direction that  
19 was contrary to the intention of the risk policy, which is to provide safe, reliable,  
20 affordable energy to customers. Essentially, [REDACTED]

21 [REDACTED]

22 [REDACTED]

23 [REDACTED]



1 [REDACTED]  
2 [REDACTED]. The Company chose to alter the  
3 program to account for increasing reliability concerns and increasing instances of  
4 scarcity pricing in the Western energy markets. The specific limits were developed  
5 through collaboration between front office and risk management over the course of  
6 months, using the newly (at the time) created [REDACTED]

7 [REDACTED]  
8 [REDACTED] The essential objective is that the Company should be less short, and short  
9 with decreasing frequency, in recognition of the increasing frequency and intensity of  
10 scarcity pricing events in the Western United States.

11 **Q. Has AWEC expressed any concerns about the Company's power hedging**  
12 **policy?**

13 A. Yes. At least in Washington, AWEC's concerns have been voiced regarding the prior  
14 policy and this is the first time AWEC has challenged the policy currently in effect,  
15 owing primarily to timing. AWEC's foremost issue with the current hedging policy is  
16 apparently that it does not include a separate hedge program for the WIJAM position,  
17 though that complaint is incoherent, as I will explain below. Interestingly, AWEC  
18 witness Bradley G. Mullins appears to be advocating for the precise opposite of what  
19 he advocated for in Wyoming as recently as October 2023. In Wyoming, Mr. Mullins  
20 (in his capacity as an analyst for Wyoming Industrial Energy Consumers [WIEC])  
21 asked the Commission to [REDACTED],<sup>2</sup>

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<sup>2</sup> *In the Matter of the Application of Rocky Mountain Power to Increase Current Rates by \$50.3 Million to Recover Deferred Net Power Costs Pursuant to Tariff Schedule 95*, Docket No. 20000-642-EM-23 (Record No. 17279), WIEC Exh. 200, 45 (Sept. 8, 2023).

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**V. PRUDENCE REVIEWS – FUNCTIONS AND PRACTICE**

6

**Q. What is the purpose of prudence reviews in the context of a power cost recovery mechanism?**

7

8

A. It is my understanding that prudence reviews help to protect customers from utilities that operate assets imprudently, fail to maintain compliance with their written policies, and do not demonstrate internal controls sufficient to ensuring that individuals within the utility cannot place customers at risk.

10

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**Q. How is prudence for hedges evaluated in the context of cost recovery mechanism reviews?**

13

14

A. Prudence evaluations, so far as I am aware, revolve around the idea that hedging decisions should demonstrate reasonable behavior, given what was known (or reasonably should have been known) at the time of hedge execution, and that the Company maintained compliance with all policies, procedures, and governance limits in effect at the time of hedge execution.

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**Q. Why is prudence evaluated using those standards?**

20

A. A prudence review confirms the Company had, and adhered to, established risk policies, limits, internal controls, recordkeeping and reporting requirements, and made logical decisions throughout the period based on all available information at the

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22

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<sup>3</sup> AWEC Witness Mullins, Exh. BGM-1CT at 50 (Mar. 28, 2024). Mullins, 50, 5-12

1 time of each transaction. As the Company cannot predict the level of commodity  
2 prices months or years in advance, any introduction of this information in a regulatory  
3 review becomes a hindsight review, where knowledge of what happened after the  
4 hedging decision colors the evaluation of the hedging decision itself. With perfect  
5 hindsight, it is easy to second guess decisions and assert the Company should have  
6 hedged more or less, earlier or later, to achieve the best possible outcomes for  
7 customers.

8 This introduces the ability for intervenors to propose (after the fact) different  
9 hedging strategies for different periods without the accountability of having to  
10 propose those strategies in advance. It also introduces the ability for those same  
11 parties to find fault and assert the Company should have hedged more with the certain  
12 knowledge that spot (intra-month) market prices were higher than prices in the  
13 forward (future months) market, but then find fault and assert the opposite argument  
14 in a different period, asserting that the Company should have hedged less with the  
15 certain knowledge that spot market prices were lower than prices in the forward  
16 market. Essentially, the standard becomes prescience instead of prudence.

17 **Q. How is prudence generally challenged?**

18 A. In my experience, Staff or an intervenor will normally challenge the prudence of one  
19 of more transactions or operational decisions on the grounds that it was inconsistent  
20 with policy, not approved in a fashion that demonstrates respect for the governance  
21 limits in place at the time of the trade, or demonstrably imprudent based on factors  
22 known (or that should have been known) to the utility at the time though this final  
23 standard is, at least in my experience, somewhat more frequently applied when

1 evaluating decisions related to generator operations. As an example of how a  
2 principled challenge to prudence is typically formulated and presented to the  
3 Commission, Staff Witness John D. Wilson has challenged the Company's dispatch  
4 of Chehalis and Hermiston based on his view of prevailing market prices the day  
5 before those dispatch decisions were being made. While the Company disagrees with  
6 Mr. Wilson's evaluation of the facts and his conclusions, it is important to  
7 acknowledge that at least he has chosen specific and identifiable grounds upon which  
8 to challenge the costs included in actual NPC.

9 **Q. Have AWEC or Public Counsel challenged the prudence of any specific**  
10 **transaction(s) executed by the Company?**

11 A. No.

12 **Q. Have AWEC or Public Counsel challenged the prudence of any specific**  
13 **operational decision(s) made by the Company during 2022?**

14 A. No.

15 **Q. Did the Company remain in compliance with its natural gas and power hedging**  
16 **policy during the period when 2022 was a part of the active hedging window?**

17 A. Yes. [REDACTED]  
18 [REDACTED]  
19 [REDACTED]  
20 [REDACTED]  
21 [REDACTED]  
22 [REDACTED]  
23 [REDACTED]

1 [REDACTED]  
2 [REDACTED]  
3 [REDACTED]  
4 [REDACTED]  
5 [REDACTED]

6 **Q. Has AWEC offered any criticism of the previous risk policy?**

7 A. Yes. Mr. Mullins notes the previous limit structure was based on containment of NPC  
8 increases and indicating that he believes an increase in NPC means that the TEVaR-  
9 based hedging program was ineffective.<sup>4</sup>

10 The most obvious problem with this statement is that the TEVaR model  
11 cannot be used to draw this conclusion. That is the case for two specific reasons: a)

12 [REDACTED]

13 [REDACTED] The TEVaR limits  
14 were set up to control NPC volatility but the model makes no allowance for the  
15 possibility that price volatilities change over time, or that requirements differ from  
16 forecast.

17 **Q. Please describe the problem of [REDACTED]**

18 A. Consider for a moment a situation in which the Company was able to hedge every  
19 hourly interval perfectly and exactly to remove all price exposure, based on the  
20 forecasted position. This is impossible due to the mismatch of financial products and  
21 physical operations, but useful for the purpose of a thought experiment. In that  
22 situation, customers would be 100 percent exposed to every incremental or

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<sup>4</sup> Exh. BGM-1CT at 20.

1           decremental megawatt-hour (MWh) of power or million metric British thermal unit  
2           (MMBtu) of natural gas.

3                       This is particularly problematic because periods of elevated aggregate demand  
4           tend to produce periods of high pricing, meaning that the Company becomes short on  
5           energy in a high-price environment. Conversely, periods of low aggregate demand  
6           tend to produce periods of relatively low prices, meaning that the Company becomes  
7           long energy in a low-price environment. In actual practice, even a utility that is  
8           perfectly hedged against its anticipated demand (which, again, is not possible in  
9           reality) would carry a risk profile that most closely resembles being short a straddle,  
10          which is a position created when a company simultaneously sells both a call option<sup>5</sup>  
11          and a put option.<sup>6</sup> In short, there are large inherent risks that resist measurement by  
12          VaR models, which AWEC has failed to recognize.

13   **Q.    Please describe the inputs to and confidence interval of the TEVaR model used**  
14   **by the Company before the 2021 Risk Policy update.**

15   A.    The TEVaR model was subject to [REDACTED]. What that means  
16          in practical terms is that actual net power cost increases are expected to exceed the  
17          measured level of risk [REDACTED], even if the key model  
18          inputs (positions, volatilities, and correlations) remain perfectly valid for the entire  
19          holding period (in this case, the holding period is until expiration). It is important to  
20          note that those parameters are subject to daily change and any assumption that they

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<sup>5</sup> A call option gives the buyer of the option the right (but not the obligation) to buy an asset at a previously agreed upon strike price on or before a particular date. Call options are commonly exercised when market prices are above the strike price.

