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August 16, 2023

Via Electronic Filing

OREGON PUBLIC UTILITY COMMISSION ATTENTION: FILING CENTER
PO BOX: 1088
SALEM OR 97308-1088

RE: Docket No. UE 420 - In the Matter of PACIFICORP, dba PACIFIC POWER, 2024 Transition Adjustment Mechanism.

Attached for filing are the following exhibits, certificate of service and service list. These documents are saved to: P:\Agency\Temporary Confidential Filings\UE 420 Rebuttal 8-16-23:

Staff Rebuttal Testimony:
Exhibit 700-701 CONF Kim
Exhibit 800 CONF Jent
Exhibit 900 CONF Dlouhy
Exhibit 1000_1001 HI-CONF Anderson
Exhibit 1100 Bolton
Exhibit 1200 CONF Chipanera

/ Kay Barnes
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CERTIFICATE OF SERVICE

UE 420 – Rebuttal Testimony

I certify that this day I served the foregoing document upon all the following parties or attorneys of parties of record in this proceeding by delivering a copy in person or by mailing a copy properly addressed with first class postage prepaid or by electronic mail pursuant to OAR 860-001-0180 (which may include a link to a secure shared file service).

Dated this 16th day of August, 2023, at Salem, Oregon.

Kay Barnes

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CASE: UE 420
WITNESS: ANNA KIM

PUBLIC UTILITY COMMISSION
OF
OREGON

REDACTED STAFF EXHIBIT 700

Rebuttal Testimony

August 16, 2023

Q. Please state your name, occupation, and business address.

A. My name is Anna Kim. I am the Energy Costs Section Manager employed in the Rates, Safety and Utility Performance (RSUP) Program of the Public Utility Commission of Oregon (OPUC). My business address is 201 High Street SE, Suite 100, Salem, Oregon 97301.

Q. Please describe your educational background and work experience.

A. My witness qualifications statement is found in Exhibit Staff/101.

Q. What is the purpose of your testimony?

A. My testimony is presented in two sections. First, as Staff's summary witness, I will provide an overview of Staff's Reply Testimony. In this section, I also present a summary of the dollar effect of Staff's adjustments and overview of the issues reviewed by Staff in this filing, including detail of where each topic is discussed.

The second section of my testimony addresses coal markets.

Q. Did you prepare an exhibit for this filing?

A. Yes. I prepared the following Staff Exhibit:

- Staff/701: Coal thermal dispatch reporting.

Q. How is your testimony organized?

A. My testimony is organized as follows:

ISSUE 1. OVERVIEW OF REPLY TESTIMONY

Q. Please describe any relevant updates and activities in this docket since Staff posted opening testimony.

A. In accordance with the TAM Guidelines, PacifiCorp published the most recent official forward price curve (OFPC) in its Reply Testimony on July 24, 2023. The Company will provide two further updates to the OFPC in November.

The parties also participated in a settlement conference on August 11, 2023. A settlement was not reached during the conference.

Q. Please provide an overview of Staff's testimony.

A. Staff's review has focused on the main expenses forecasted by the Company and on the modeling changes the Company. In Staff's Reply Testimony, Staff includes analysis of Opening Testimony provided by other parties and the Company's Reply Testimony.

Q. What issues are addressed in Staff's Reply Testimony?

A. In Staff/700, I provide a summary of Staff's positions in Reply Testimony and discuss future data needs for Staff to understand coal markets and coal dispatch.

In Staff/800, witness Julie Jent addresses the Company's DA/RT adder and additional topics raised by other parties.

In Staff/900, witness Curtis Dlouhy addresses the Company's modelling of market caps.

In Staff/1000, witness Rose Anderson addresses the Jim Bridger Fuel Plan, coal contracts, Hunter and Huntington coal, coal modeling, Jim Bridger gas conversion, and the Washington Climate Commitment Act (CCA).

In Staff/1100, witness Madison Bolton addresses the calculation of Direct Access rates.

In Staff/1200, witness Itayi Chipanera addresses Production Tax Credits (PTC) and net power cost benefits of wind resources.

Q. Has Staff proposed any recommendations?

A. Yes. Staff's adjustments are:

1. A reduction in Oregon-allocated power costs of $66.21 million to reject the change to the DA/RT as detailed in Staff/800, Issue 1.
2. A reduction in Oregon-allocated power costs of $5.69 million to represent the "third quartile of averages" approach to market caps rather than the "average of averages" as detailed in Staff/900, Issue 1.
3. A downward adjustment of $400,000 to reflect risk reduction value in the Hunter RFP as detailed in Staff/1000, Issue 4.
4. A downward adjustment of **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** related to the Gentry contract, as detailed in Staff/1000, Issue 4.
5. A downward adjustment of **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** to allocate to Oregon the benefits of Oregon's share of permits under Washington's Climate Commitment Act (CCA) , as detailed in Staff/1000, Issue 6.

6. An increase to the Company's Oregon allocated PTC credit of **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** and a decrease in net power costs of **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** based on Staff's adjustment to the Company's forecasted wind generation during the test period as discussed in Staff/1200, Issue 1.

Additionally, Staff proposes the Commission require PacifiCorp to:

7. Host a workshop prior to the filing of each TAM to discuss coal markets and any market impacts on thermal operations as discussed in Staff/700, Issue 2.
8. Include a report on coal unit dispatch with each TAM as discussed in Staff/700, Issue 2.
9. Host workshops be held in future TAMs to discuss ad-hoc changes to Aurora. Staff is open to hearing from the Company, other intervenors, and additional Staff members on the best timing of this workshop.
10. Investigate alternatives to using the current Western EIM benefits forecasting methodology and the "third quartile of averages" method in the 2025 TAM as outlined in Staff/900, Issue 1.
11. Bring forth an estimate of benefits from its participation in the first year of the EDAM as outlined in Staff/900, Issue 1.
12. Use the contractual price of coal volumes in the minimum take tier for coal modeling as discussed in Staff/1000, Issue 1.

13. Include a Step Log that lists the changes from the previous TAM and their cost impacts sequentially as outlined in Staff/1000, Issue 5.

ISSUE 2. COAL MARKETS

Q. Please describe Staff's experience investigating the impact of coal markets and coal availability on PacifiCorp's power costs.

A. The coal market is complex. Interactions of various factors in the market, and how the Company responds to these interactions on a unit-by-unit basis, impact the Company's net variable power costs. In Staff's experience, the current discovery process is not an adequate vehicle for Staff and parties to gather sufficient information about the complex interactions of the coal market and the Company's actions to validate or contest the Company's forecast of coal-related costs.

Q. Why does Staff find it important to have more information on this topic?

A. Staff believes that the coal market is less stable now than in the past and the market has experienced several shocks recently. As the energy economy shifts toward generation that requires lower carbon intensity, the future for coal is less certain even when the Company is still relying on a steady supply of coal to meet load. Staff believes it is important to understand the risks that the Company is facing to ensure adequate resources to meet customer demand. Further, Staff finds it helpful to understand the impacts of coal market changes on the Company's complex system. Each facility may be facing different impacts and it is difficult to understand these decisions without more information about the interactive effects.

