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October 5, 2016

VIA ELECTRONIC FILING

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Public Utility Commission of Oregon
PO Box 1088
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Re: UE 307– In the Matter PACIFICORP, dba PACIFIC POWER, 2017 Transition Adjustment Mechanism

Attention Filing Center:

Attached for filing in the above-captioned docket is an electronic copy of PacifiCorp's Reply Brief. The confidential pages will follow via U.S. Mail to qualified persons.

Please contact this office with any questions.

Very truly yours,

Katherine McDowell

Attachment

CERTIFICATE OF SERVICE

I certify that I served a true and correct copy of PacifiCorp's Reply Brief in Docket UE 307 on the parties listed below via electronic and/or U.S. Mail delivery.

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BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

In the Matter of: PACIFICORP d/b/a PACIFIC POWER 2017 Transition Adjustment Mechanism.	**UE 307**

PACIFICORP'S REPLY BRIEF

REDACTED

October 5, 2016

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I. INTRODUCTION

PacifiCorp d/b/a Pacific Power (PacifiCorp or Company) respectfully submits this reply brief to the Public Utility Commission of Oregon (Commission), addressing the response briefs filed by Staff, the Citizens' Utility Board of Oregon (CUB), the Industrial Customers of Northwest Utilities (ICNU), and Noble Americas Energy Solutions LLC (Noble Solutions).

In the 2017 Transition Adjustment Mechanism (TAM), PacifiCorp seeks a revenue increase of $16.2 million, or 1.3 percent overall.[1] The parties have proposed several major adjustments, which combined would produce an unrealistically low net power cost (NPC) baseline and a revenue decrease of approximately $26 million. This result is contrary to the goal of the TAM, which is to produce the most accurate NPC forecast possible.[2] The parties fail to address whether their adjustments increase forecast accuracy. Staff even contends that the reasonableness of the overall NPC baseline and the Company's historical under-recovery of NPC are irrelevant considerations in this case.[3]

The parties approach this case in a vacuum, ignoring that the Commission recently considered and rejected virtually all of the adjustments they propose. Instead of addressing how their adjustments make sense in the context of recent Commission decisions, the parties present their claims as if the Commission is reviewing them for the first time.

Staff's $23 million adjustment for Jim Bridger fueling costs is illustrative. Less than three years ago in Order No. 13-387, the Commission found that the Company's current

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[1] Unless otherwise noted, all amounts stated are Oregon-allocated values.

[2] *In the Matter of PacifiCorp d/b/a Pacific Power 2013 Transition Adjustment Mechanism*, Docket No. UE 245, Order No. 12-409 at 7 (Oct. 29, 2012).

[3] Staff's Response Brief at 4.

fueling strategy for the Jim Bridger plant was "fair, just and reasonable."[4] Staff claims that the Company was imprudent for not dramatically changing its current fueling strategy in 2013, without addressing the Commission's approval of that strategy that same year. Staff's response brief does not even cite Order No. 13-387, which is central to assessing the objective reasonableness of the Company's fuel strategy.[5] Staff improperly bases its claim of imprudence on the results of a single quantitative analysis (which is inaccurate), without consideration of the broader economic, operational, and regulatory circumstances that show the Company acted reasonably.

Similarly, the parties challenge the system balancing transactions adjustment as if the Commission did not approve it in the 2016 TAM in a detailed order based on a fully developed record. The parties have not raised issues the Commission did not consider last year, nor have they demonstrated that the Commission's order resulted in decreased forecast accuracy or other unintended consequences. Despite near unanimous agreement that the Company experiences system balancing costs that are not otherwise reflected in the NPC forecast, the parties seek complete elimination of the system balancing transactions adjustment without proposing any viable, alternative method of modeling these costs.

The Commission also considered and approved the Company's calculation of Energy Imbalance Market (EIM) benefits in the 2016 TAM. The Company's total-system EIM benefits increased from $10.3 million in the 2016 TAM to $23.7 million in the 2017 TAM, demonstrating both the success of the EIM and the efficacy of the Company's benefit

[4] *In the Matter of PacifiCorp, d/b/a Pacific Power, 2014 Transition Adjustment Mechanism*, Docket No. UE 264, Order No. 13-387 at 6 (Oct. 28, 2013).
[5] Staff's only citation is footnote 44, noting that PacifiCorp cited Order No. 13-387 in its opening brief.

calculation.[6] Staff and CUB unfairly seek to impute additional benefits by double-counting the intra-regional EIM benefits already accounted for in GRID. Staff and CUB also propose various purported improvements designed to simplify the calculation—in actuality, their proposals are just as complex, less accurate, and admittedly erroneous.

With these three adjustments, as well as the other adjustments related to coal plant dispatch and supply contracts, Qualifying Facility (QF) modeling, the prudence of the Company's wind projects, and direct access, the parties raised many issues—but none of them are new or unresolved. The Company's 2017 TAM is fully consistent with recent Commission decisions, which resulted in greater alignment between PacifiCorp's forecast and actual NPC. The NPC forecast in the Company's reply update is reasonable and the Commission should approve it, subject to the final TAM update.

II. ARGUMENT

A. The Jim Bridger fueling strategy is prudent and the coal costs included in the 2017 TAM are reasonable.

The Company demonstrated that its fuel supply for the Jim Bridger plant is objectively reasonable. In 2017, the Company will rely on the fuel supply strategy the Commission approved in Order No. 13-387, while continuing to plan for and develop an alternative, long-term source of supply from the Powder River Basin (PRB).