<sup>6</sup> A put option gives the buyer of the option the ability (but not the obligation) to sell an asset at previously agreed upon strike price on or before a particular date. Put options are commonly exercised when market prices are below the strike price.

1 will remain valid for the entire holding period is inherently unreasonable.

2 Put another way, the types of limits the Company previously had in place  
3 were a dynamic way to create reasonable guardrails, not a guarantee that net power  
4 costs will never increase (or decrease) by more than the amounts implied by the limit  
5 structure, particularly when price volatilities increase over time.

6 **VI. HOW PACIFICORP HEDGES**

7 **Q. Please describe PacifiCorp’s current natural gas limits, as defined in the**  
8 **Company’s Energy Risk Management Policy.**

9 A. The Company’s policy dictates that front office adhere to the [REDACTED]  
10 [REDACTED] memorialized in the policy document itself. For natural gas, these [REDACTED]  
11 [REDACTED]  
12 [REDACTED]  
13 [REDACTED]  
14 [REDACTED]  
15 [REDACTED]  
16 [REDACTED]  
17 [REDACTED]  
18 [REDACTED]

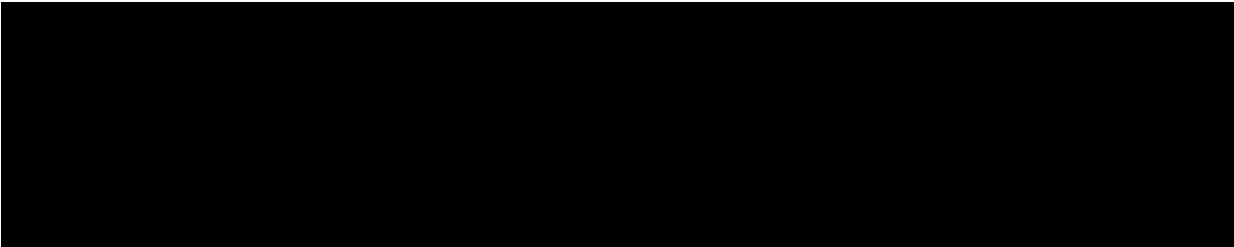
19 [REDACTED]<sup>7</sup> These limits have been in place and fundamentally unchanged since 2012,  
20 though it is worth noting that the gas requirements against which [REDACTED]  
21 [REDACTED]  
22 [REDACTED]

<sup>7</sup> Confidential Exh. DRS-2C, Appendix E of the Energy Risk Management Policy.

1 [REDACTED] The Company would contend  
2 that this update provides them with a [REDACTED] that can reasonably be  
3 expected to resemble its eventual operational reality more closely, making it a slightly  
4 superior choice since hedging should align with the conditions that are expected to  
5 exist in actual operations.

6 The [REDACTED] enshrined in policy are identified in Confidential  
7 Table 1 below:

**Confidential Table 1: Natural Gas Hedging Policy Limits**



8 **Q. Please describe why the natural gas hedging limits are structured in this fashion.**

9 A. As mentioned above, the percentage ranges are in place to [REDACTED]  
10 [REDACTED]. As for why the position is [REDACTED]  
11 [REDACTED]  
12 [REDACTED] the Company does not wish to obligate  
13 itself to procure hedges that would prove either impossible to find, or cost-prohibitive  
14 due to [REDACTED]. This risk management approach is rational and in keeping  
15 with the spirit of the risk policy itself, which has the goal of ensuring safe, affordable,  
16 reliable service.

17 Importantly, this approach is possible specifically because the gas hedge  
18 program is [REDACTED] in nature. That is, the Company stabilizes gas prices [REDACTED]  
19 [REDACTED]



1 [REDACTED]  
 2 [REDACTED]  
 3 [REDACTED]  
 4 [REDACTED]  
 5 [REDACTED]  
 6 [REDACTED]  
 7 [REDACTED]  
 8 [REDACTED]

9 **Q. Please describe PacifiCorp’s current power hedging limits, as defined in the**  
 10 **Company’s Energy Risk Management Policy.**

11 A. The Company’s power trading limits, as articulated in its current policy, are intended  
 12 to [REDACTED]  
 13 [REDACTED] <sup>8</sup> Doing so serves the dual goals of [REDACTED]  
 14 [REDACTED]  
 15 [REDACTED]  
 16 [REDACTED]  
 17 [REDACTED]  
 18 [REDACTED]

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<sup>8</sup>Confidential Exh. DRS-3C Appendix F, Risk Policy.

**Confidential Table 2: Power Hedging Policy Limits**



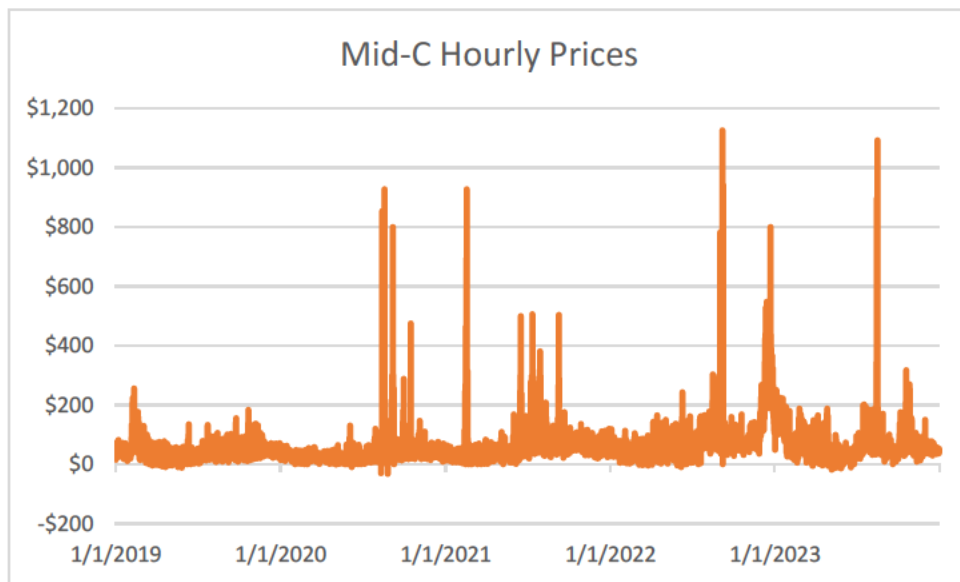
1 **Q. Please describe why the power hedging limits are structured in this fashion.**

2 A. As previously noted, the Company has opted to establish [REDACTED]

3 [REDACTED]

4 [REDACTED] Figure 1 below shows hourly prices at Mid-Columbia from the last five  
5 years. Mere observation is sufficient to realize that prices have been more volatile  
6 over the past three years.

**Figure 1 – Hourly Prices at Mid-Columbia, 2019-2023**



7 An important factor in establishing why the Company [REDACTED]

1 [REDACTED]  
 2 [REDACTED]  
 3 [REDACTED]  
 4 [REDACTED]  
 5 [REDACTED]  
 6 [REDACTED]

7 That consideration highlights the dangers of proposals like the one Mr.  
 8 Mullins advanced in Wyoming last October. Mr. Mullins' attempt to have the  
 9 Wyoming Public Service Commission direct the Company to [REDACTED] in an  
 10 environment where scarcity is possible and transmission is limited raises the  
 11 possibility of reliability events, primarily to the detriment of customers on the west  
 12 side of the Company's system, where the position is [REDACTED]. In other words,  
 13 that recommendation would have directly harmed Washington customers.

14 **Q. Has the change in policy resulted in a noticeable change in hedging activity?**

15 A. Yes. The Company's risk policy changed in July 2021, meaning 2020 was the last  
 16 year to be completed governed by the former policy, and 2022 is the first year to be  
 17 governed entirely by the new policy. An examination of total system hedge positions  
 18 (net purchases and sales) between 2020 and 2022 shows that the Company's average  
 19 hedge positions changed from [REDACTED]

20 [REDACTED]  
 21 Turning specifically to the position on the west side of PacifiCorp's system,  
 22 the Company is [REDACTED]  
 23 [REDACTED]

1 [REDACTED] The  
2 Company has long needed to purchase for customers on the west side of the system,  
3 so the primary change is that the Company is simply doing more of that in the  
4 forward market, which would seem harmonious with the direction provided by the  
5 Commission after the Company's last PCORC, and at odds with AWEC's and Public  
6 Counsel's portrayal of the Company as an entity uninterested in hedging for  
7 Washington.