Q. Does Staff have recommendations on how to improve understanding and transparency on this topic?

A. Yes. Staff has two recommendations. First, Staff recommends that the Company host a workshop prior to the filing of each TAM to discuss coal markets and any market impacts on thermal operations. In UE 421, the Company provided a workshop to Staff that covered basic coal operations and major coal market factors that affected the Company in 2022. Staff found this presentation immensely helpful and believes annual updates would be valuable to Staff and stakeholders.

Second, Staff recommends that the Company provide additional reporting on its coal generating resources with each TAM filing. Please see Staff/701 where Staff proposes coal thermal dispatch reporting to be filed with future TAMs.

Q. Does this conclude your testimony?

A. Yes.

CASE: UE 420
WITNESS: Anna Kim

PUBLIC UTILITY COMMISSION
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STAFF EXHIBIT 701

Exhibits in Support
Of Rebuttal Testimony

August 16, 2023

Coal-Fired Thermal Generation Report

Parties request that PacifiCorp provide monthly data for its coal-fired thermal generation plants with future TAM filings. The reports should inform as to how PacifiCorp manages its coal fleet and what factors influenced the generation for each plant included in Oregon rates over the given month. Specifically, we request that this report include the following information each month over the calendar year prior to the TAM forecast year:

1. Generation per plant
    a. Forecasted in the previous TAM
    b. Actual
    c. Variance
2. Coal consumption per plant
    a. Forecasted in the previous TAM
    b. Actual
    c. Variance
3. Price of coal for the month at each plant
    a. Forecasted in the previous TAM
    b. Actual
    c. Variance
4. Explanation for running each plant at its monthly output:
    a. In the event that the variance between forecast and actual coal prices or generation at a plant is greater than 5%, explain the difference.
    b. In the event that coal prices have changed, and generation for the plant has not, please provide a rationale for operating the plant at forecasted generation (e.g. plant was the cheapest in the fleet).
    c. In the event that coal prices have not changed but generation for the plant has, please provide a rationale for the reduction in generation (e.g. significant change to load, alternate plant ran, etc.)
    d. In the event that coal prices and generation at a plant is within 5% of the forecasted values, no additional explanation is needed for that plant.
5. Any other items that are relevant to operations of PacifiCorp's coal fleet should be included as an addendum in a separate document.

CASE: UE 420
WITNESS: JULIE JENT

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 800

Rebuttal Testimony

August 16, 2023

Q. Please state your names, occupations, and business address.

A. My name is Julie Jent. I am a Senior Economist in the Energy Costs section of the RSUP Program of the OPUC. My business address is 201 High Street SE, Suite 100, Salem, Oregon 97301.

Q. Are you the same Julie Jent that wrote Opening Testimony in Exh 200?

A. Yes.

Q. Please describe your each of your expertise and educational backgrounds.

A. My witness qualification statement can be found in Exhibit Staff/201.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to address intervenors' opening testimonies and the Company's Reply Testimony on the Transition Adjustment Mechanism (TAM).

Q. How is your testimony organized?

A. My testimony is organized as follows:

ISSUE 1. DA/RT ADJUSTMENT[1]

Q. When was the DA/RT Mechanism approved for use?

A. The DA/RT adjustment was first proposed by PAC in 2015 UE 296 and approved in Order No. 15-394 to "more accurately model day-ahead and real-time system balancing transactions."[2] These balancing sales and purchases are made in advance of the day-ahead and real-time market to better align its resources and expected load. The purpose of the DA/RT price component is to reflect the difference between the average market prices modeled in AURORA and the Company's transaction prices.

In this docket, the Company proposes a change to the DA/RT adjustment, which was previously approved by the Commission.[3]

Q. Restate PAC's recommendation in UE 420.

A. In UE 420, PacifiCorp proposes the same change to the DA/RT adjustment that was proposed in UE 400, which is to change the price component/adders (to the hourly scaled prices from the OFPC) from a dollar value to a percentage of market prices.

Q. How was this issue settled in UE 400?

A. The issue of whether to use percentages for the price adders in DA/RT was settled in a black box stipulation in UE 400 that resulted in an OR allocated unspecified reduction to NPC of $4.9 million; in UE 400 is where most of

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1 Topic is discussed PAC/400, Mitchell, starting on page 20.
2 See UE 296 PAC Reply Testimony in PAC/500, Dickman/14 and also Order No. 15-394.
3 Vitesse also discusses this in Vitesse/100, Johnson/7.

PAC's arguments for this change can be found given that the information was not self-contained within UE 420 opening testimony.

Q. What is the price component?

A. As noted above, the DA/RT price component is to reflect the difference between the average market prices and the Company's transaction prices.

Q. If that is the price component, state what the volume component is.

A. According to the Company, "the volume component reflects additional volumes to account for the use of monthly, daily, and hourly products." The Company states the products used to balance the Company's forward position in the wholesale market are available in flat 25 MW blocks. Thus, in real world operations, the Company must continuously purchase or sell additional volumes to keep the system in balance."[4]

In other words, PacifiCorp states Aurora has perfect foresight and can balance the system with few transactions. However, in the real world, the balancing transactions are not as simple. Therefore, PAC argues that the volume component is a necessary adjustment.

Q. Did other intervenors comment on this issue?

A. Yes. Vitesse, AWEC, and Calpine Solutions commented on this issue. However, PAC responded to Calpine solutions in a separate section of its

4 PAC/400, Mitchell/22.

Reply Testimony as Calpine's discussion on DA/RT is related directly to the calculation of the transition adjustment and Consumer Opt-Out Charge.[5]

Q. Summarize intervenors' Opening Testimony recommendations on this issue.

A. As you can see from Table 1 below, all parties had a monetary adjustment and rejected (at least in-part), PACs recommendation.

TABLE 1: PARTIES' RECOMMENDATIONS ON THE DA/RT ADJUSTMENT

Intervenor	Monetary Adjustment	Additional Recommendations
Staff	$5.21 million	• Reject change to price adders. • Address DA/RT underestimation of off-system sales revenues with market cap methodologies. • Hold workshops in future TAMs to discuss changes to Aurora.
Vitesse	**[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**	• Reject change to price adders even if other two recommendations are adopted.[6]
AWEC	$4.9 million	• Remove the in-model adjustment while retaining the outboard adjustment.[7]

Q. What is Staff's view of other recommendations?

5 PAC discussed Calpine Solutions DA/RT topic in section XXI starting on page 121. Whereas PAC's response to Staff, Vitesse, and AWEC starts on page 20 in section V. Staff addresses the issues raised by Calpine in Staff/1100.

6 Vitesse/100 Johnson/3. Their additional recommendations are covered in their testimony but not restated here as their principal recommendation was to reject the change to the price adders.