It is undisputed that the conversion of the Jim Bridger plant to solely PRB coal supply requires a multi-year, multi-million-dollar plant retrofit and technical challenges, and will be irreversible.[7] In its 2015 Long-Term Fuel Plan, the Company proposed an orderly transition to PRB coal supply beginning in 2023, tied to the depletion and closure of the Bridger Coal

[6] PAC/100, Dickman/26; PAC/400, Dickman/56.
[7] PAC/500, Ralston/16, 26-27; PAC/1000, Ralston/23, 29.

Company's (BCC) underground mine.[8] To ensure appropriate review, the Company asked the Commission to open an expedited planning docket, supported by an update to the Long-Term Fuel Plan to address recent market changes and other issues raised in this case.

While Staff accepts the Company's proposal for a long-term planning docket, it continues to advocate for a $23.5 million prudence disallowance.[9] Staff claims that the Company's BCC/Black Butte fuel supply for the Jim Bridger plant is unreasonable, but ignores key components of the Company's case, most notably the Commission's 2013 order approving the reasonableness of that supply strategy. Staff also ignores all of the Company's evidence except four particular analyses, wrongly implying that this is the full extent of the Company's case.[10]

Because Staff cannot demonstrate the Company acted contrary to Commission directives or failed to consider and reasonably develop an alternative, long-term fuel supply from the PRB, Staff relies solely on the claim that the Company was imprudent for failing to conduct a 20-year present value revenue requirement differential (PVRR(d)) analysis of PRB coal supply, with aggressive assumptions, to justify an expedited conversion to PRB coal supply by 2017.[11]

Staff's position that the Company was imprudent for not conducting a particular analysis at a particular time cannot be squared with Staff's agreement to the Company's articulation of the Commission's prudence standard.[12] This standard requires the Company

[8] PAC/500, Ralston/10.
[9] Staff's Response Brief at 25.
[10] *Id.* at 6.
[11] *Id.*
[12] *Id.* at 5.

to show that its actions are objectively reasonable; it does not prescribe an exact process, documentation or outcome, such as that argued by Staff in this case.[13]

Staff's position is also inconsistent with the long-term planning process adopted by the Commission in Order No. 13-387 and outlined in the Company's compliance filing in 2014. There, the Company proposed and all parties accepted without comment: (1) a multi-year assessment to address the economics of continued coal supply from BCC, with variable form and content depending on the circumstances; and (2) a five-year planning cycle unless major milestones require more frequent updates.[14] Staff never asserted that the Company had an underlying obligation to perform a 20-year PVRR(d) analysis of PRB coal to justify continuation of its approved fuel supply strategy in each TAM proceeding. The long-term fuel plan process assumes a five-year planning cycle,[15] supporting the reasonableness of the Company maintaining the fuel strategy approved in the 2013 TAM through the 2017 TAM, while the Company continues to develop and assess alternative supply options for the future.

1. The Company regularly assessed market alternatives to BCC coal.

The Company's planning process to develop the least-cost, least-risk fueling plan for the Jim Bridger plant includes annual BCC mine plans, annual 10-year budget plans, and biennial life-of-plant fuel plans to develop a strategy for least-cost, least-risk fueling of the Jim Bridger plant.[16] Staff dismisses these plans, claiming that they do not evaluate market alternatives to BCC coal.[17] But Staff's own analysis in this case relies on the forecasted

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[13] PacifiCorp's Opening Brief at 9; *see In the Matter of PacifiCorp d/b/a/ Pacific Power Request for General Rate Revision*, Docket No. UE 246, Order No. 12-493 at 25 (Dec. 20, 2012); *In the Matter of PacifiCorp, d/b/a Pacific Power, 2012 Transition Adjustment Mechanism*, Docket No. UE 227, Order No. 11-435 at 7 (Nov. 4, 2011).
[14] PAC/501 (Docket No. UE 287, PAC/201).
[15] PAC/501.
[16] PAC/1000, Ralston/8.
[17] Staff's Response Brief at 6.

Black Butte and PRB prices taken directly from these planning documents, conclusively demonstrating that the Company's planning includes third-party suppliers.[18]

In addition to comprehensive planning, the Company also demonstrated that it assessed market alternatives through a 2014 request for proposals (RFP) for Jim Bridger fuel supply, which was distributed to all potential market suppliers, including PRB mines.[19] This RFP led to the Black Butte contract, which was approved for inclusion in the 2016 TAM without objection.[20] Staff's testimony and brief omit any mention of this RFP—which is irrefutable proof of the Company's continuing assessment of market alternatives—and Staff now seeks to disallow the Black Butte contract.

2. The Company's planning process was reasonable, even though it did not include a 20-year PVRR(d) analysis of PRB coal in 2013.

It is uncontroverted that the Company evaluated PRB coal supply before, during, and after 2013.[21] Based on these evaluations, including the Black and Veatch study estimating the cost of PRB conversion at over [redacted] (total plant), PacifiCorp reasonably concluded in 2013 that PRB coal remained an infeasible and uneconomic fuel supply.[22] Staff is incorrect that the prudence standard required PacifiCorp to reject the report of its reputable consultant, conduct a 20-year PVRR(d) analysis of PRB conversion in 2013 as if the report did not exist, and begin the conversion in 2013 on this basis.

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[18] Staff/611 at 14 (indicating Staff's Black Butte pricing was taken from PacifiCorp planning documents); Staff/200, Kaufman/51 (referencing PacifiCorp's inclusion of PRB market prices in planning documents as evidence that PRB is a valid market alternative to BCC); Staff/200, Kaufman/53 (relying on PacifiCorp market forecasts for PRB pricing); Staff/246 (PacifiCorp's Jim Bridger plant market forecast used in Staff's analysis).