8 Hedge positions for calendar years 2020 through 2022 are all displayed in  
9 Confidential Tables 3 through 5 below. Please note that [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED] Please also note that I have removed  
13 balance of month transactions and index priced transactions because I do not believe  
14 their inclusion is in the spirit of this exercise, which is focused on an evaluation of  
15 forward fixed price hedges executed prior to the start of the spot month. [REDACTED]

16 [REDACTED]

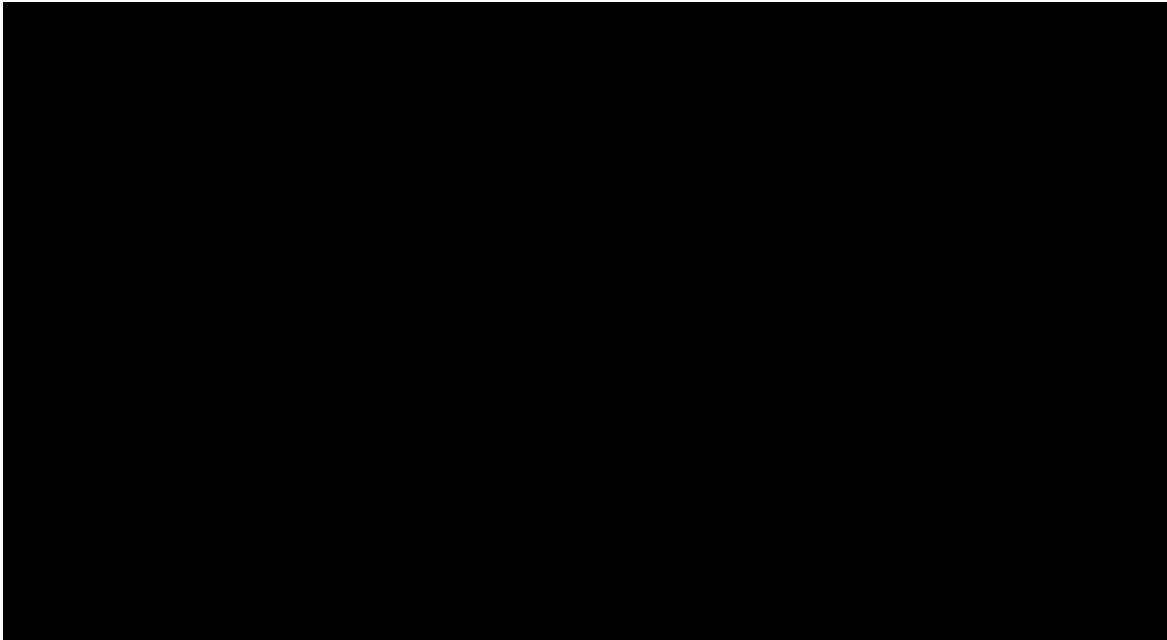
17 [REDACTED]

18 [REDACTED]

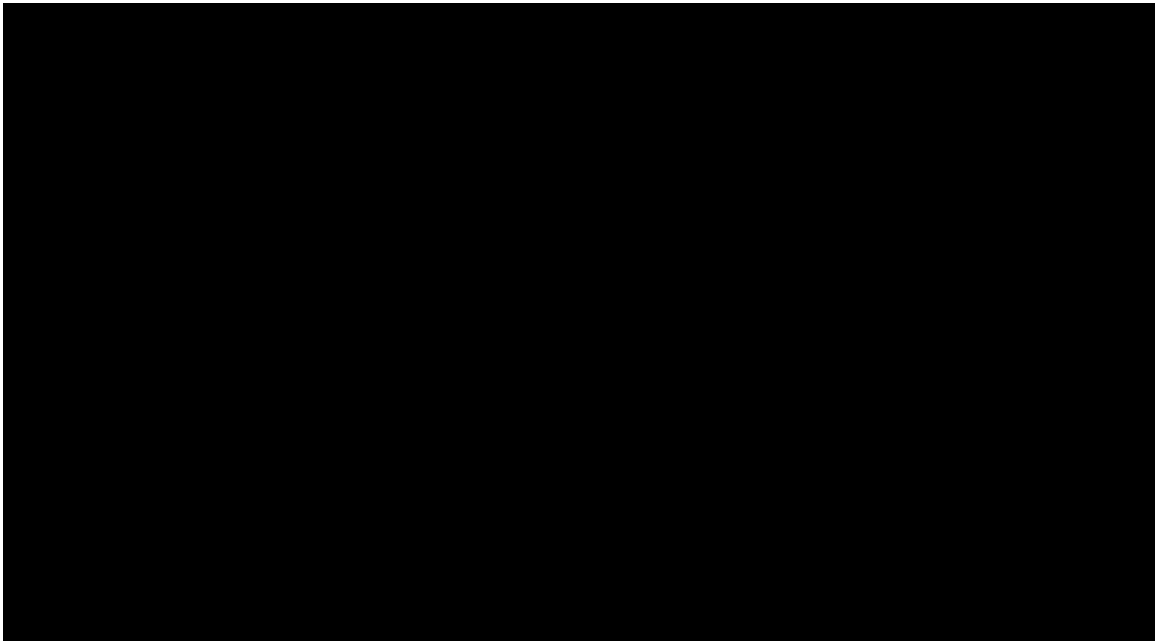
19 [REDACTED]

20 [REDACTED]

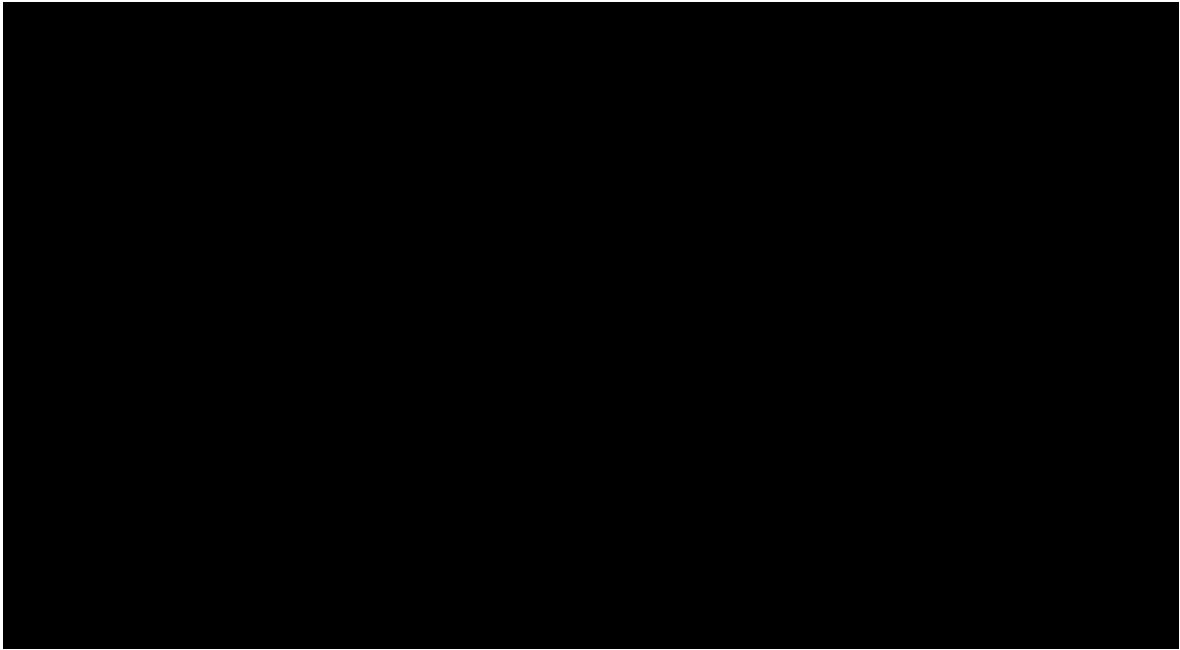
**Confidential Table 3: 2020 Cumulative Hedge Positions**

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**Confidential Table 4: 2021 Cumulative Hedge Positions**

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**Confidential Table 5: 2022 Cumulative Hedge Positions**



1 **VII. WIJAM COST ALLOCATION**

2 **Q. Please explain why the change in the risk policy is particularly beneficial to**  
3 **Washington customers.**

4 A. Washington routinely begins the cost allocation with a supply-demand imbalance in  
5 several months due to the fact that Washington does not include all dispatchable  
6 resources in its asset base. This necessitates an additional step in the calculation of  
7 NPC where individual months are balanced, usually by some combination of reduced  
8 sales and increased purchases, at least in time periods when Washington is forecasted  
9 to be net short. The [REDACTED] highlighted above serves to [REDACTED]  
10 [REDACTED] in the final balancing step because of the [REDACTED]  
11 [REDACTED], though this effect is probably less important than the  
12 other benefits of the Company's [REDACTED].