7 AWEC/100 Mullins/2-3

A. Staff agrees with Vitesse that this docket does not provide sufficient opportunity to evaluate the change to the DA/RT adjustment proposed by PacifiCorp. Consequently, Staff recommends the Commission reject PacifiCorp's proposed change to the DA/RT adjustment.

Further, Staff does not have enough information to support Vitesse's recommendation **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**. The Company supports Vitesse's recommendation, but Staff expects that part of the support is due to the fact that it would add to NPC costs. As for AWEC's proposal, Staff needs further time to evaluate the impact of removing one component of the DA/RT adjustment and keeping the other.

Q. Does Staff still recommend that the Commission view the adjustment with DA/RT holistically with the market caps proposal?

A. Yes. While the Commission did weigh in on the DA/RT issue in 2017, the Commission can always reconsider its merits. As Staff stated in their Opening Testimony, given that these two ad hoc adjustments have opposing effects on off-system sales revenues, Staff believes that they can be paired together to help the AURORA model better match up to reality and perhaps remove some recurring issues in future TAM proceedings.[8] As stated in Staff/900, "A feasible way to address the issues surrounding the Western EIM, DA/RT adjustment, and the market caps methodology is to analyze the offsetting effects of each of

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[8] Staff/200 Jent/9.

these ad hoc adjustments and use existing techniques to come up with a fair, holistic adjustment for the purposes of this TAM proceeding." Staff also maintains their recommendation that an extensive workshop and workpaper walk-thru be held to discuss all ad-hoc adjustments made to Aurora.

Q. What evidence does the Company provide to rebut Staff's recommendation?

A. Throughout its' testimony, the Company details the following points:

- The Company-proposed change aids in accounting for the volatility caused by prices and system conditions not captured in day-ahead transactions and therefore captures intra-monthly variability.[9]
- The transition to Aurora has not solved for the fact that there are historical price differences between the Company's purchases and sales as compared to the monthly average.[10]
- **[BEGIN CONFIDENTIAL]** [redacted].[11] **[END CONFIDENTIAL]**
- There is no flaw that needs to be addressed in the price component therefore the market caps and DA/RT should be addressed separately.[12]

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9 PAC/400, Mitchell/23-24.
10 PAC/400, Mitchell/23.
11 PAC/400, Mitchell/25.
12 PAC?400, Mitchell/36.

Q. What was PAC's rebuttal to the claim that the Company's proposed modification to the DA/RT adjustment creates artificial losses?

A. The volume component of the DA/RT adds into the NPC forecast a measure of historical arbitrage revenue to offset the impact of using a single price adjustment in the DA/RT *price component* when the sales price exceeds the purchase price.[13] The Company goes on to say, "If the inputs to Aurora for a single market showed a purchase price that was less than the sales price, then Aurora would buy and sell arbitrarily (arbitrage) large volumes of power under this situation,

Q. What is Staff's response?

A. One, Staff is concerned that the Company claims the volume component adds a measure of historical arbitrage revenue to offset the impact of the price component yet also claims to correct this error in their Reply Testimony without much discussion.[14] Two, the artificial losses that Staff describes would not automatically lead to free profit arbitrage opportunities until market prices reached equilibrium and the purchase price was greater than or equal to the sales price.[15] Staff is still concerned that the price adder forces the revenues from megawatts sold lower and forces the expenses from megawatts bought higher.[16]

13 PAC/400, Mitchell/31-33.
14 PAC/400, Mitchell/11.
15 PAC/400, Mitchell/44.
16 This was detailed extensively in UE 400 Staff/200, Cohen.

Q. Was the NPC impact of the DA/RT adjustment updated in the Company's Reply Testimony?

A. Yes, there was a $61M additional increase that accompanied the DA/RT adjustment in PAC's Reply Testimony. The Company stated that they corrected an error in the DA/RT adjustment by removing unsupported artificial arbitrage revenue from the DA/RT volume component.[17] Staff is skeptical that this is a correction. Instead, Staff believes this is a *chang*e to the modeling that should not have been labeled as a correction.

Q. Does Staff have issues with the Company's recent change to the DA/RT that resulted in a $61M addition to NPC?

A. Yes. As Staff currently understands, the Company used to go back and look at historical DA/RT adjustments and make a corresponding adjustment in its NPC report spreadsheets to tie back to historical values.[18] Staff assumes that the Company was not in agreement with what historical values were showing so the Company's "correction" takes out that portion of the adjustment. As a result, Staff is also skeptical of the other "corrections" discussed on pages 10-13 of its' Reply Testimony.

Q. Does Staff have additional comments on the DA/RT?

A. Yes, as CUB and Staff pointed out in testimonies and discussions, PAC wanted to give the illusion that it is simply using last year's methodology for

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[17] PAC/400, Mitchell/11.

[18] The three spreadsheets in question are titled _OR UE-420 ORTAM24_Mitchell_Reply_July 2023 CONF, C04 - DA-RT_NPC_Report CONF, and S02 - DART_Percentile_Adder_NPC_Report CONF. The last two of these spreadsheets were not provided in the company's March Filing.

issues like the DA/RT and market caps. What the Company did not do is explicitly state that these issues were settled in a black box the prior year, and the Company's proposed methodology change was never adopted.[19] PAC started its initial filing with the assumption that this methodology was not only approved but did not require analysis or support in the current docket.

Q. Does Staff have an update to their recommendation with regards to the DA/RT adjustment?

A. Yes, Staff maintains the same recommendations that it had in its Opening Testimony with the addition of one adjustment. My Opening Testimony adjustment was related to the price component of the DA/RT, which I maintain. The second adjustment discussed below is related to the volumetric component, as it was just brought up in PacifiCorp's Reply Testimony. Staff still recommends the Commission:

- Reject the Company's proposed change to price adders that would change the dollar value adder to an adder based on a percentage;
- Address DA/RT underestimation of off-system sales revenues with market cap methodologies; and
- Require PAC to hold workshops in future TAMs to discuss ad-hoc changes to Aurora. Staff is open to hearing from the Company, other intervenors, and additional Staff members on the best timing of this workshop.

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19 CUB/100 Jenks/10 and PAC/100 Mitchell/4.

In addition, Staff recommends that the dollar value adjustment be updated from ($5.21) million to ($66.21) million. This is to reflect the change that PacifiCorp made in their Reply Testimony to the volume component of the DA/RT adjustment.

ISSUE 2. OTHER ISSUES

Q. What is Staff's understanding of the purpose of PAC's section on NPC Validation?

A. In this section, the Company provides support for the requested NPC total of $2.528 billion, based on a historical trend analysis of Company NPC relative to regional market prices.[20]

Q. What additional comments does Staff have regarding NPC validation?

A. Essentially, the Company used the projected monthly 2024 market prices to justify the reasonableness of its 2024 forecast. At this point, there is a clear difference of opinion on whether the large increase to NPC is warranted based on what new costs are forecasted to be in 2024 and how much ongoing costs are expected to increase. While Staff did not dispute the linear regression provided by the Company, Staff does dispute that this projection of market prices can be seen as a way to validate the NPC forecast or that it provides strong support for the overall request as it is known that market prices do have a strong correlation to NPC forecasts.