[19] PAC/1000, Ralston/3.

[20] PAC/1000, Ralston/6; *In the Matter of PacifiCorp*, Dockets Nos. UM 995, UE 121, & UC 578, Order No. 02-469 at 7 (July 18, 2002) (if neither the Commission nor parties propose a change to particular rate base item, then item deemed approved even if not specifically addressed in final order).

[21] A summary of the evidence of the Company's evaluation of PRB coal supply between 2003 and 2015 is set forth on pages 6-8 of PacifiCorp's Opening Brief.

[22] Highly Confidential Transcript (HC TR.) TR. 10 (Ralston).

3. In 2013, BCC coal remained the least-cost fuel for the Jim Bridger plant.

Staff incorrectly claims that the Company was aware that in 2013, BCC's unit costs of [redacted] per ton were above PRB coal costs and expected to escalate.[23] Staff relies on a flawed and incomplete calculation to derive 2013 PRB unit costs of [redacted] per ton, compared to the Company's [redacted] per ton calculation. Staff's price is significantly understated because it uses the wrong PRB coal price (Staff used the September 2014 8,400 Btu/lb. price, not the September 2013 8,800 Btu/lb. price), excludes the fuel surcharge, anti-freeze/dust suppression and handling costs, and omits the costs for the Btu/lb. adjustment, capital costs for PRB conversion, and all costs related to the closure of the BCC mine.[24]

Staff faults the Company for purportedly relying on 2013 pricing only in assessing PRB conversion.[25] The record is clear, however, that the Company relied on other factors in assessing PRB conversion, including the prohibitively high costs of conversion, and the Commission's finding that BCC and Black Butte provided a reasonable, stable coal supply.[26]

4. Staff cannot reconcile its testimony in previous TAMs with its characterization of the historical record in this case.

The record here includes Staff's past testimony confirming the reasonableness of the Company's fueling strategy for the Jim Bridger plant.[27] In its response brief, Staff asks the Commission to ignore Staff's prior, contradictory testimony because the Commission is not

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[23] Staff's Response Brief at 7, 10.

[24] PAC/500, Ralston/17-18, 20; PAC/1003 Revised; PAC/1210; Executive Session Transcript (ES TR.) 21 (Ralston).

[25] Staff's Response Brief at 7. Pointing to BCC prices in a single future year, 2027, Staff claims that BCC unit costs were forecast to increase to [redacted] per ton. In 2027, however, BCC volumes were forecast to be unusually low, so this yearly price is aberrational. To illustrate, in the Company's most recent mine plan, BCC prices ranged from [redacted] per ton for 2025-2037 for every year except 2030, which was [redacted] per ton due to relatively low production in that year. See Staff/227, Kaufman/20, 24.

[26] HC TR. 10 (Ralston); Order No. 13-387 at 6; PAC/600, Dalley/14-15.

[27] *See, e.g.,* PAC/600, Dalley/11-16; PAC/601, Dalley/6.

bound by its previous orders.[28] Staff's argument misses the point of this evidence, which is to demonstrate Staff's improper hindsight review in this case. Staff's contemporaneous support of the Company's fuel supply strategy cannot be reconciled with its current position that BCC costs were escalating rapidly since 2010 and the Company should have reacted by converting to PRB coal starting in 2013.[29]

5. Staff's PVRR(d) analysis is flawed; as corrected, it demonstrates that continued reliance on BCC and Black Butte coal was least-cost, least-risk by a substantial margin.

a. PacifiCorp's 2013 base case uses the correct forecast prices.

In its surrebuttal testimony, the Company presented a corrected version of Staff's PVRR(d) analysis that compared a base case, which modeled continued reliance on BCC and Black Butte, and a market case, which modeled a transition to PRB coal.[30] The Company's analysis demonstrated that continued reliance on BCC and Black Butte resulted in customer benefits of nearly [redacted].[31]

Staff claims that the Company's PVRR(d) analysis is flawed because it relied on forecast BCC prices that were used in a mine plan that was not finalized until December 2013, even though the Company testified that it would have had to decide to switch to PRB coal in fall 2013.[32] Staff is splitting hairs—while the mine plan was not approved until December 2013, the mine plan was substantially completed in fall 2013 and is referred to in the record as the fall 2013 plan.[33] There is nothing improper about using the mine plan developed in late 2013 to assess a decision that would have been made in late 2013.

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[28] Staff's Response Brief at 9.
[29] PAC/1100, Dalley/8-9; Staff/400, Kaufman/4.
[30] PAC/1003 Revised.
[31] *Id.*; PAC/1210.
[32] Staff's Response Brief at 11.
[33] *See, e.g.*, PAC/1210.

Staff's analysis relies on 2012 BCC forecasts that did not include the assumption that the underground mine would close in 2024.[34] Staff's position that the Company should have made a decision to convert to PRB coal in 2013 using out-of-date pricing is unreasonable.

The comparison of forecast BCC prices used by Staff and the Company is also noteworthy because its shows that between 2012 and 2013, BCC prices decreased.[35] Thus, in 2013, when Staff claims that the Company was aware of rapidly escalating BCC prices and should have begun the conversion to PRB coal, BCC costs were actually decreasing.

b. The Company's base case reasonably excluded the capital investments required for PRB coal.

The base case in the Company's corrected PVRR(d) analysis did not include a transition to PRB coal (or the capital costs of conversion), consistent with the Company's long-term planning in 2013.[36] Staff criticizes the Company's base case, claiming that in 2013, the Company knew that Black Butte could not replace BCC's underground operations.[37] According to Staff, the Company should have known that it would require PRB coal, making the capital investments to receive PRB coal unavoidable even in the base case. Staff makes three points to support this claim, none of which are persuasive.