13 More importantly, the estimated sales revenues or purchase expenses are  
14 calculated based on all short-term (in this context, short-term can be thought of as

1 “less than or equal to a calendar year in duration”) firm transactions delivered during  
2 the deferral period. That is, it includes the price-stabilizing effects of any hedges that  
3 were executed, as well as any other non-hedge fixed price transactions. [REDACTED]

4 [REDACTED]  
5 [REDACTED] For that reason, when  
6 the Company [REDACTED] and  
7 leaves Washington customers less exposed to the sometimes wild fluctuations of the  
8 spot electricity market.

9 In other words, the prices used during the balancing step *also* exhibit the same  
10 fixed-forward-to-spot price balance as the Company’s overall short-term firm  
11 transactions, which serves to reduce risk to Washington customers, particularly when  
12 the Company takes steps to [REDACTED]  
13 [REDACTED]. The WIJAM effectively extends the hedges beyond the amounts allocated to  
14 Washington, imparting the stabilizing benefits of hedging activities to the portion of  
15 Washington’s load that is accounted for in this balancing step as part of the cost  
16 allocation. This effectively allocates more hedges and more fixed price transactions to  
17 Washington, which is a reasonable approach given that Washington does not  
18 subscribe to the total-Company system. This is the balance that the WIJAM strikes:  
19 fewer resources than the system overall, but more hedges allocated to Washington.

20 **Q. Does this reduce NPC for Washington customers?**

21 A. Not in all cases. As previously noted, hedges can increase or decrease NPC,  
22 depending on the fixed price of the hedges as compared to spot market prices.

23 However, it does stabilize power costs, and that stabilization is extended through the

1 WIJAM balancing step.

2 **Q. Does that conflict with the Company’s previous characterization of Washington**  
3 **as uniquely vulnerable to market prices?**

4 A. No, and this is candidly one of the most bewildering parts of AWEC’s testimony.  
5 AWEC Witness Mullins quotes prior testimony and uses that to paint the Company as  
6 inconsistent in the following passage:

7 *“PacifiCorp’s claim that the WIJAM minimizes spot market exposure*  
8 *is a new one and is inconsistent with both its past testimony and actual*  
9 *experience. In the 2022 PCORC, PacifiCorp plainly stated that under*  
10 *the WIJAM Washington customers have been ‘uniquely vulnerable to*  
11 *market purchases.’”<sup>9</sup>*

12 One cannot help but wonder what AWEC believes hedge purchases are, if not  
13 market purchases. They do, however, reduce exposure to spot market prices.

14 Hedges are executed at or around prevailing market prices at the time of  
15 execution, and any objective examination of transactions will show that is true of the  
16 Company’s hedging activities. The conflict AWEC professes to see here is a mystery  
17 to anyone familiar with power markets and hedge programs. Having a position in  
18 need of hedging creates exposure to market prices, and vulnerability to market  
19 purchases in the case of a short position. Hedging removes exposure to spot market  
20 volatility, but it does not retroactively insulate customers from the effects of all price  
21 changes, including those that have already taken place in the forward market.

22 To simplify this, here are the facts:

23 1) PacifiCorp, as a system, maintains an open position as part of a least-cost,  
24 least risk portfolio, though Washington’s chosen cost allocation methodology

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<sup>9</sup> Exh. BGM-1CT at 48.



1 is less representative of system operations and leaves Washington customers  
2 more vulnerable to market purchases with all the risks that attend a short  
3 position generally,<sup>10</sup>

4 2) The Company addresses those risks through hedging, the effects of which are  
5 extended through the balancing step of the cost allocation methodology, both  
6 when forecasting NPC and when allocating actual NPC,

7 3) Because hedges are executed at market prices, the act of hedging does not  
8 mean that customers are not, or were never, exposed to market risk; it only  
9 indicates that the exposure to spot market volatility has been managed to the  
10 extent possible given both the imperfect match between hedging instruments  
11 and load, and the Company's own imperfect knowledge of its future load  
12 position, resource availability, etc.

13 AWEC and Public Counsel both contend that the WIJAM does not manage  
14 spot market price exposure, but that is simply incorrect. This is not a difference of  
15 opinion; it is a matter of mathematics.

16 To be clear, if the WIJAM used only day-ahead or hourly transactions  
17 (essentially, non-hedging spot market transactions that take place much later in the  
18 process of managing a position through delivery) in approximating revenues or  
19 expenses during the balancing step of the WIJAM allocation, the Company would be  
20 receptive to the idea that additional hedging is required to insulate Washington  
21 customers. However, lacking the backstop of dispatchable resources, Washington  
22 customers experience enhanced benefits from the Company's hedge program due to

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<sup>10</sup> The history behind this issue is further discussed in the testimony of Company Witness Wilding.

1 the way the weighted average prices are calculated before being used in the balancing  
2 step of the WIJAM.

3 **Q. Does the Company consistently achieve the [REDACTED]?**

4 A. Yes. The Company must, to comply with its own risk management policy, achieve  
5 [REDACTED] specified in policy on a forecast basis. In short,  
6 the idea put forth by AWEC and Public Counsel that the Company does not hedge  
7 power in a contemplative and conservative fashion, or that the benefits of those  
8 hedges do not adhere to Washington customers, should be put to rest.

9 From this point forward, I will focus my rebuttal on responding to AWEC's  
10 arguments. I understand that Public Counsel has voiced additional concerns regarding  
11 the Company's resource planning practices, but I have limited expertise on that topic,  
12 and I will defer to Company witness Michael G. Wilding to provide the PacifiCorp  
13 response.

14 **VIII. AWEC'S TESTIMONY**

15 **A. Gas Hedging**

16 **Q. Please describe AWEC's testimony on the topic of gas hedging.**

17 A. The central argument from AWEC seems to be the Company was not [REDACTED]  
18 [REDACTED]  
19 [REDACTED]. AWEC argues that the disparity in hedge ratios  
20 justifies either a disallowance or a reallocation of hedges from [REDACTED]  
21 [REDACTED]

22 AWEC also presents some misguided arguments about the accuracy of the  
23 Company's gas requirements forecast based on a single position report that was over

1 a year old by the time the deferral period concluded, and without consideration given  
2 to non-required activities (the Company hedges its gas *requirements*), which I will  
3 explain below.

4 **Q. How do you respond to the notion that the Company was not** [REDACTED]

5 [REDACTED] ?

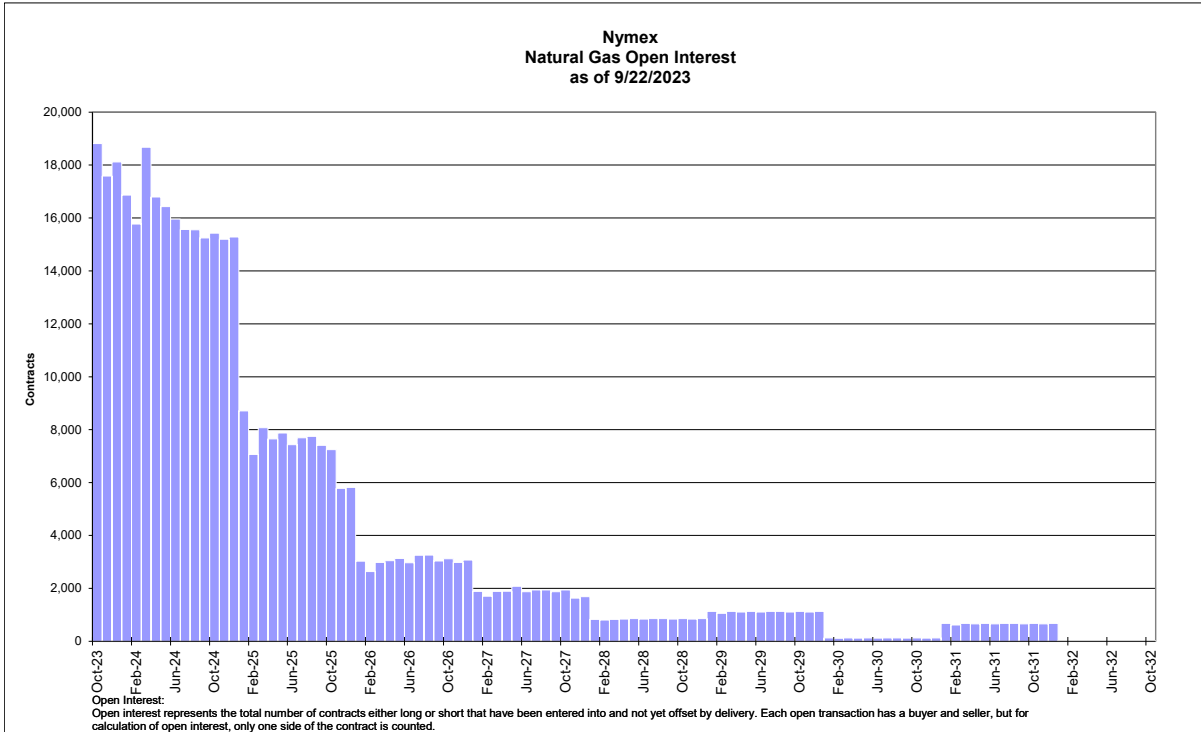
6 A. Please refer back to my testimony in Section VI describing the gas hedging program  
7 limits. The Company's policy plainly states that [REDACTED]  
8 [REDACTED]. The Company complied with its policy. AWEC is correct that the  
9 policy does not [REDACTED], but if  
10 one of the fundamental duties of risk management is to assess the hedge program to  
11 ensure limit compliance, it must make that assessment [REDACTED] because  
12 that is how the limit is structured.