Q. What additional comments does Staff have regarding Aurora Model Validation?[21]

A. As Staff stated in Opening Testimony, the table the Company provides with the benchmark study is not as helpful to Staff as it could be because each of the columns are not including EIM benefits in the same way. Therefore, it is not an

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20 Pac/100, Mitchell/10 and PAC/400, Mitchell/101.
21 Topic is discussed PAC/400, Mitchell, starting on page 106.

apples-to-apples comparison. The Company does not address this argument in Reply Testimony and claims that a benchmark has been completed, as is required by a previous order. Staff is concerned that the same information will be provided in the next TAM but context will not be given on how each of the model runs is including EIM benefits.

Q. Are there other issues brought up by intervenors that Staff wishes to highlight?

A. Yes, CUB brought up the concern of rate shock, which is a particular concern for big increases that fall on January 1.[22] While PAC's modeling suggests that residential rates will increase 8.2 percent, in CUB's experience, the overall increase experienced by ratepayers may turn out to be much higher than what is initially forecasted. Staff wants to emphasize that this is not the only cost that will be added to rates on January 1, 2024, as there are costs associated with wildfire mitigation, the PCAM, and other assorted single-issue ratemaking mechanisms. The PCAM showed that there was an exceptionally large variance between forecasted and actual power costs for 2022—an increase so large that PAC is proposing to amortize the increase over two years. In January 2023, the typical customer received a 21 percent increase according to a Commission news release.[23] Staff remains cognizant of the potentially large increase as a result of this TAM when combined with other filings that are

[22] CUB/100, Jenks/2-3.
[23] OPUC News Release, PACIFIC POWER CUSTOMER RATES INCREASING JANUARY 1, 2023, *available at* https://www.oregon.gov/puc/news-events/Documents/PR-202226.pdf.

expected to go into effect in the upcoming year. However, Staff does not take a position at this time on CUB's proposal to phase in rate increases.

Q. Does this conclude your testimony?

A. Yes.

CASE: UE 420
WITNESSES: CURTIS DLOUHY

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 900
Market Caps

Opening Testimony

August 16, 2023

Q. Please state your business address, names, and occupations.

A. My name is Dr. Curtis Dlouhy, Ph.D. I am an Economist within the Strategy and Integration (SI) Division of the Public Utility Commission of Oregon (Commission or OPUC). My business address is 201 High Street SE, Suite 100, Salem, Oregon 97301.

Q. Please describe your educational background and work experience.

A. My witness qualifications statement is found in Exhibit Staff/301.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to address parties' and the Company's response to my testimony on market caps.

Q. How is your testimony organized?

A. My testimony is organized as follows:

ISSUE 1. MARKET CAP METHODOLOGY

Q. Please summarize your findings and recommendations on market caps.

A. I recommend that the Company return to using the "third quartile of averages" method to forecast market caps. I, along with Staff Witnesses Anna Kim and Julie Jent, make this recommendation as a way to holistically address off-system sales revenue by reconciling the under-forecast of revenue resulting from the Day-Ahead/Real-Time (DA/RT) adder persistently brought up by Staff and stakeholders, and the Company's perceived over-forecast of revenues resulting from the "third quartile of averages" approach that Staff has recommended in the past two TAM proceedings. Implementing the "third quartile of averages" approach reduces Oregon-allocated NVPC by $5.69 million

Q. Did the Company agree with your testimony?

A. No. The Company argued that it has persistently under-recovered NPC in its PCAM filings due to the persistent over forecasting of off-system sales which led to its proposal to model market caps using the average of averages approach.[1] The Company then compares actual short term sales to forecasted values in PAC/400, Mitchell/55, demonstrating that in the 2022 PCAM, Staff's proposed "third quartile of averages" approach still over forecasted off-system sales.[2] In response to Staff's argument on addressing market caps holistically

[1] PAC/400, Mitchell/52.
[2] PAC/400, Mitchell/55.

with the DA/RT, the Company argues that there are no artificial losses created by the DA/RT and this was recognized by the Commission in 2017.[3] The Company also notes that there is empirical evidence that trading volumes have been trending downward over the past five years at Mid-Columbia.[4] The Company also states that many EIM entities may choose to bid their generators into the EIM rather than transact in the day-ahead timeframe if it appears that the expected EIM price will be higher than the prevailing day-ahead price.

Q. What did stakeholders have to say about the issue in their Opening Testimony?

A. AWEC also noted that the Company did not use the "third quartile of averages" method in this TAM filing and recommends that the Company use this approach.[5] In making this recommendation, it notes that the "third quartile of averages" method was the last Commission-approved method and recommends that the Commission require PacifiCorp to evaluate alternatives to the current approach in the 2025 TAM filing.[6]

Q. The Company states that the trading volumes at Mid-C have been declining for the past five years. Is the "third quartile of averages" method able to pick up that decline?

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[3] PAC/400, Mitchell/72.
[4] PAC/400, Mitchell/59.
[5] AWEC/100, Mullins/6.
[6] AWEC/100, Mullins/6.

A. Yes. The "third quartile of averages" method averages the highest two market capacities over the last four years for each combination of hub-month and HLH/LLH. Therefore, it is a viable way to capture the declining trading volumes that the Company points to as a weakness in Staff's method. Additionally **[BEGIN CONFIDENTIAL]** [redacted]. **[END CONFIDENTIAL]**

Q. Do you think there is reason to view your adjustment to market caps holistically with the DA/RT even if the Commission accepted the methodology in 2017?

A. Yes. While the Commission did weigh in on the DA/RT issue in 2017, the Commission can always reconsider its merits. The Company also fails to point out that the DA/RT adjustment has been brought up in essentially every TAM since then by Staff and stakeholders.

Q. Do you agree with the Company that the "third quartile of averages" over forecasts off-system sales?

A. Yes. Following the Company's comparison of actual off-system sales to the forecasted off-system sales using the "third quartile of averages" method, I agree that the "third quartile of averages" method for setting market caps over forecasts off-system sales.

Q. Do you still believe that the "third quartile of averages" method should be used?

A. Yes. As stated in my Opening Testimony, the “third quartile of averages” method should be viewed holistically with the DA/RT adjustment. After reviewing the Company’s Reply Testimony, Staff is also convinced that this method captures benefits that are currently unmodeled from the Company’s outboard adjustment to model EIM benefits.

Q. The Company states that reserving capacity for the EIM is contributing to the decline in off-system sales. Do you believe that this justifies changing the market cap methodology?

A. No. Staff is generally convinced by the Company that the “third quartile of averages” method over forecasts off-system sales to some degree. However, as Staff advocated for in its Opening Testimony, the use of the “third quartile of averages” method should be viewed holistically with other ad hoc modeling choices made by the Company outside of AURORA, such as the DA/RT adjustment. Given some shortcomings and under forecasting of benefits with the Company’s current Western EIM method, Staff still recommends using the “third quartile of averages” method.