First, Staff claims that the Company requested engineering studies related to PRB coal, which indicates that the Company was planning a conversion.[38] This ignores the Company's testimony that the studies were part of the Company's ongoing assessment of PRB as a market alternative to BCC. After the Company received the 2013 Black and

[34] Staff/611 at 14.
[35] *Id.*
[36] PAC/1000, Ralston/32; PAC/1210.
[37] Staff's Response Brief at 12.
[38] *Id.*

Veatch study, it determined that PRB was not a viable replacement at that time.[39] The fact the Company requested studies does not suggest that it was committed to PRB coal conversion regardless of the outcome of the studies.

Second, Staff claims the Company was aware that Black Butte coal could not produce sufficient volumes to replace BCC's underground operation when it closed at the end of 2023.[40] Staff's only basis for this claim, however, is a 2010 coal inventory study that describes Black Butte's estimated production levels at that time.[41] Staff's reliance on a 2010 coal inventory study to determine the 2024 production level at Black Butte is unpersuasive. The Company testified that, as of 2013, Black Butte coal was the preferred alternative to BCC underground coal, a conclusion that reasonably assumed that long-term production at the Black Butte mine would increase to meet demand.[42]

Third, Staff claims that the Jim Bridger plant would require the same rail infrastructure investments to receive Black Butte coal as PRB coal.[43] Staff provides no evidence to support this claim, which ignores the key fact that the Black Butte mine is only 20 miles away from the Jim Bridger plant, which allows for transportation by rail or truck.[44]

c. The Company reasonably relied on the capital costs included in the Black and Veatch study.

In 2013, the Company requested an engineering study from Black and Veatch detailing the *minimum* capital costs necessary to allow the Jim Bridger plant to transition to PRB coal. That study identified capital costs of over [redacted] (total plant).[45] Staff

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[39] HC TR. 10 (Ralston).
[40] Staff's Response Brief at 13.
[41] Staff/212, Kaufman/14.
[42] PAC/1000, Ralston/32.
[43] Staff's Response Brief at 13.
[44] Staff/215, Kaufman/6.
[45] PAC/1002, Ralston/6.

incorrectly argues that the Company unreasonably relied on the Black and Veatch study to determine the capital investment required for conversion to PRB coal.[46]

First, Staff claims that the study includes "considerable" contingency costs, without actually stating what those costs are or why they are unreasonable.[47] Staff does not argue that removal of the contingency costs supports the capital cost estimate used by Staff.

Second, Staff claims that the Jim Bridger conversion costs should mirror rail upgrade costs incurred at other plants.[48] Staff fails to provide any basis to assume comparability of these costs, however.[49] The Company testified that the infrastructure costs are unique to each plant and depend on numerous factors, rendering Staff's general comparison inapt.[50]

Third, Staff argues that PacifiCorp's estimated capital costs were near the top of the range of costs estimated by Black and Veatch.[51] Staff does not provide any basis to assume that an estimate near the low end is more reasonable than the point estimate identified by Black and Veatch. The low end of the Black and Veatch study is still substantially higher than the capital costs used by Staff.[52]

Fourth, Staff claims the Company should have conducted a test burn of PRB coal in 2013 to verify Black and Veatch's estimate.[53] Staff produced no evidence the Company could have actually completed that test burn in 2013. The record shows the Company

[46] Staff's Response Brief at 14.
[47] *Id.* at 15.
[48] *Id.*
[49] PAC/1000, Ralston/28; ES TR. 43 (Kaufman).
[50] PAC/1000, Ralston/28.
[51] Staff's Response Brief at 16.
[52] At hearing, Staff could identify only one cost component that Black and Veatch indicated could be lower. ES TR. 41-42 (Kaufman). But even if that cost component were eliminated entirely, it would only decrease the overall estimate by 4 percent. PAC/1002, Ralston/5-6.
[53] Staff's Response Brief at 16.

negotiated a transportation contract for PRB coal as a result of the 2014 RFP, which was effective on January 1, 2015, and reasonably conducted a test burn shortly thereafter.[54]

d. The Company's transportation costs are consistent with its actual contract, which has not been challenged.

The rail transportation rate used in the Company's corrections to Staff's PVRR(d) analysis was calculated using a U.S. Department of Transportation Surface Transportation Board's Uniform Rail Costing System model—a recognized and reasonable methodology for estimating rates in the industry.[55] In contrast, Staff used an unorthodox methodology based on limited data, which produced a rate that is roughly 40 percent lower than the Company's.[56] The Company's 2015 rail contract for delivery of PRB coal to the Jim Bridger plant confirms the accuracy of the Company's estimate, as does Staff's testimony in the 2011 TAM, which verified PRB pricing with a transportation rate comparable to the Company's.[57]

e. The Company's modeled BCC closure costs are reasonable.