13 **Q. What prevents the type of gas hedging that AWEC assumes is possible?**

14 A. At various points in time, gas markets trade in calendar strips, seasonal strips (April  
15 to October for summer, November through March for winter), quarterly blocks, and  
16 individual months. Much of the open interest for individual months and quarters is  
17 concentrated in near-term contracts, with most market participants managing their  
18 immediate price exposure that way and relying on seasonal or calendar year contracts  
19 to manage longer-term exposures.

20 For an example of how this works even in a liquid market, see Figure 2 below  
21 of open interest in NYMEX Henry Hub Futures. Please note that this is representative  
22 of the single most liquid natural gas market in America, but there is still a precipitous  
23 decline in open interest after the first 15 months.

Figure 2. NYMEX Henry Hub Natural Gas Open Interest



1 Most fundamentally, this is what prevents equal hedging across both sides of  
2 the system: liquidity. A hedge requires a counterparty and AWEC fails to take into  
3 consideration this constraint relative to the [REDACTED]  
4 [REDACTED] In  
5 addition to seeing substantially greater granularity in terms of the available tenors of  
6 near-term contracts, the number of counterparties willing to trade increases as time to  
7 expiration decreases. In other words, it is difficult (if not impossible) to execute cost-  
8 effective hedges [REDACTED] far ahead of time.

9 Further, a common feature of illiquid markets is that the bid-ask spread will be  
10 considerably wider than it is in more liquid markets. Market makers in illiquid  
11 markets demand large premiums given the lack of participants and the relative  
12 uncertainty introduced by the lower frequency of price discovery, meaning that the

1 Company is likely to pay substantially more than mid-market prices (the average of  
2 the bid price and the ask price) for gas. PacifiCorp's alternative is to [REDACTED]

3 [REDACTED]  
4 [REDACTED] The policy would not  
5 serve anyone's interests by creating requirements that are either impossible or cost-  
6 prohibitive to comply with, and this approach minimizes NPC for customers.

7 **Q. Do the conditions necessitating this approach persist in the current**  
8 **environment?**

9 A. Yes. In his capacity as an analyst for WIEC, Mr. Mullins made similar arguments in  
10 Wyoming during their Energy Cost Adjustment Mechanism (ECAM) in October  
11 2023. In preparing my response testimony in that jurisdiction, I consulted with the  
12 Company's gas traders about the current market dynamics. They noted that after  
13 reviewing available offers on the Intercontinental Exchange (ICE) platform in late  
14 September, there were four times as many active participants in the [REDACTED] market as  
15 there were in the [REDACTED] market. In addition, when tallying up the open interest in  
16 monthly contracts between [REDACTED] in early October, the [REDACTED] monthly  
17 contracts exhibited nearly 20 times the open interest that [REDACTED] had, and there was no  
18 open interest in [REDACTED] more than two contract months into the future. All of this  
19 points to a significant difference in the level of liquidity between the two locations.

20 I refreshed that analysis for this proceeding and the outlook is similar though  
21 there are slight improvements for [REDACTED]. As of early April, information provided by  
22 the Company's gas traders indicates that the open interest in [REDACTED] is now nearly  
23 eight times the open interest in [REDACTED], which is a noteworthy improvement, though

1 there still exists an order of magnitude difference, and there continues to be no open  
2 interest at all for [REDACTED] outside of the balance of the year, while [REDACTED] contracts  
3 exhibit open interest through March 2026.

4 **Q. Does this mean that the Company took no cost-stabilizing steps for units on the**  
5 **west side of the system?**

6 A. No. [REDACTED] is a well-understood and  
7 widely used risk management technique the world over, so hedging [REDACTED]  
8 [REDACTED] should allow for the stabilization of overall system costs. While this is a  
9 technique that is familiar to risk professionals, it is not commonly applied outside the  
10 risk industry. Using instruments that [REDACTED] but impart a  
11 stabilizing benefit across the system is a straightforward solution to this issue.

12 I want to be careful to note that the Company does not earmark specific trades  
13 executed at the [REDACTED] to indicate that they are intended to hedge [REDACTED]  
14 [REDACTED] or anything approaching that degree of specificity. The policy simply  
15 assesses the [REDACTED] with an understanding that [REDACTED]  
16 [REDACTED]  
17 [REDACTED]  
18 owing to the differences in liquidity between the two locations.

19 **Q. Mr. Mullins insists that the risks are distinct at [REDACTED]. Do you**  
20 **concur?**

21 A. Not entirely. As I noted above, I would not characterize them as identically risky or  
22 interchangeable, but they do share a relationship. To demonstrate the strength or  
23 weakness of this relationship, I calculated a simple Pearson correlation coefficient for

1 daily prices between [REDACTED]. During 2022 that coefficient was relatively  
2 high, at 0.71. This strongly indicates that the Company's approach was a useful and  
3 logical approach to risk management during the deferral period.

4 This is somewhat expected since they are relatively close to one another  
5 geographically. Using Henry Hub or Permian Basin gas to offset the [REDACTED]  
6 would probably result in a weaker relationship and a less predictable outcome.

7 However, the geographic proximity [REDACTED] coupled with the relative  
8 similarity in seasonal weather make them exhibit a meaningful correlation.

9 **Q. What is a correlation coefficient, and what does a coefficient of 0.71 indicate?**

10 A. A correlation coefficient is fundamentally a measure of covariance between two sets  
11 of data. In this case, since I have applied it to measure the covariance of the natural  
12 log of returns for two prices series, it simply measures the tendency of those prices to  
13 move in the same direction and by the same amount on a day-to-day basis.

14 As for the significance of a correlation of 0.71, it is somewhat high, but I want  
15 to be careful not to overstate the strength indicated by that data point. In my  
16 experience, most statisticians would not label that as "strongly positive" since they  
17 typically apply that label to correlations that are greater than or equal to 0.75.

18 However, 0.71 is, at least in my estimation, a reasonably high correlation for two  
19 different price locations, and certainly enough to illustrate that a hedge program that  
20 allows this sort of activity is logical.

21 **Q. Are there other ways to calculate correlation that might produce different  
22 results?**

23 A. Yes. The primary example I am familiar with is the exponentially weighted moving

1 average (EWMA) calculation. I have not performed that type of analysis here  
2 because, at least in my experience, that approach is more suited to providing inputs to  
3 forward-looking risk models (VaR models, in particular) than to allowing for a simple  
4 observation of the historical covariance between two sets of data. For this sort of  
5 more straightforward measurement, the unweighted (or equally weighted, if one  
6 prefers that term) Pearson coefficient should suffice.

7 **Q. Have you examined AWEC's analysis as it relates to the counterfactual**  
8 **presented in Confidential Figure 5?**

9 A. Yes.

10 **Q. Please summarize your findings.**

11 A. AWEC's analysis is flawed for several reasons, but most fundamentally, the ability to  
12 construct a counterfactual (with the benefit of perfect hindsight) that is also policy-  
13 compliant and lowers NPC *is not evidence of imprudence*. The Company followed its  
14 policy and [REDACTED] throughout 2022,  
15 showing that it was responsive to increasing risks. AWEC's analysis does not change  
16 or even really challenge any of that. They seem to believe that simply pointing out  
17 that some other course of action may have lowered Washington-allocated net power  
18 costs is evidence of imprudence. Furthermore, the analytical route they take to  
19 arriving at that conclusion is flawed since it avails itself of information unavailable to  
20 the Company at the time it was executing hedges.