Also, as stated before, the “third quartile of averages” method is just as able to capture declining average sales as the “average of averages” method.

Q. What shortcomings and under forecasting problems do you see with the Company’s Western EIM model?

A. I have concerns that the full benefits of the EIM are being expressed in the TAM. To start, in my Opening Testimony I expressed concerns about the poor model fit of parts of the Company's EIM benefits forecasting model.[7]

Additionally, the Company states that CAISO's WEIM benefits report indicates that the Company received $200 million in benefits in 2022. Staff was interested to see if the Company's current methodology captures something near the full benefit levels reported by CAISO. To investigate this, I took the Company's Western EIM benefits forecast regressions and backcasted them using the 2022 data included in the Company's model. Doing this, the Company's model would forecast a benefit from EIM participation of **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**.

I support the use of using theoretically sound models when possible. In this case, I do not disagree with the theoretical underpinnings of the Company's EIM benefits forecast or the "third quartile of averages" method. This comparison also makes it abundantly clear that the Company's forecast errors offset each other in a way that is holistically fair for customers and provides a suitable proxy for customer benefits.

Q. Is it an anomaly that PacifiCorp's Western EIM benefits were larger in 2022 than what the model would predict in 2022?

A. No, it is a repeated trend dating back to the Company's involvement in the Western EIM. Using the Company's EIM benefits model provided in Staff data

[7] Staff/300, Dlouhy/18.

request 70, I compare the Company's actual EIM benefits with what the forecast would predict if it were backcasted onto previous years.[8] Confidential Table 1 contains the comparison of forecasted and actual EIM benefits according to the Company's model.

Confidential Table 1: Comparison of Forecasted and Actual EIM Benefits

[BEGIN CONFIDENTIAL]

[redacted]

[END CONFIDENTIAL]

[BEGIN CONFIDENTIAL] [redacted] **[END CONFIDENTIAL]**

Q. Do you have any other observations from this table?

A. Yes. As stated before, I recommend using the "third quartile of averages" method to holistically address the DA/RT, market caps, and benefits that accrue to the Company's system through its participation in the Western EIM. In a footnote, I previously note that most times the differences between the CAISO-reported EIM benefits don't vary substantially from the Company reported EIM benefits. **[BEGIN CONFIDENTIAL]** [redacted]

[8] It is worth noting that the Company uses a different methodology to calculate actual EIM benefits than CAISO. In most cases, these values are of similar magnitude.

[redacted]

[END CONFIDENTIAL] Based on this, I have further concerns about the Company's Western EIM forecasting methodology that I hope to investigate in a future TAM proceeding.

Q. Why do you recommend investigating this further in a future TAM and using the "third quartile of averages" method rather than making an adjustment to the Western EIM benefits?

A. As I've argued in this testimony, these two items are related and thus should be viewed holistically. Additionally, the TAM proceedings happen on a more compressed timeline than most general rate case proceedings, so doing a more in-depth analysis of modeling techniques would likely take longer than the TAM schedule allows. Instead, I believe that a more feasible way to address the issues surrounding the Western EIM, DA/RT adjustment, and the market caps methodology is to analyze the offsetting effects of each of these ad hoc adjustments and use existing techniques to come up with a fair, holistic adjustment for the purposes of this TAM proceeding.

Q. Are there other reasons that support the use of the "third quartiles of averages" method when viewed holistically with the Company's participation in the Western EIM?

A. Yes. As stated in the Company's Reply Testimony, it makes an active decision whether to transact at market hubs in the day-ahead market or to hold aside reserves for the Western EIM.[9] Therefore, one would expect that the benefits of trading in the Western EIM or trading at the hubs are not easily separated and likely vary in ways that cannot be identified by any exogenous variables. Offsetting the over forecast of benefits at the hubs through the use of the "third quartile of averages" method with the under forecast of benefits at the Western EIM sidesteps any need to drill down into these difficult to model outboard adjustments.

Q. The Company states that because net generation can only be sold once, either the market caps forecast or the EIM forecast should be reduced in the NPC forecast.[10] Do you agree?

A. No. The EIM benefits forecast happens outside of the model and represents benefits that occur throughout the Company's system that arise from more efficient dispatch and regional coordination. As I stated before, one of the side effects of this regional dispatch is to eat away at the sales that would have otherwise happened in a bilateral market. Therefore, it is more accurate to measure the EIM benefits relative to what the Company would be doing but for its participation in the Western EIM. Using this logic, it should be expected that off-system sales are lower in practice than what the model forecasts.

Q. Do you have any recommendations for the Company beyond this TAM filing?

9 PAC/400, Mitchell/64.
10 PAC/400, Mitchell/68.

A. Yes. I make my recommendation to use the "third quartile of averages" method and the current Western EIM benefits methodology in the 2024 TAM based on the understanding that these forecasts have offsetting effects on total NPC. For the purposes of forecasting NPC, this is workable but not ideal. The Company also notes that it will be participating in the Extended Day-Ahead Market (EDAM) beginning in 2025, which should be expected to confer additional benefits that may not cleanly fit into an AURORA model run. Much like AWEC, I recommend that the Company investigate alternatives to using their current Western EIM benefits forecasting methodology and the "third quartile of averages" method in the 2025 TAM.

Additionally, I recommend that the Company bring forth an estimate of benefits from its participation in the first year of the EDAM. In making this recommendation, recognizing that forecasting benefits for the first year of market operation may prove difficult, I expect that arguments about why current modeling techniques – such as some variant of the market caps methodology – could serve as a suitable proxy for these new benefits.

Q. Does this conclude your testimony?

A. Yes.

CASE: UE 420
WITNESS: Rose Anderson

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 1000

Rebuttal Testimony

August 16, 2023

Q. Please state your name, occupation, and business address.

A. My name is Rose Anderson. I am a Senior Economist employed in the Energy Resource Planning Division of the Public Utility Commission of Oregon (OPUC). My business address is 201 High Street SE., Suite 100, Salem, Oregon 97301.

Q. What is the purpose of your testimony?

A. My testimony responds to PacifiCorp's Reply Testimony on coal and coal-to-gas conversion topics, as well as the Washington Climate Commitment Act (CCA)

Q. Did you prepare an exhibit for this docket?

A. Yes. I prepared Confidential Exhibit Staff/1001 – Coal Testimony Workpapers.

Q. How is your testimony organized?

A. My testimony is organized as follows:

ISSUE 1. COAL MODELING

Q. What are your recommendations for coal modeling in future TAMs?

A. I have two recommendations for future TAMs. First, regarding the average cost run, PacifiCorp should continue to provide an average coal cost run and use the assumptions recommended by Sierra Club in Opening Testimony.[1] Second, PacifiCorp should use the actual price of coal under the minimum take volume in the TAM, **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**.