If the Company had decided to supply the Jim Bridger plant exclusively with PRB coal, BCC would close.[58] Thus, the PVRR(d) analysis comparing BCC and Black Butte to PRB coal must account for BCC closure costs, including the undepreciated investment at the mine and the closure and remediation costs.[59]

Staff questions whether BCC's closure costs and undepreciated investment are recoverable from customers.[60] Staff claims that comparisons to the Deer Creek mine are inapt because Deer Creek was not owned by an affiliate and was included in PacifiCorp's

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[54] PAC/1001; ES TR. 17 (Ralston).
[55] PAC/1000, Ralston/17.
[56] Staff's Response Brief at 19; PAC/1000, Ralston/18-22.
[57] PAC/1000, Ralston/18, 20; ES TR. 16 (Ralston); PAC/1208 at 5; Staff/200, Kaufman/65.
[58] PAC/500, Ralston/26-27; PAC/1000, Ralston/23.
[59] PAC/600, Dalley/19-20.
[60] Staff's Response Brief at 17.

rate base.[61] This is incorrect—like BCC, Deer Creek was owned by an affiliate, Energy West Mining Company and Deer Creek was consolidated with PacifiCorp for ratemaking.[62]

Staff also claims the Company's regulatory asset overstates the undepreciated BCC investment because the Company assumes recovery of avoidable surface mining capital costs.[63] Staff provides no evidence to support this claim, which is contradicted by the fact that the Company calculated the undepreciated investment as of the assumed date of mine closure.[64]

Staff rejects the Company's assumed four-year amortization period and claims that its 20-year amortization period for the undepreciated investment is reasonable because it represents the remaining life of the Jim Bridger plant.[65] Staff never acknowledges that the plant's depreciable life extends to only 2025.[66]

Staff claims that the Company's application of its weighted average cost of capital to the undepreciated investment is contrary to Oregon law because this investment would be recovered in rates after the mine closed.[67] But if the Company had actually decided to close the mine in 2013, it would have sought accelerated depreciation while the mine remained

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[61] *Id.* at 17 n. 96.
[62] *In the Matter of PacifiCorp Application for Approval of Deer Creek Mine Transaction*, Docket No. UM 1712, Order No. 15-161 at 2 (May 27, 2015) ("The mine is operated by Energy West Mining Company (Energy West), a wholly-owned subsidiary of PacifiCorp, and consolidated with PacifiCorp for regulatory purposes.").
[63] Staff's Response Brief at 17.
[64] PAC/1000, Ralston/25.
[65] Staff's Response Brief at 18.
[66] PAC/1000, Ralston/29. Staff also implies that a four-year amortization period could result in rate shock. Staff's Response Brief at 18. The rate impact of amortizing this investment is far less, however, than in other cases where the Commission has rejected the rate shock argument. *See, e.g., In the Matter of Re Portland General Electric Company*, Docket No. UE 115, Order No. 01-988 (Nov. 20, 2011) (rejecting rate shock argument related to 38 percent rate increase).
[67] Staff's Response Brief at 19.

used and useful, consistent with the treatment of early closure of generation plants like Carbon and Boardman.[68] Staff did not address nor rebut this argument.

Staff claims that the Company's undepreciated investment includes capital costs that would have been avoided if the Company had decided to close BCC.[69] According to Staff, once the decision to close the mine was made in 2013, the Company would have avoided all capital expenditures to operate the mine until 2017.[70] The Company testified that specific capital investments would be necessary to allow the mine to continue to operate, however, and Staff has not challenged any of those investments.[71]

f. Staff's analysis fails to account for the risk associated with a transition to PRB coal.

Staff claims that there is no evidence in the record that shows reliance on PRB coal is riskier than receiving coal from BCC and Black Butte.[72] On the contrary, BCC presents virtually no transportation price or supply risk because it is delivered via conveyor belt directly from the mine to the plant.[73] In addition, the Jim Bridger plant's diversified fuel supply from BCC and Black Butte minimizes risk, and BCC has historically provided price leverage on coal supplied from Black Butte.[74] PRB coal, on the other hand, presents both transportation supply and price risk, as detailed in the evidence presented by Staff in this and other cases.[75]

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[68] PAC/1100, Dalley/10; Order No. 12-493 at 3; *In the Matter of Idaho Power Company Application for Authority to Implement a Boardman Operating Life Adjustment Tariff for Electric Service to Customers in the State of Oregon*, Docket No. UE 239, Order No. 12-235 (June 26, 2012).
[69] Staff's Response Brief at 23.
[70] *Id.*
[71] PAC/1000, Ralston/25-26. The only specific investment Staff claims would be avoidable is the investment in Deadman Wash. The Company's undepreciated investment does not include any material capital investments related to the Deadman Wash because it was not scheduled to produce coal until 2021. ES TR. 22 (Ralston).
[72] Staff's Response Brief at 21.
[73] PAC/500, Ralston/8.
[74] *Id.*
[75] PAC/1207 at 4; Staff/212, Kaufman/16; PAC/1000, Ralston/10.

6. Staff's alternative prudence disallowance is without merit.

In its response brief, Staff argues for the first time that even if the Commission concludes that the Company's coal fueling strategy is prudent, the Commission should nevertheless find that PacifiCorp's planning process was imprudent "for lack of meaningful analysis related to alternative courses of action."[76] The only basis for this argument is Staff's inaccurate claim the Company has not conducted long-term fueling cost analysis for the Jim Bridger plant. The record here demonstrates the Company regularly and comprehensively studied alternatives to BCC coal, including PRB coal, for at least 15 years.[77]

7. There is no basis for the Commission to reverse nearly 40 years of precedent and apply lower of cost or market pricing to BCC coal.

a. ICNU concedes that the lower of cost or market rule has not historically applied to BCC.

ICNU does not dispute that since 1979, the Commission has consolidated BCC with PacifiCorp and applied cost-based pricing to BCC coal.[78] ICNU argues the Commission should reverse course, treat BCC as an affiliate, and apply the lower of cost or market rule.[79] To support its recommendation, ICNU argues the Commission erred in 1979 when it began consolidating BCC with PacifiCorp for ratemaking purposes because BCC does not hold a "position of dominance over the market for coal that could be used to fuel Jim Bridger."[80] ICNU contends that without this market dominance, there is no basis for cost-based treatment of an affiliate and the Commission must apply the lower of cost or market standard.