21 By this same logic, AWEC could propose a disallowance for the Company  
22 having failed to play the winning Powerball numbers. After all, we could just have  
23 gone to a store, requested the purchase of a ticket with the winning numbers selected,



1 and credited Washington NPC with our winnings; each step is feasible. The primary  
2 issue is that the Company would not have known the winning numbers at that time in  
3 the same way that AWEC knows them now. In other words, the mere claim that there  
4 exists a conceivable scenario that results in lower costs for Washington specifically  
5 does not make the Company's actions imprudent. This is precisely the danger of  
6 confusing prudence with hindsight. The standard becomes perfection, as judged on a  
7 backwards looking basis, using information unavailable to anyone at the time.

8 **Q. Are there any other facts about Confidential Figure 5 that should make viewers**  
9 **skeptical of the output?**

10 A. Yes. AWEC's own Confidential Figure 4 shows [REDACTED]  
11 [REDACTED]  
12 [REDACTED]  
13 [REDACTED]. For most months in 2022, front office  
14 personnel managed exposures by [REDACTED]  
15 [REDACTED]  
16 [REDACTED]  
17 [REDACTED] serves to  
18 insulate customers from spot month volatility.

19 In other words, AWEC's counterfactual would require *a net removal of*  
20 *hedges*. As AWEC's scenario reduces [REDACTED]  
21 [REDACTED] that means customers would have been  
22 more exposed to spot gas price fluctuations.

23 AWEC's primary accomplishment in the execution of that analysis seems to

1 be that they have provided an excellent example of why a rigid, inflexible,  
2 programmatic hedge plan geared towards serving the interests of the [REDACTED]  
3 [REDACTED] is suboptimal for overall NPC.

4 **Q. Have you reviewed AWEC's complaints about the gas forecast?**

5 A. Yes.

6 **Q. Please summarize your findings.**

7 A. First, AWEC is comparing actual gas consumption in operations to a daily gas  
8 requirement forecast that was generated in the previous year.<sup>11</sup> For obvious reasons,  
9 this is not how one assesses the accuracy of a model that has dynamic inputs and was  
10 updated on a daily basis throughout the deferral period.

11 Second, AWEC's witness is making a bad faith comparison here. The  
12 [REDACTED] is intended to forecast *gas requirements*, not *all gas*  
13 *consumed* in the deferral period.

14 For an example of why this is important, consider Energy Imbalance Market  
15 (EIM) dispatch. To the extent that the Company participates in the EIM and is a net  
16 exporter of power, that increases the amount of gas (and coal) consumed during the  
17 deferral period, because the Company is generating more than what is required to  
18 serve load. The Company cannot forecast this volume, as dispatch instructions come  
19 from the EIM on a sub-hourly level and those instructions are the product of a model  
20 that uses inputs that are completely unknowable to the Company in advance.

21 PacifiCorp accounts for the benefit of these activities by using a benefit forecast  
22 generated from a regression model since a more deterministic approach is infeasible.

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<sup>11</sup> Exh. BGM-1CT 28.

1 Those benefits manifest as a reduction in purchased power expense in the Company's  
2 NPC forecast. In actual NPC, EIM revenues are also a credit against purchased power  
3 expense.

4 Furthermore, the Company should *absolutely not* hedge EIM gas volumes  
5 ahead of time because EIM dispatch is entirely dictated by spot market conditions,  
6 including conditions in the spot gas market. To "hedge" those volumes, even if they  
7 were knowable or able to be forecasted (they are neither), would run the risk of taking  
8 swap losses without any ability to make up for them with gains on power hedges  
9 since EIM power *cannot be sold on a forward basis*. That is, it would destabilize  
10 NPC to try and "hedge" EIM gas.

11 Finally, the EIM is a not a requirement in anything approaching the sense that  
12 serving load is. It is something the Company elects to participate in because the net  
13 effect is a benefit to customers.

14 **Q. Was the Company a net exporter of power to the EIM during 2022?**

15 A. Yes. As can clearly be seen in the Company's actual NPC,<sup>12</sup> PacifiCorp was a net  
16 exporter of 3.4 million MWh of power to EIM in 2022, producing net revenues of  
17 \$294.7 million, and reducing NPC for customers.

18 That type and scale of activity is going to cause actual fuel consumption to  
19 exceed forecasted fuel requirements materially, and some portion of that is going to  
20 take the form of natural gas expense. That in no way indicates a lack of [REDACTED]  
21 [REDACTED]. It simply indicates that the Company does not forecast or hedge for non-  
22 required activities, and that those activities can change specific line items on the

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<sup>12</sup> NEW-PAC-PCAM-WP3-6-15-23.xlsx – Actual NPC (Total System) tab.

1 actual NPC report. This has the effect of making those lines look more aberrant than  
2 they otherwise would. As previously mentioned, the offset to that increase in natural  
3 gas expense takes the form of reduced purchased power expense because that is  
4 where EIM revenues are recognized in actual NPC as well. Given that the revenues  
5 and expenses for EIM cannot be consolidated into a single line item (the Company  
6 does not track separately the fuel consumed for EIM dispatch versus serving load,  
7 versus satisfying a market sale obligation, etc.), it is up to everyone in these  
8 proceedings to remain mindful of the fact that these offsets exist throughout the NPC  
9 report. That fact makes it rarely, if ever, correct to focus on a single cost category.

10 **Q. Are there other reasons that the Company may have utilized more natural gas**  
11 **fuel than anticipated during 2022?**

12 A. Yes. Toward the end of 2022, due to conditions outside of the Company's control,  
13 coal supply issues causing delivery shortages began to impact the dispatch at Utah's  
14 Hunter and Huntington coal-generating plants. The operating mines in Utah's Book  
15 Cliffs and Wasatch Plateau coal fields experienced production difficulties due to a  
16 variety of geological, logistical, and financial challenges. Additionally, there was a  
17 mine fire at American Consolidated Natural Resources' Lila Canyon mine in  
18 September 2022. In recent years, the Lila Canyon mine has accounted for more than  
19 25 percent of Utah's coal production.

20 However much the Company may have been experiencing coal supply  
21 shortages, system obligations still needed to be met. The only way to do so was by  
22 using other dispatchable generation sources, and force majeure events are not a part  
23 of the Company's forecast more than a year ahead of their occurrence.

1           AWEC understandably overlooked this driver since the Company did not  
2 offer any direct testimony related to it in, primarily because the impacted plants are  
3 not a part of Washington’s asset base. However, when you combine this with their  
4 failure to consider EIM dispatch and its potential to increase fuel consumption,  
5 AWEC’s use of a single September 2021 position report to insinuate an issue with the  
6 Company’s gas requirements forecast is indefensible.

7 **Q. Given that the Company has no way of knowing these consumption drivers**  
8 **ahead of time, does the Company hedge those volumes?**

9 A. No. As noted above, attempting to “hedge” gas associated with EIM generation  
10 would just be speculating in gas, so there is no way the Company could or would ever  
11 hedge those volumes. In addition, the Company cannot forecast force majeure events  
12 that have not occurred yet at the mines that serve its coal generators, so there is  
13 obviously no way to hedge for that either.

14 **Q. How do you respond to AWEC’s suggestion that hedges should be reallocated to**  
15 **Washington?**

16 A. We now arrive at a valid point made by AWEC during their analysis of the  
17 Company’s gas hedging program. The way that the WIJAM is structured prevents the  
18 benefits of the Company’s gas hedging program from fully adhering to Washington  
19 customers, and that is an issue worth solving. Please note that this is a cost allocation  
20 issue, not an indication that there is anything imprudent about the Company’s hedge  
21 program. I strongly believe, and the data strongly supports, that hedging in this  
22 fashion is prudent and reasonable, but it undoubtedly creates challenges for  
23 Washington customers because of the fact that they are only partial participants in the

1 system.