Q. Please describe your recommendation on the average cost run.

A. The average cost run provided in the 2024 TAM is an important exercise in transparency about the effects of minimum take requirements on customers. This should continue in future TAMs and should utilize the recommendations provided by Sierra Club in its Opening Testimony:

> We recommend that this run should remove any modeling constraints that would result in coal generation that is not economic: the tiered approach with the first tier minimum take being available at $0/MMBtu, the minimum fuel bum constraints, the inclusion of fixed costs for minimum take requirements even if those were not selected, the must run designation for coal units, as well as any other constraint that might result in uneconomic operations of the coal units.

These recommendations all help the average cost run provide the most value as a window into the effects of minimum take provisions on customers.

Q. Please describe your recommendation on minimum take coal prices in the TAM.

[1] Sierra Club/100, Burgess and Roumpani/48.

A. The TAM should use the contractual price of coal volumes in the minimum take tier. In the 2024 TAM, PacifiCorp has used a price of **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** for minimum take volumes. This is unnecessary, because **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**. Using the actual cost of coal under minimum take volumes will result in the Aurora model's shadow prices for its minimum take constraints accurately reflecting the value of increasing the minimum take quantity. Currently, the shadow prices are misleading because they **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**. Using the actual coal cost for minimum take volumes is not a burdensome request and it should only improve the accuracy of modeling in Aurora.

ISSUE 2. JIM BRIDGER FUEL PLAN

Q. Please discuss the modeling in the Jim Bridger Long-Term Fuel Supply Plan (LTFSP) and explain how the Company might be able to improve it.

A. The LTFSP looks at six different scenarios for fueling the Jim Bridger plant, each including various quantities of coal from various sources.[2] While it is useful to understand the costs of six different scenarios, the PLEXOS model PacifiCorp uses may be able to consider many more than six different scenarios in a single model run if the Company allows the model to select coal fuel supplies and mine retirement dates, instead of giving these to the model as inputs. Using the optimization capabilities of the PLEXOS model to select a fueling strategy may help reduce costs at the Bridger plant. The model would be able to consider a wide variety of options, including Sierra Club's requested scenario of Bridger mine retirement in 2025 and Black Butte supply termination at the end of 2023.[3] Staff requests the Company respond in Rebuttal Testimony regarding its ability to give the PLEXOS model a variety of choices of mine and contract quantities and end-dates.

Q. Sierra Club provides a table comparing Jim Bridger costs in PacifiCorp's LTFSP as compared to costs in the 2024 TAM. Please discuss your thoughts about this data.

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[2] PAC/500, Owen/30-31.
[3] Sierra Club/100, Burgess and Roumpani/23.

A. Sierra Club has provided a table showing the difference in Bridger Coal Company (BCC) mine costs between the preferred scenario in the LTFSP and the 2023 TAM. These costs **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**

It is unclear whether PacifiCorp updated the Bridger coal costs and volumes in the TAM update to reflect the LTFSP, which is a more recent analysis than the initial TAM filing. It appears that PacifiCorp did not provide an updated version of its “01 OpsCostSchedules” workpaper with the TAM update. Staff requests PacifiCorp respond in Rebuttal Testimony about whether it updated BCC coal costs and volumes in the TAM update to match the values in the LTFSP. If the Company did not update Bridger coal costs in the TAM update, it should explain why it did not. Staff requests the annual quantities and total costs used in the TAM update be provided in Rebuttal Testimony as well.

ISSUE 3. COAL CONTRACTS

Q. Please discuss your view of the steps PacifiCorp is taking to manage risk in its coal contracts.

A. PacifiCorp has taken some reasonable steps to manage risk, including limiting the duration of its coal contracts and removing minimum take requirements where possible. The Company has also been working to add **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**.

Q. What additional steps would you like to see taken to manage risk?

A. I would like to see the addition of a **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** PacifiCorp should pursue a similar clause for its own protection.

Q. Please describe this protection in more detail.

A. **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** or a similar protection that the coal seller can agree to.

Q. Do you have an adjustment in this TAM based on your recommendation?

A. No. This recommendation will reduce risk in future years but does not affect costs in 2024. Future TAM filings may include recommendations for downward adjustments if the Company has not adequately pursued this recommended protection.

ISSUE 4. HUNTER AND HUNTINGTON COAL

Q. What has PacifiCorp done in its coal contract analysis to reflect the benefits of reduced dispatch at the Hunter and Huntington plants as a result of new resources from the 2020AS RFP?

A. In the analysis supporting its coal contract volumes for the new Hunter contracts, the Company included the expected resource buildout resulting from the 2020AS RFP. This is one reasonable step toward realizing the benefits of reduced dispatch at the Company's Utah coal plants.

Q. Is there more the Company can do to reflect the benefits of reduced dispatch at Hunter and Huntington?

A. Yes. Maximizing the benefits of the new 2020AS RFP resources depends on PacifiCorp attaining maximum flexibility to reduce the amount of generation at Hunter and Huntington in the short-term and long-term. To increase flexibility and reduce risk, one step that PacifiCorp can take is to **[BEGIN HIGHLY CONFIDENTIAL]** [redacted]

[redacted] **[END HIGHLY CONFIDENTIAL]** Staff finds that PacifiCorp should have pursued such a protection in advance of the 2024 TAM. Staff recommends an Oregon-allocated adjustment of $400,000 to reflect the risk reduction value to customers that was lost when PacifiCorp did not **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**. This adjustment was calculated based on the possibility of a carbon price being implemented during the contract's term and the significant expense the minimum take would cause in that event.[4]

Q. The Hunter and Huntington plants are located close to one another and [BEGIN HIGHLY CONFIDENTIAL] [redacted] **[END HIGHLY CONFIDENTIAL]. Please describe the potential for customer benefits from gaining flexibility to burn coal from Huntington contracts at Hunter and vice versa.**

[4] Staff/1001, Anderson/2.

A. Hunter and Huntington have **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** which uses the PLEXOS model, not the Aurora model. The Company has confirmed that economic cycling was allowed in the RFP analysis.[7] Staff requests the Company respond in Rebuttal Testimony regarding whether heat rate curves were considered by the model in the Hunter RFP analysis.

Q. Even if accurate heat rate curves are included in the PLEXOS optimization, are there circumstances where the model might not be able to make the best choice?

A. Yes, assuming the model has been given the full heat rate curves as an input and is able to use them to optimize dispatch between the two plants, dispatch could still turn out to be suboptimal if the Company has contracted for coal quantities at each plant that are higher than optimal and do not allow coal to be used at the other plant. One reason this might occur is a lack of a contract

[5] Aurora GN Heat Rate Definitions CONF.xlsx
[6] Staff/1001, Anderson/1.
[7] PacifiCorp reply to Staff DR 120.

clause to allow for coal to be used flexibly between plants. Another reason is that PAC may receive bids in its RFP that are for suboptimal amounts of coal, especially if the Company does not indicate to the market what quantities would be optimal. For example, it is unclear whether PacifiCorp's RFP for coal at Hunter **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL].**

Q. What is your recommendation for future coal RFPs?

A. In future coal RFPs, PacifiCorp should perform a pre-RFP optimization to determine the amount of coal the Company would like to procure. The results of this analysis should be included in any RFP issued to market or any contract negotiations. The pre-RFP optimization workpapers should be provided in support of any new coal contracts, along with RFP analysis.