The Commission has never concluded that cost-based pricing is appropriate only in the narrow circumstances described by ICNU. Rather, the Commission has repeatedly

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[76] Staff's Response Brief at 24.
[77] PAC/600, Dalley/11-16; PAC/1000, Ralston/3, 8-11; PAC/1002, PAC/1208 at 5.
[78] ICNU's Response Brief at 11.
[79] *Id.* at 15.
[80] *Id.* at 14.

affirmed that cost-based pricing is reasonable for BCC (and similar affiliated mines) because consolidation for ratemaking eliminates the possibility of cross-subsidization.[81] Moreover, ICNU concedes that the Commission is not required to apply lower of cost or market pricing because the "ultimate question" is whether PacifiCorp's rates are just and reasonable.[82]

b. PRB coal is not *available* to replace BCC coal in 2017.

Even if the Commission were to treat BCC as an affiliate and apply the lower of cost or market rule, PRB coal is not an available market alternative to BCC for 2017. The lower of cost or market rule defines the "market rate" as the "lowest price that is available from nonaffiliated suppliers for comparable services or supplies."[83] Based on this definition, ICNU argues that PRB coal is an "available" alternative to BCC coal in 2017, even though ICNU does not dispute that PRB coal could not actually replace BCC coal in 2017 due to the lack of infrastructure necessary to receive sufficient volumes of PRB coal.[84]

The plain and ordinary meaning of the term "available" is "present or ready for immediate use" or "accessible, obtainable."[85] Given that ICNU concedes that the Jim Bridger plant cannot physically receive sufficient volumes of PRB coal to replace BCC coal, PRB coal is not "ready for immediate use" or "obtainable." Thus, PRB coal is not an *available* market alternative and its pricing cannot be used under the lower of cost or market rule. The Commission reached this same conclusion in Order No. 13-387, when it last

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[81] *In the Matter of PacifiCorp*, Docket No. UI 105, Order No. 91-513 at 2(Apr. 12, 1991); *In the Matter of Idaho Power Co.*, Docket No. UI 107, Order No. 91-567 at 2 (Apr. 25, 1991).
[82] ICNU's Response Brief at 15.
[83] OAR 860-027-0048(1)(i).
[84] ICNU's Response Brief at 9; PAC/500, Ralston/14-17, 32, 34.
[85] http://www.merriam-webster.com/dictionary/available; *see, e.g., SAIF Corp. v. Frias*, 169 Or App 345, 350 (2000) ("We interpret administrative rules according to their plain meaning.").

rejected ICNU's lower of cost or market adjustment, concluding in that case that additional Black Butte coal was not *available* to replace BCC coal during the test year.[86]

ICNU claims that what matters for purposes of the lower of cost or market rule is that the alternative is "comparable" to BCC.[87] But this argument effectively reads the term "available" out of the rule. To give full effect to the Commission's rule, the non-affiliate alternative must be both *available* and *comparable*.[88] While PRB coal is comparable to BCC coal, the undisputed record shows that it is not available in 2017.

Requiring that the nonaffiliated alternative be available is also consistent with the purpose of the lower of cost or market rule, which is to prevent cross subsidization and ensure that customers pay reasonable costs for materials from affiliate suppliers.[89] If BCC coal is the least-cost coal that can be physically burned in the test year, then customers are not harmed by the Company's purchase of BCC coal. Potential harm can occur only if the Company could have reduced its costs in the real world, but chose instead to rely on an affiliate supplier. There is no evidence of this harm in this case.

c. PRB coal is not lower price than BCC.

ICNU claims that if PRB coal were available to replace BCC coal in 2017, it would be lower priced.[90] This is incorrect. As summarized in Mr. Ralston's testimony, the PRB unit costs of [redacted] per ton are [redacted] per ton higher than ICNU's BCC-only unit cost of [redacted] per ton, as shown in ICNU's corrected Table 1R.[91]

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[86] Order No. 13-387 at 7.
[87] ICNU's Response Brief at 9.
[88] *PGE v. Bureau of Labor and Industries*, 317 Or 606, 612 n. 4 (1993) (ORS 174.010 applies to interpretation of administrative rules); ORS 174.010 (interpretation must give effect to all terms in a rule).
[89] *GTE Nw. Inc. v. Pub. Util. Comm'n of Oregon*, 120 Or App 401, 404 (1993).
[90] ICNU's Response Brief at 7, 21.
[91] PAC/1000, Ralston/5.

ICNU also claims that the Company failed to prove that ICNU did not adjust PRB coal for heat content.[92] This is also incorrect. In Table 1R of ICNU's testimony, the BCC coal was [redacted] tons and [redacted] MMBtus at [redacted] Btu/lb.[93] Using that same amount of [redacted] MMBtus of PRB coal at [redacted] Btu/lb. yields [redacted] tons not [redacted] tons reflected in Table 1R. Therefore, the capital investment amortization should be [redacted] per ton, not [redacted] per ton. Additionally, the regulatory asset amortization should be [redacted] per ton using a four-year amortization period instead of a 13-year period. The total unit costs would therefore be [redacted] per ton ([redacted]), instead of [redacted] per ton.