2 With all that said, Mr. Mullins' approach is fundamentally unreasonable.  
3 Again, for two of the three counterfactuals, AWEC has used actual total consumption  
4 and actual total purchases<sup>13</sup> which is not information available to the Company at the  
5 time it is executing hedges. If the purpose of a counterfactual is to recreate how the  
6 Company would have behaved when pursuing some other course of action, then  
7 AWEC is again inappropriately relying on hindsight review. There is no way the  
8 Company would know its precise consumption or future transactions, only its  
9 forecasted requirements. In addition, even if the Company knew its total  
10 consumption, it would not hedge those amounts since they include volumes  
11 associated with non-required activities, and activities that absolutely should not be  
12 hedged without perfect foreknowledge of what prices will do in the future, which  
13 again is not knowable ahead of time. As such, those portions of AWEC's analysis fail  
14 to make any reasonable representation about what other courses of action the  
15 Company may have taken.

16 Finally, in the counterfactual developed based on the September 30, 2021  
17 position report, AWEC has not reflected mere compliance with the risk policy (if the  
18 risk policy were restructured to require [REDACTED]  
19 [REDACTED]), but has [REDACTED] under the policy, which requires  
20 assumptions of liquidity that are unsupported by reality. AWEC also quite  
21 conveniently fails to note that their own exhibit shows that their counterfactual would  
22 have *increased* total company NPC. Benefits from the hedges executed [REDACTED]

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<sup>13</sup> Exh. BGM-1CT at 27.

1 [REDACTED] increased by approximately \$62 million, but the fact that the  
2 benefits of [REDACTED] hedging fell by approximately \$108 million is understandably  
3 unheralded in their testimony. That amounts to a net increase in system costs of  
4 approximately \$42 million. Needless to say, PacifiCorp would not elect to pursue a  
5 course of action that would remove hedges and raise total-Company NPC.

6 I have prepared an alternative analysis that accounts for the shortcomings in  
7 AWEC's analysis, which I will present below.

8 However, I want to emphasize that this *will not* invariably lower Washington  
9 NPC. The purpose of hedging is to *stabilize* NPC, not to *minimize* NPC because  
10 hedges can raise or lower NPC depending on whether the fixed transaction prices are  
11 above or below prevailing spot market prices. For example, taking a similar approach  
12 for calendar year 2020 would have resulted in an increase in Washington-allocated  
13 costs. The same will undoubtedly be true again in the future. However, this proposal  
14 does better allocate hedges to Washington customers.

15 **Q. Please describe the alternative allocation being proposed by the Company.**

16 A. Since there is no way to objectively reassign hedges from [REDACTED]  
17 [REDACTED], the Company would opine that the best way to handle the issue of  
18 allocation is by ensuring that, if the Company were [REDACTED]  
19 [REDACTED] as AWEC claims it should have,<sup>14</sup> the hedge positions would have  
20 been within [REDACTED] in the Company's risk  
21 management policy.

22 In other words, if the hedge ratio was below [REDACTED], swap

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<sup>14</sup> Exh. BGM-1CT at 39.

1 volumes sufficient to the task of getting the hedge ratio to [REDACTED] are relocated  
2 from the [REDACTED] position to the [REDACTED] position using the average mark-  
3 to-market value per Million British Thermal Units (MMBTU) of [REDACTED] hedges  
4 settled during that month, and using the final gas requirement forecast published  
5 before the contract month moved into spot. Importantly, this approach would not  
6 remove any hedges in months where the Company's hedge position on the [REDACTED]  
7 [REDACTED] was greater than [REDACTED]. In that way, it allows the [REDACTED] units to  
8 retain the benefits of all [REDACTED] hedges, even in months when the Company's hedge  
9 ratio for that individual month was [REDACTED] on a forecast basis (June and  
10 July being the primary examples), while buttressing other months when the hedge  
11 ratio was lower than what [REDACTED].

12 **Q. What are the primary inputs to the calculation of your adjustment?**

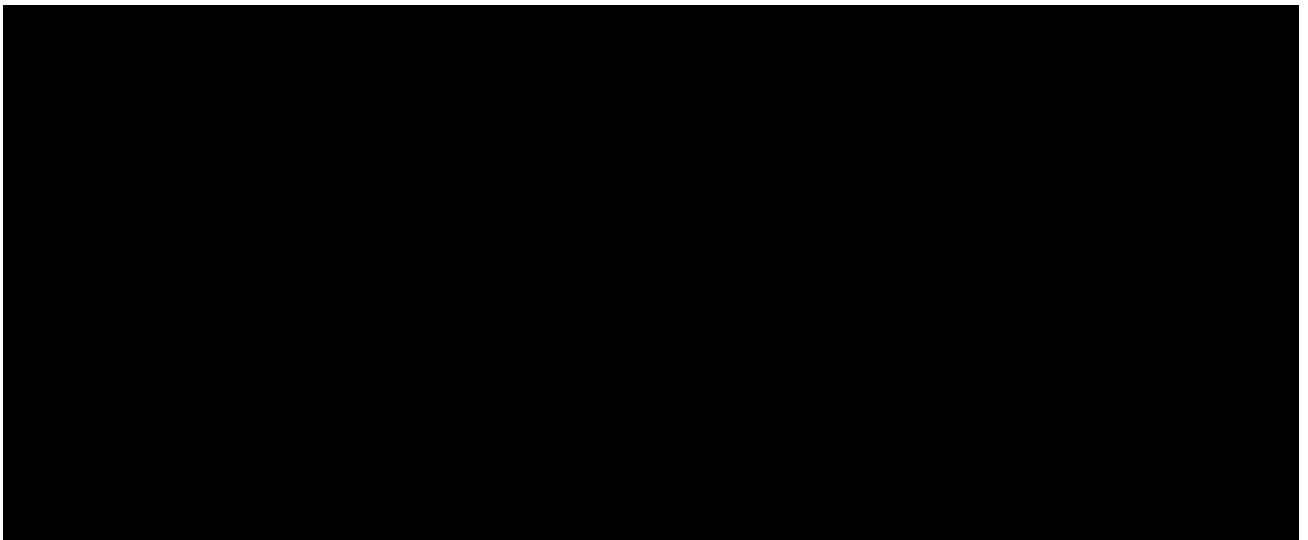
13 A. I have taken the final forecast requirement by month for the [REDACTED] of the system,  
14 and the total hedges executed at [REDACTED] to calculate a monthly hedge ratio prior to  
15 reallocation. The reason that I have opted to use the final requirement forecast is that  
16 it represents the terminal value of the forecast in the forward period and includes the  
17 most granular data available, with some portion of the gas demand informed by the  
18 short-term load forecast. Some variables (weather in particular) become slightly more  
19 predictable nearer in time than they are further in the future. That being the case, it is  
20 reasonable to assume that the final gas requirements forecast is the highest quality  
21 forecast with the least uncertainty baked into it.

22 For some sense of what this means on a practical basis, the January 2022  
23 position is the position as of December 30, 2021, while the February 2022 position is



1 the position as of January 31, 2022, and so on. The hedges are simply all hedges  
2 executed on a forward basis for the deferral period, broken out by month. The hedge  
3 benefit per MMBTU is calculated based on the settlement value, by month, of all [REDACTED]  
4 [REDACTED] divided by the notional volume of all [REDACTED], also by month.  
5 Please see Confidential Table 6 below for the proposed change, as well as the  
6 resultant impact on generation costs on the [REDACTED] of the system.

**Confidential Table 6 – Proposed Adjustment to Reallocate Hedges to the West Side**



7 This proposal results in a total-Company impact of moving approximately  
8 \$8.5 million of hedging benefits from [REDACTED]. Once allocated at the  
9 CAEW rate, this approach produces a reduction of approximately \$1.9 million to  
10 Washington NPC.

11 **Q. Can you respond to AWEC's suggestion that there be an adjustment to the**  
12 **PCAM baseline?**

13 A. Yes. There has never been a more textbook example of a hindsight review of an  
14 appropriately set forecast. AWEC voiced concerns over this issue at the time the

1 PCAM baseline was being set, but their testimony decried the absence of hedges<sup>15</sup>  
 2 while simultaneously opposing an update that was intended to get more hedges into  
 3 the NPC baseline.<sup>16</sup> In addition, their recommendation indicates the same  
 4 assumptions that their counterfactual does: that either the Company is able to [REDACTED]  
 5 [REDACTED] far ahead of time (it is not), or that by default the most  
 6 reasonable assumption is that the Company would, if it had the chance, [REDACTED]  
 7 [REDACTED] (that contention is unsupported by any form of evidence  
 8 whatsoever). They should not be awarded a do over simply because the cost of gas  
 9 was higher than originally forecast due to conditions outside the Company's control.

