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August 19, 2016

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Attn: Filing Center

Re: UE 307 – Errata Filing

Commission Staff hereby submits the attached errata to Staff Witness Dr. Kaufman's Rebuttal/Cross-Answering Testimony in UE 307. This filing contains the following changes:

- The page numbers referenced in Staff/400, Kaufman/1 have been updated.
- The reference in footnote 2 on Staff/400, Kaufman/2 changed from Staff/506 to Staff/406.
- The reference in footnote 4 on Staff/400, Kaufman/3 changed from Staff/506 to Staff/406.
- Staff/400, Kaufman/42, lines 7-8 are changed to read "PacifiCorp's own fuel risk management appears to place the entire burden of minimum take requirements on flexible inventory and uneconomic dispatch."
- The confidential figures and corresponding discussion in Staff/400, Kaufman/32, line 16 have been revised due to an excel cell reference to GRID sale dollars instead of GRID sale volumes.
- Staff/400, Kaufman/33, Figure 6 has been updated for clarity and consistency. The confidential figure in column 2, row 3 has been updated to reflect sales in MWh rather than sales in dollars.
- Staff/400, Kaufman/33, lines 5-7 have been updated to be consistent with the changes to Staff/400, Kaufman/32, line 16 and to match Figure 6.

Included with this filing are the updated redacted pages. Confidential materials will be mailed to those parties that have signed the protective order in this docket.

Sincerely,

Sommer Moser
Assistant Attorney General
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Q. Please state your name, occupation, and business address.

A. My name is Lance Kaufman. I am a Senior Economist employed in the Energy, Rates, Audits, and Finance 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, My previous testimony is Staff/200.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to respond to parties regarding Jim Bridger coal costs, the DA-RT adjustments, costs related to take-or-pay requirements and PacifiCorp's avian related wind curtailment.

Q. Did you prepare an exhibit for this docket?

A. Yes. I prepared exhibit Staff/401, excerpts of Staff/200 workpapers; Staff/402, rail transportation estimates; Staff/403, 20 year coal model, Staff/404, EVA website; Staff/405 PacifiCorp market transactions summary; Staff/406, PacifiCorp non-confidential responses to data requests, and Staff/407, Confidential responses to data requests.

Q. How is your testimony organized?

A. My testimony is organized as follows:

ISSUE 1, JIM BRIDGER COAL COSTS

Q. Please summarize Staff's position regarding PacifiCorp's obligation to analyze fuel supply options for Jim Bridger Plant?

A. The majority of Jim Bridger Plant's fuel is sourced from Bridger Coal Company (BCC). The coal costs for BCC have escalated rapidly since 2005.[1] PacifiCorp has an ongoing obligation to evaluate the least-cost/least-risk fuel sources for the Jim Bridger Plant, including evaluations of market alternatives to BCC coal. However, PacifiCorp performed no multi-year cost analysis of market alternatives until order to do so by the Commission.[2] PacifiCorp complied with Order 13-387 by filing its the Long-Term Fuel Supply Plan for Jim Bridger (Long Term Plan) on December 30, 2015 – more than 2 years after the Commission's order. Staff does not agree with the Company that its analysis in the Long Term Plan is adequate to ensure that ratepayers are paying for the least-cost/least-risk fuel resources for Jim Bridger Plant in 2017 and over the long-term.[3] Prudent management of Jim Bridger's fuel supply would have included a long term comparison of PRB and BCC prior to major investments and after substantial market changes. This means that PacifiCorp should have

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[1] *See* Staff/200, Kaufman/29.
[2] Staff/406, Kaufman/23 and Kaufman/32 through Kaufman/37, PacifiCorp Responses to Staff DR 221, Staff DR 239, Staff DR 240, Staff DR 244, and Staff DR 247. PacifiCorp claims to have evaluated PRB as a fueling source in 2013. However, this evaluation was limited to estimating the BCC closure costs and Jim Bridger facility upgrade costs. PacifiCorp does not appear to have weighed potential ongoing fuel savings against the fixed costs.
[3] Staff/200, Kaufman/59 to Kaufman/64.

evaluated PRB in 2005, before investing in the BCC's underground operations, and again in 2013, after BCC costs escalated substantially.[4] Other parties have repeatedly sought to evaluate BCC coal against market sources.[5] Because PacifiCorp did not meet its obligation to analyze least-cost/least-risk fueling sources for Jim Bridger, Staff recommends that the Commission impose a disallowance on the Company. In its opening testimony and again in this testimony, Staff demonstrates that had PacifiCorp performed such an analysis, PacifiCorp would have found switching to PRB coal in 2017 saves customers [redacted] in present value revenue requirement (PVRR).[6]