Q. Do you have an adjustment in the 2024 TAM?

A. Yes, I recommend a downward adjustment of **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**. This is approximately 10 percent of the Oregon-allocated Gentry coal contract costs and represents the savings that might have been obtained if the Company had **[BEGIN HIGHLY**

CONFIDENTIAL] [redacted] **[END HIGHLY CONFIDENTIAL].**

Q. In Opening Testimony, Staff found that the Aurora model would have [BEGIN CONFIDENTIAL] [redacted] **[END CONFIDENTIAL]. Has this finding changed?**

A. Yes. As discussed earlier, PacifiCorp has included a **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** price of coal for its minimum take quantities. This leads to misleading shadow prices that suggest the model would **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** even when this is not true. Accordingly, Staff modifies its previous statement, and notes **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**.

ISSUE 5. JIM BRIDGER GAS CONVERSION

Q. What response do you have to PacifiCorp's Reply Testimony on the Jim Bridger gas conversion?

A. In Opening Testimony, Staff noted that the NOX emissions rate at the converted Jim Bridger units **[BEGIN CONFIDENTIAL]** [redacted] **[BEGIN CONFIDENTIAL]** at the counterfactual Bridger 1 and 2 coal units. Staff appreciates the Company's explanation in Reply Testimony that the NOX emissions rate at the converted Jim Bridger 1 and 2 units appears higher than the NOX emissions rate at the counterfactual Jim Bridger 1 and 2 coal units because in the counterfactual scenario, Jim Bridger 1 and 2 remain coal fired units and the scenario includes the installation of SCR equipment at these units.[8]

Q. Does this explanation raise any concerns?

A. Yes. Staff would like to use this example to highlight the issues with the Company's current "Step Log." The Step Log appears to indicate that the cost impact of converting Jim Bridger to gas in 2024 is an increase of $134 million over 2023 TAM costs. This is a strikingly large cost increase that might cause some concerns about the costs of gas conversions.

[8] PAC/400, Mitchell/99.

2024 TAM Step Log

	Description	Detail		Impact
ORTAM23			$	1,977,454,591
	Routine Updates		$	98,994,040
Step 1	Trapped Energy	Removing the trapped energy modeling construct in favor of wind curtailment to reflect the realities of system operations.	$	14,354,348
Step 2	Ozone Transport Rule	Impact of the EPA's Ozone Transport Rule on NPC.	$	202,475,788
Step 3	Jim Bridger Outage	Assesses the impact of JB Gas units 1 & 2 going on outage to convert to gas.	$	41,973,900
Step 4	Jim Bridger Gas Conversion	Impact of converting Jim Bridger Coal to Jim Bridger Gas (units 1 and 2).	$	92,194,553
Step 5	WA Cap and Invest	Impact of the WA Cap and Invest program on NPC.	$	72,970,628
Step 6	Klamath Deconstruction	Impact of the deconstruction of the hydroelectric projects on the Klamath river (dam removal).	$	53,467,853
Step 7	Gateway South	Gateway South transmission project in-service by October 2024	$	(19,031,995)
Step 8	Coal Supply Limitations	Impact of the reduced availability of coal for all Company coal-fired plants in Utah	$	107,623,919
ORTAM24			$	2,642,477,625

[9]

However, it is clear from PacifiCorp's Reply Testimony that this cost difference is not an increase above 2023 TAM costs but an increase in comparison to a counterfactual where SCR is installed at Bridger 1 and 2.

Q. Do you have a recommendation regarding PacifiCorp's Step Log?

A. Yes. While the comparison of actual costs to a series of counterfactuals is an informative exercise, it does not accomplish the goal of showing exactly what has changed since the last TAM in a transparent way. In the future, the Company should include a Step Log that lists the changes from the previous

[9] PAC/104, Mitchell 1.

TAM and their cost impacts sequentially. Staff acknowledges that this type of Step Log will not provide an accurate estimate of the cost impact of any one change. But it is Staff's view that the Step Log is meant to transparently show the changes made to the model since the last TAM, not to pinpoint the effect of each change as compared to a counterfactual where that change did not happen. Counterfactual analysis can be very useful in discussing the impacts of various events on NPC, however it may be better to provide this analysis separately from the Step Log.

ISSUE 6. WASHINGTON CCA

Q. What was your position on Washington CCA costs in Opening Testimony, and has your position changed in response to the Company's Reply Testimony?

A. In Opening Testimony, Staff testified that Oregon customers should receive benefits associated with a share of the free permits issued by Washington to PacifiCorp for its Chehalis plant based on costs charged to Oregon for the plant. In Reply Testimony, the Company explained that it has received direction from a Washington agency to allocate the full benefit of the permits to Washington customers. Staff's position has not changed as a result of this information.

Q. Why has your position not changed in light of the direction PAC has received from a Washington agency?

A. PacifiCorp has received a direction from a Washington agency that benefits Washington customers at the expense of Oregon customers. Under normal circumstances in PacifiCorp ratemaking, the value of permits given to Chehalis would be allocated equally between all of the states that pay for the Chehalis plant. This would be an equitable approach. A Washington agency has directed the Company to take an unequitable approach and provide the full value of the permits to Washington customers. This leads to the question of whether ratepayers or the Company should pay for the costs of this unfair requirement. PacifiCorp has assumed that ratepayers will bear the cost, but it is Staff's position that the Company should bear the cost. Staff would be open to a 50-50 sharing agreement in the 2024 TAM, which allows Oregon to receive the benefit of half of the free permits it would otherwise be allocated. The adjustment to the 2024 TAM would be **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**. Further, Staff finds this issue to be a state energy policy and as such should be entirely born by Washington per MSP guidelines. In such a finding by the Commission, the full adjustment would be **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**.

Q. Does this conclude your Testimony?

A. Yes.

CASE: UE 420
WITNESS: Rose Anderson

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF CONFIDENTIAL EXHIBIT 1001

Coal Testimony Workpapers

August 16, 2023

CASE: UE 420
WITNESS: MADISON BOLTON

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 1100

Rebuttal Testimony

August 16, 2023

Q. Please state your name, occupation, and business address.

A. My name is Madison Bolton. I am a Senior Energy and Policy Analyst employed in the Utility Strategy and Integration Division of the Public Utility Commission of Oregon (OPUC). My business address is 201 High Street SE., Suite 100, Salem, Oregon 97301.

Q. Have you previously provided testimony in this case?

A. Yes. In Staff Exhibit/500 I provided testimony on the Company's forecast of qualifying facilities as well as the calculation of Direct Access transition adjustments and the consumer opt-out charge.

Q. What is the purpose of your testimony?

A. I provide a summary of parties' positions regarding the application of the Day-Ahead, Real-Time (DA/RT) adjustment in the Direct Access transition adjustment calculations in PacifiCorp's 2024 Transition Adjustment Mechanism (TAM) filing, Docket No. UE 420. I also make recommendations on the Direct Access transition adjustment calculation methodology, noting this topic will be further examined in Docket No. UM 2024.