ICNU claims PRB coal costs must be compared to only BCC coal costs, not the Jim Bridger plant's total fueling costs.[94] As just noted, whether PRB coal is compared to BCC coal or total plant costs (including Black Butte and PRB coal), PRB unit costs are higher.[95]

ICNU contends that the regulatory asset resulting from the closure of BCC should be amortized over 13 years, rather than the four years modeled by the Company.[96] ICNU acknowledges that the Company's proposal is consistent with past Commission cases.[97] ICNU argues that the four-year amortization period approved in the Deer Creek case was aligned with the depreciable life of the mine, but this does not support ICNU's recommendation for a 13-year amortization period. In addition, in the Deer Creek case, the Commission specifically rejected ICNU's theory that the amortization period should align the costs and benefits of the mine closure.[98]

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[92] ICNU's Response Brief at 20.
[93] ICNU/200, Mullins/9.
[94] ICNU's Response Brief at 21.
[95] PAC/1000, Ralston/5.
[96] ICNU's Response Brief at 17.
[97] *Id.*
[98] Order No. 15-161 at 7.

ICNU also claims that the Commission should apply a debt cost to the undepreciated investment in BCC, rather than the weighted average cost of capital included in the Company's analysis.[99] As explained above, the Company used the weighted average cost of capital on the assumption that if it had decided in 2013 to close BCC in 2017, it would have sought accelerated depreciation to fully amortize the investment before the mine closed.[100]

B. The Company's coal supply contracts are prudent and the modeling is reasonable.

Staff and CUB challenge the minimum-take provisions in the Company's coal supply contracts. These provisions are common in coal supply contracts to provide favorable pricing for the buyer and investment security for the seller.[101] CUB admits that it has the burden of producing evidence to support its claim that three recent coal supply contracts are imprudent because they include minimum-take provisions.[102] CUB produced no such evidence, nor has it reconciled the fact that, just last year, it supported approval of the largest of these contracts.[103]

Staff continues to claim that the Company's modeling of minimum-take provisions is a prohibited modeling change, despite the Company's undisputed evidence that it has used this modeling since 2005.[104] Staff claims that the Company has not demonstrated that parties were provided notice of the modeling change "in accordance with the TAM guidelines or

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[99] ICNU's Response Brief at 19.
[100] PAC/1100, Dalley/10.
[101] PAC/500, Ralston/32.
[102] CUB's Response Brief at 3.
[103] *Id.* at 17; PAC/500, Ralston/35-36.
[104] Staff's Response Brief at 52; PAC/400, Dickman/48-49; PAC/800, Dickman/37.

otherwise."[105] But the modeling predated the TAM Guidelines and the Company did provide notice when it revised GRID in 2005.[106]

Staff previously argued that before making any modeling adjustment to account for minimum-take provisions, the Company should fully use its coal stockpiles.[107] Now Staff states that it "could concede that utilizing the Company's coal stockpile flexibility" to manage minimum-take provision is "problematic."[108] But Staff still claims that the Company has "no adequate analysis or planning to mitigate minimum-take requirements."[109] This is untrue. The Company testified that every coal contract is individually analyzed in the context of the expected plant requirements during the term of the contract.[110]

Staff quantified its adjustment in its response brief based on the minimum-take provisions implicated in the initial filing, not the reply update, where its adjustment would now be zero. Staff also double-counts the impact at the Jim Bridger plant because Staff separately included the same adjustment in its proposed disallowance for Jim Bridger coal supply.[111]

C. The Company's calculated EIM benefits are reasonable.

The Company's reply update includes $23.7 million in inter-regional transfer benefits and flexibility reserve savings (total company), in addition to the intra-regional dispatch

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[105] Staff's Response Brief at 53.
[106] *See In the Matter of PacifiCorp d/b/a Pacific Power 2009 Transition Adjustment Mechanism*, Docket No. UE 199, Order No. 09-274 (July 16, 2009) (approving TAM Guidelines); *In the Matter of PacifiCorp Request for a General Rate Increase in the Company's Oregon Annual Revenues*, Docket No. UE 179, PPL/500, Widmer/5-6 (Feb. 23, 2006) ("The Company provided a more detailed description of the code changes [in GRID version 5.3] to the stakeholders when the new releases were placed into production. *The Company sent a notice covering releases 5.2 and 5.3 in December 2005.*") (emphasis added).
[107] Staff/400, Kaufman/42.
[108] Staff's Response Brief at 53-54.
[109] *Id.* at 54.
[110] PAC/1000, Ralston/7.
[111] Staff's Response Brief at 2, 52; Staff/400, Kaufman/30; PAC/400, Dickman/47.

benefits that are already included in the GRID modeling.[112] The Company's benefits are more than twice the level reflected in the 2016 TAM and reflect the continued growth in benefits from the participation in the EIM.[113]

1. Imputing intra-regional benefits is double-counting.

The EIM produces intra-regional benefits due to the more efficient balancing of the Company's system through the California Independent System Operator Corporation's (CAISO) security constrained economic dispatch model.[114] Because these benefits are included in GRID, the EIM allows the Company's actual NPC to more closely match GRID.

Staff argues that intra-regional benefits must be quantified outside GRID and then deducted from its results.[115] Staff's only basis for the imputation of these benefits is its claim that the counterfactual used by CAISO to calculate EIM benefits is identical to GRID.[116]

In pre-filed testimony, Staff argued that the counterfactual and GRID are identical because both models are perfectly efficient optimized models and neither mimics manual dispatch.[117] In its response brief, Staff reverses itself and now claims that the counterfactual and GRID are identical because both models mimic manual dispatch (and by implication are not perfectly efficient).[118] Staff's new position that GRID mimics manual dispatch has absolutely no support in the record.[119] Because GRID does not model manual dispatch,