10 **B. Power Hedging**

11 **Q. Please summarize AWEC's analysis as it relates to the Company's power**  
 12 **hedging program.**

13 A. AWEC contends that the Company's hedge program does not protect Washington  
 14 customers from spot price volatility. AWEC also proposes a counterfactual, though  
 15 the flaws in that analysis render the conclusions devoid of any analytical merit.

16 **Q. Please identify the falsehoods in AWEC's testimony.**

17 A. To begin with the easiest one to identify at a glance, the following passage is  
 18 categorically incorrect:

19 [REDACTED]  
 20 [REDACTED]  
 21 [REDACTED]  
 22 [REDACTED]

<sup>15</sup> *WUTC v. PacifiCorp d/b/a Pacific Power & Light Co.*, Docket UE-210402, Exhibit BGM-1CT at 14 (Nov. 22, 2021).

<sup>16</sup> Docket UE-210402, Exhibit BGM-1CT at 12.

<sup>17</sup> Exh. BGM-1CT at 52.

1 This is false. The policy states in plain language [REDACTED]  
 2 [REDACTED] 18” In other words, front office personnel are  
 3 not allowed [REDACTED] at all. If the forecast position is [REDACTED]  
 4 [REDACTED]  
 5 [REDACTED]  
 6 [REDACTED]. Confidential Table 5 above  
 7 should make it immediately clear that the Company [REDACTED]  
 8 [REDACTED]  
 9 [REDACTED]

10 AWEC closes with a counterfactual that purports to raise the Company’s  
 11 hedge ratio to the [REDACTED] described in policy. The obvious issue is that the  
 12 Company has already complied with its policy, forcing AWEC to rely on distortions  
 13 of the truth in this section of their testimony. The problems with **Mullins, Exh.**  
 14 **BGM-10C** are numerous but the most egregious shortcomings are:

- 15 1) AWEC has categorized deals as hedges, day-ahead, and real-time without  
 16 consideration given to whether the transactions were index-priced or fixed  
 17 price, distorting the hedge position (since this analysis is concerned with  
 18 price hedging, only fixed price deals should be considered);
- 19 2) AWEC has categorized several deals as day-ahead though they were  
 20 executed for a delivery period covering the entire prompt month, in the  
 21 month prior to the delivery period; this arbitrarily excludes transactions  
 22 executed late in the hedging window, distorting the hedge position;
- 23 3) AWEC’s analysis fails to account for the fact that several of the deals in  
 24 its workbook are contracts and auction results, which are not normally  
 25 considered when evaluating hedging activity (the Company does not  
 26 hedge to avoid needing to participate in an auction; [REDACTED]  
 27 [REDACTED]), distorting the hedge  
 28 position;

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<sup>18</sup> Confidential Exh. DRS-3C Appendix F, Risk Policy.

1 4) AWEC’s analysis divides transactions into purchases and sales, failing to  
2 recognize that the Company is managing a net position and that both  
3 purchases and sales are used in doing so, distorting both the hedge  
4 position and the hedge ratio;

5 5) AWEC has calculated its hedge ratio using total *actual* purchases, which  
6 obviously incorporates information not available to the Company at the  
7 time of hedge execution, miscalculating the hedge ratio.

8 On that last point, AWEC attempts to use this to demonstrate policy non-  
9 compliance on the part of the Company,<sup>19</sup> but this represents an impossible standard.

10 [REDACTED]  
11 [REDACTED]  
12 [REDACTED]  
13 [REDACTED]  
14 [REDACTED]  
15 [REDACTED]  
16 [REDACTED]  
17 [REDACTED] That is not imprudence or policy non-

18 compliance, it is simply an example of the difference between serving load in reality  
19 versus serving load in a deterministic model with no uncertainty.

20 Finally, the math contains errors, and the graph provided in AWEC’s  
21 Confidential Figure 6 is misleading. AWEC presents the graph as though it is a  
22 moving average over time, but it is a cumulative [REDACTED] (again,  
23 using incorrect data), where the [REDACTED]  
24 [REDACTED] In other words, much like AWEC’s gas analysis *the*  
25 *only meaningful data point is the last one*, where we finally get to compare a full year

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<sup>19</sup> Exh. BGM-1CT at 54.

1 of incorrectly calculated [REDACTED] to a full year of [REDACTED].

2 Sadly, the shortcomings in AWEC's Confidential Figure 6 do not end there.  
3 Everything I just wrote applies *only* to the series representing the [REDACTED].  
4 The series representing [REDACTED] uses an entirely different calculation  
5 and represents what [REDACTED] were executed in each  
6 month in a *non-cumulative* fashion, so one would have to sum the series to ascertain  
7 the [REDACTED]. The same is true of the [REDACTED]  
8 [REDACTED]. If AWEC acknowledges that the majority of the Company's purchases  
9 [REDACTED], and they go on to calculate a [REDACTED]  
10 [REDACTED], it is surprising that they would then evaluate a [REDACTED]  
11 [REDACTED] and not notice that there is a serious discrepancy. By  
12 simple arithmetic, that number should be over [REDACTED].

13 Finally, leaving aside all of the issues related to how transactions are assigned  
14 a label of "hedge" or "day-ahead," and setting aside the deal population issues that I  
15 have noted above, I used the same information that AWEC claims to have used to  
16 perform a very simple analysis. The results are in Confidential Table 7 below:

**Confidential Table 7 – Hedges vs Spot Transactions 2022**

1 As can be seen above, the forward hedges [REDACTED]  
2 [REDACTED] of overall net volumes. [REDACTED]  
3 [REDACTED]  
4 [REDACTED] Please note that [REDACTED]  
5 [REDACTED] are presented, and [REDACTED] appears quite high [REDACTED]  
6 [REDACTED] However, given that the Company [REDACTED]  
7 [REDACTED], I do not recommend that the Commission give much weight to that  
8 number. The combined numbers are included here primarily for the sake of  
9 completeness. This comparison simply illustrates that, even having selected the  
10 wrong set of transactions (which is somewhat understandable since the fields required  
11 for filtering are not available in the SAP report used by AWEC) and the wrong  
12 framework for comparison (since comparing to a [REDACTED] should be the obvious  
13 choice when evaluating a framework that claims to result in [REDACTED]

1 [REDACTED], it appears that AWEC simply did  
2 not perform any perfunctory checks for internal consistency as it relates to the  
3 analysis presented to the Commission. AWEC's own source data does not match their  
4 exhibit. The numbers in the table above match AWEC's own pivot tables in **Mullins,**  
5 **Exh. BGM-10C**, so it is surprising that AWEC represented the Company's [REDACTED]  
6 [REDACTED]  
7 [REDACTED]  
8 [REDACTED]  
9 [REDACTED]

10 **Q. Please summarize your findings as it relates to AWEC's analysis of the**  
11 **Company's power hedging program.**

12 A. In short, AWEC uses the wrong data, performs the wrong calculations, and plots the  
13 wrong data series to claim that the Company was non-compliant with its own policy,  
14 without having chosen the correct framework to evaluate policy compliance.  
15 AWEC's testimony is a gross misrepresentation and a distortion. I recommend the  
16 Commission disregard AWEC's testimony on this topic.

17 **Q. Did the Company comply with its risk policy during 2022?**

18 A. Yes. [REDACTED]  
19 [REDACTED]  
20 [REDACTED]  
21 [REDACTED]  
22 [REDACTED]

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## IX. CONCLUSION

**Q. Please summarize your testimony and recommendations.**

A. My testimony addressed the claim by AWEC and Public Counsel that the WIJAM does not protect Washington customers from spot market volatility, noting that the WIJAM uses the weighted average price of short-term firm purchases in the balancing step. Since those prices include hedges and other fixed priced instruments in the same proportion as overall short-term purchases and sales, the net percentage of balancing volumes made up of fixed forward transactions for Washington is unchanged, meaning that Washington customers are just as protected as customers in any other jurisdiction.

Next, I addressed AWEC's analysis of the Company's gas hedging program, explaining the reasons why the program is structured the way it is, and the practice of [REDACTED]. However, at this point, the Company does concede that the WIJAM does not allow Washington's customers to experience the full allocation of gas hedging activities in their own NPC. As a result, I have proposed an alternative to reallocate hedges to the [REDACTED] [REDACTED]. AWEC's analysis for reallocation either avails itself of information unavailable to the Company at the time it was carrying out hedging activities, or leads to an overall increase in NPC, and should be rejected.

I addressed AWEC's inaccurate and misleading power hedging analysis, noting that the Company complied with its policy and that AWEC's own exhibit did



1 not match its source data. I recommended that the Commission disregard that section  
2 of AWEC's testimony.

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

4 **A. Yes.**