ISSUE 1. DIRECT ACCESS AND CONSUMER OPT-OUT CHARGE

Q. What arguments did parties make regarding direct access and consumer opt-out charges in the Transition Adjustment Mechanism?

A. Calpine Solutions (Calpine) witness Kevin Higgins recommends that the Commission should reject PacifiCorp's application of the DA/RT price adjustment in the calculation of transition adjustments for Schedules 294, 295, and 296, and the Consumer Opt-Out Charge. Calpine argues that the calculation of NPC already incorporates the DA/RT adjustment, and since NPC is already a component of the transition adjustment calculation, it is redundant to apply the DA/RT adjustment as PacifiCorp has done. Calpine also contends that PacifiCorp is improperly selective in the application of the DA/RT adjustment, since only the discounted prices associated with market sales are applied and not the premium prices for market purchases.[1]

Q. How did PacifiCorp respond?

A. PacifiCorp witness Ramon Mitchell explains that Calpine's recommendation does not accurately account for how the transition adjustments are calculated. PacifiCorp summarizes the calculation as having three steps: a forecast for NPC that includes the DA/RT adjustment, a forecast that removes an amount of direct access load that includes the DA/RT adjustment, and a calculation of the megawatt-hour (MWh) variance at trading hubs for each generator between the NPC forecasts from the first two steps. The official forward price curve

[1] Calpine Solutions/100, Higgins/4.

(OFPC) used in the third step also includes the DA/RT adjustment to ensure it is consistent with the OFPC in the first two steps.[2]

PacifiCorp also explains that it is appropriate to select only the sales price from the DA/RT adjustment in the third step of the transition adjustment calculation. The Company states that the freed-up energy from the removal of direct access load is assumed to be sold at a market price. Since the freed-up energy is calculated as a generator, it is viewed as energy that can only be sold, not purchased. Therefore, PacifiCorp believes it is necessary to only apply the sales price adjustments from the DA/RT adjustment. Additionally, the Company notes that when direct access load reduces need for market purchases, the impact is calculated in the MWh variance at trading hubs in the third step of the calculation. The trading hub variance uses DA/RT adjusted purchase prices from the second step, therefore the purchase price adjustment is already included in the transition adjustment calculation, contrary to Calpine's argument.

Q. What are your recommendations?

A. First, the recommendations related to the DA/RT adjustment outlined by witness Julie Jent in Staff/200 also apply to this issue and could impact the application of the DA/RT in these calculations.

Second, I believe that PacifiCorp's explanation of the DA/RT adjustment's application in transition adjustments is reasonable at this time. Because the OFPC should remain consistent between all three steps of the transition

[2] PAC/400, Mitchell/122-123.

adjustment calculation, applying the DA/RT adjustment as part of the third step in the calculation makes sense in this context. However, the issues around transition charges are best addressed during the contested case in the ongoing direct access investigation, Docket No. UM 2024. Until more holistic arguments and determinations can be made in UM 2024, Staff is inclined to recommend that the transition adjustment be calculated as proposed for this TAM filing.

Q. Does this conclude your testimony?

A. Yes.

CASE: UE 420
WITNESS: Itayi Chipanera

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 1200

Rebuttal Testimony

August 16, 2023

Q. Please state your name, occupation, and business address.

A. My name is Itayi Chipanera. I am a Senior Financial Analyst employed in the Accounting and Finance Section of the Rates, Safety and Utility Performance Program of the Public Utility Commission of Oregon. My business address is 201 High Street SE, Suite 100, Salem, Oregon 97301.

Q. Have you previously provided testimony in this case?

A. Yes. My Opening Testimony is found in Exhibit No. Staff/600 and my witness qualification statement is provided in Exhibit No. Staff/601.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to respond to PacifiCorp's rebuttal testimony regarding wind forecasting and production tax credits (PTC) in the Company's 2024 Transition Adjustment Mechanism (TAM) filing, UE 420.

Q. Did you prepare any exhibits for this docket?

A. No.

Q. How is your testimony organized?

A. My testimony is organized as follows:

WIND PRODUCTION FORECASTING AND PRODUCTION TAX CREDITS.

Q. What is Staff's recommendation regarding the Company's wind production forecasting and calculation of PTCs for the TAM?

A. Staff believes PacifiCorp has under forecast the generation of some of its wind plants and therefore, under forecast PTCs for the Test Year. Addressing the under forecast results in an adjustment to PacifiCorp's 2024 Test Year PTCs of **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**and an additional adjustment of **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** to power costs to account for the increased availability of lower cost wind generation.

Q. How do you respond to the Company's assertion that Staff's forecast adjusted 2019 data instead of 2021 to account for the 2021 Aeolus fire substation fire outage?

A. Staff excluded production values from 2019 in their entirety for forecasting purposes. The Company points out in its rebuttal testimony that higher values observed in years after 2019 are due to wind plant repowering efforts rather than a production disruption. No adjustments were made to the 2021 data values for purposes of calculating the adjustments proposed in opening testimony.

Q. Has Staff made any further changes to the year 2021 production data to address the Aeolus substation fire outage and revised its forecast?

A. Yes. Staff has adjusted the data from 2021 on three facilities, which in Staff's judgement were affected by the Aeolus substation fire outage. Production data recorded for the month of October 2021 was adjusted to reflect what the output might have been under normal operating conditions. Adjusting the 2021 data for what is probably a one-time event in Staff's view is more likely to produce more accurate forecast values and fair rates for customers.

Q. How did Staff identify the facilities whose data needed an adjustment?

A. According to media reports, the Aeolus substation fire occurred on September 29, 2021[1]. Any notable drop in production would be observed in the data in the period immediately after the disruption. Staff examined monthly production data from the Company and compared data on the same facilities between 2021 and 2022. Production dropped by a range of 23 percent to 40 percent in the month of October 2021 at three facilities. To correct for the observed drop in production, the October 2021 production values were replaced with October 2022 values at the outage affected facilities. Staff's 2021 data adjustment assumes that October 2022 recorded data is reflective of the level of production that should have been recorded in October 2021.

Q. How does your proposed forecast change after adjusting the 2021 production output?

A. Staff's revised production forecast changed from **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**, an increase of **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**.

[1] Early morning fire destroys transformer at RMP's Aeolus substation in Medicine Bow

Q. How does your proposed production tax credit forecast amount change because of the revised production forecast?

A. The proposed production tax credits increase changed from [**BEGIN CONFIDENTIAL]** [redacted] [**END CONFIDENTIAL]**.

Q. Is there any other adjustment related to Staff's wind forecast you would like to discuss?

A. Yes. Staff proposes a reduction to net power costs of [**BEGIN CONFIDENTIAL]** [redacted] [**END CONFIDENTIAL]** based on the increased forecast to wind production.

Q. Does this conclude your testimony?

A. Yes.