Staff's proposed disallowance is not grounded in the results of the Jim Bridger long term coal cost analysis, but in the fact that PacifiCorp failed to perform such long term analysis in a timely manner. Staff proposes that the size of the disallowance be calculated as the difference between the 2017 cost to use PRB versus BCC fuel at Jim Bridger Plant.[7]

Q. Please summarize Staff's recommendation to the Commission to address PacifiCorp's imprudence.

A. Staff recommends the Commission impose a $95.2 million ($23.5 million Oregon-allocated) prudence disallowance based on the 2017 TAM savings

[4] PacifiCorp claims that the 2005 investment included an analysis of PRB coal, however, they have not provided any documentation of such analysis. *See* Staff/406, Kaufman/23 and Kaufman/32 through Kaufman/37, PacifiCorp Response to Staff DR 221, Staff DR 240, Staff DR 239, Staff DR 244, and Staff DR 247.
[5] *See* Staff/200, Kaufman/58.
[6] *See* Staff/403, Kaufman/1.
[7] Staff's calculations for both scenarios include Jim Bridger facility upgrade costs and BCC closure costs.

ISSUE 2, DA-RT ADJUSTMENT

Q. What is Staff's position regarding the DA-RT adjustment?

A. Staff's position is that:

- The DA-RT adjustment is arbitrary;
- The DA-RT adjustment does not increase accuracy of the NPC;
- Properly correlating load and market prices is a more appropriate remedy to PacifiCorp's concerns regarding system balancing transactions; and
- PacifiCorp is capable of properly implementing correlated load and market in GRID.

Q. Where does PacifiCorp agree with Staff?

A. PacifiCorp agrees that refining the forward price curve is a potential solution. PacifiCorp disagrees with Staff's other three positions.

Q. Please provide evidence that the DA-RT adjustment is arbitrary.

A. There are two very clear signs that the DA-RT adjustment is arbitrary. First, PacifiCorp's Reply Update forecasts [redacted] percent fewer transactions than PacifiCorp's Direct filing. However, The Reply Update DA-RT adjustment [redacted]. The specific values are provided in the Figure below.

[redacted]

The Company's rationale for the DA-RT adjustment is that real time transactions are more costly than GRID recognizes. According to the Company's rationale, decreasing real time transactions by [redacted] percent should decrease the DA-RT adjustment but in practice it has a negligible effect.

The problems with DA-RT are acutely highlighted by calculating the DA-RT adjustment under a scenario when PacifiCorp is expected to make no market transactions. Staff modified the Reply Update GRID inputs to restrict market sales to zero.[65] Under this scenario, where PacifiCorp makes no market sales, there should be no costs for system balancing. However, the DA-RT adjustment was [redacted].

Q. Why does Staff think the DA-RT adjustment does not increase the accuracy of the NPC forecast?

A. PacifiCorp creates the illusion of a link between market transaction costs and GRID performance. PacifiCorp accomplishes this by observing that it has recently under-forecasted NPC, then observing that PacifiCorp tends to make more purchases above the average monthly price and more sales below the

[65] Staff accomplished this by changing the market capacity to 0.01 MW for every period.

the lowest marginal price.[78] The error caused the Company to overestimate NPC.

Q. Staff's Opening Testimony states that PacifiCorp should include inventory flexibility in its modeling of take-or-pay requirements. The Company contends that your proposal lacks specificity.[79] Please respond.

A. PacifiCorp's own fuel risk management appears to place the entire burden of minimum take requirements on flexible inventory and uneconomic dispatch.[80] Given that PacifiCorp's own hedging policy is to use inventory capacity to manage minimum take requirements, it is reasonable to expect them to have a specific plan with regards to how to model this relationship. If PacifiCorp did not have specifics in mind when it chose to rely on inventory levels to absorb minimum take requirements, Staff proposes that PacifiCorp allow 2017 year-end inventory levels to reach maximum capacity prior to artificially modifying dispatch tier GRID prices.

Q. Staff's Opening Testimony did not provide a dollar figure for its adjustment. Can you provide an update?

A. Yes, Staff calculates that the cost of minimum take requirements under the initial filing to be $16,268,297 on a system basis. The Company's Reply filing

[78] *See* Staff/407, Kaufman/1, PacifiCorp response to Staff 200.
[79] *See* PAC/400, Dickman/50, lines 6-10.
[80] *See* Staff/406, Kaufman/26, PacifiCorp response to Staff DR 231. The Response to DR 231 also references PacifiCorp's coal inventory policy, the 2010 version of this policy is provided in Staff/212. Staff has reviewed both the 2010 policy and the nearly identical 2013 policy. The report and analysis supporting the coal inventory policy does not evaluate the cost risk associated with take-or-pay requirements.

CERTIFICATE OF SERVICE

UE 307

I certify that I have, this day, served the foregoing document upon all 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, to the following parties or attorneys of parties.

Dated this 19th day of August, 2016 at Salem, Oregon

Kay Barnes

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