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[112] PAC/400, Dickman/56.
[113] PAC/100, Dickman/26; PAC/400, Dickman/56.
[114] PAC/400, Dickman/57-58; TR. 43-46, 50-51 (Dickman).
[115] Staff's Response Brief at 36.
[116] *Id.* at 40-41.
[117] Staff/100, Crider/10-11 ("the counterfactual is not a comparison of the manual operational solution to a more efficient automated system . . . [both the counterfactual and GRID] represent[] the optimized security-constrained, economically dispatched solution to balancing load with generation in the absence of the EIM.").
[118] Staff's Response Brief at 40, 42.
[119] *Id.* at 42 ("both the Counterfactual and GRID use the same type of resources" for system balancing has no citation to the record).

while the counterfactual does, there is no basis for Staff's imputation of intra-regional benefits.[120]

The counterfactual mimics manual dispatch by using a limited pool of resources to balance the Company's system.[121] The limited pool consists of generators that can ramp up quickly, like gas units, because those are the units that a manual dispatcher would likely choose based on the lack of perfect information and the time constraints imposed by real-world operations.[122] GRID, on the other hand, does not rely only on fast ramping resources because it has perfect information and foresight, *i.e.*, GRID knows exactly how the load will change and the least-cost resource to meet changing load.[123] Given this perfect foresight, GRID always selects the least-cost resource and is not constrained by ramping times.[124] CUB agrees that "GRID is not the CAISO counterfactual," arguing that the "problem with the CAISO study" is that it compares actual results to the counterfactual, not GRID.[125]

Moreover, Staff's response brief did not dispute that CAISO's description of Nevada Energy's (NVE) EIM benefits confirms that intra-regional benefits result from the transition from manual to computerized dispatch.[126] Because GRID does not model manual dispatch, it already captures these benefits.

Staff notes that its intra-regional benefits of $12.3 million is "exactly at the mid-point of the E3 Report's range[.]"[127] But Staff did not dispute that the E3 study states that intra-regional benefits are already captured in a perfectly efficient dispatch model like GRID.[128]

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[120] TR. 53 (Dickman).
[121] Staff's Response Brief at 42.
[122] TR. 54 (Dickman).
[123] PAC/400, Dickman/57-58.
[124] *Id.*
[125] CUB's Response Brief at 10.
[126] PAC/400, Dickman/62; PAC/900, Brown/15-17.
[127] Staff's Response Brief at 39.

Staff also questions the Company's claim that GRID cannot quantify intra-regional benefits.[129] Quantification would require the Company to model its real-world pre-EIM operations, which GRID does not do.[130] The E3 study stated that perfectly efficient dispatch models like GRID include the intra-regional benefits but cannot quantify them.[131]

2. The EIM's five-minute dispatch produces greater efficiency in actual operations, but not in GRID.

Staff and CUB continue to argue that the EIM's five-minute dispatch creates efficiencies over GRID's hourly modeling that support the imputation of intra-regional benefits.[132] But neither Staff nor CUB dispute that GRID's modeling does not include within-hour costs,[133] and therefore it is unreasonable to impute within-hour benefits. And neither party reasonably disputes the Company's testimony that the use of five-minute modeling *in GRID* would actually *increase* NPC because varying load within the hour creates higher average costs compared to static load.[134] Thus, while five-minute dispatch creates cost savings in actual operations, it does not in GRID.

3. CUB miscalculates intra-regional benefits.

CUB recommends the imputation of CAISO's estimate of intra-regional benefits, which CUB quantifies as $26.2 million, or in the alternative, one-half that amount.[135]

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[128] Staff/106, Crider/49.
[129] Staff's Response Brief at 47.
[130] TR. 51-54 (Dickman).
[131] Staff/106, Crider/49.
[132] Staff's Response Brief at 43; CUB's Response Brief at 8-9.
[133] PAC/400, Dickman/63.
[134] *Id.*; TR. 47, 49 (Dickman). If load varied within the hour, then there would be some five-minute intervals with higher load than the hourly average and some with lower load than the hourly average. For the intervals with higher load than the average, GRID would dispatch up higher cost resources, thus increasing the average cost for that interval. For the intervals with lower load than the average, GRID would dispatch down lower cost resources, thus increasing the average cost for that interval. And higher than average intervals would have to be offset by lower than average intervals to maintain the same average load for the hour.
[135] CUB's Response Brief at 10.

CAISO, however, does not separately quantify intra-regional benefits.[136] The $26.2 million identified by CUB is CAISO's calculation of the *total* EIM benefits for 2015.[137]

4. Staff concedes that its inter-regional benefits are overstated but has not provided alternative, corrected calculations.

The Company calculates inter-regional benefits of $19.2 million (total company).[138] Staff calculates inter-regional benefits of $31.2 million, but admits that its results "should be reduced somewhat to account for some of the corrections proposed by PacifiCorp."[139] Correcting these errors reduces Staff's inter-regional benefits to $15.7 million (total company).[140]

Staff acknowledges that its calculation used 13 months to calculate the dollars and volumes for exports and imports and that it used 15 months of data to calculate the production costs. Staff does not dispute the other corrections identified by PacifiCorp; rather, Staff could not confirm the Company's calculations.[141] For clarification, the Company corrected the volume mismatch between Staff's export volumes and volumes used to calculate production costs by applying the average production cost reflected in Staff's workpaper, to the missing volumes, as described in PacifiCorp's testimony.[142] The Company corrected Staff's import benefit calculation by accounting for the costs paid by PacifiCorp for

[136] *See, e.g.,* PAC/1200 at 5 (showing CAISO's benefit calculations, which are not broken down by category).
[137] Staff/100, Crider/8.
[138] PAC/400, Dickman/56.
[139] Staff's Response Brief at 46. In addition, Staff's total benefits of $46.1 million are not incremental to the Company's calculated benefits, they are in the alternative.
[140] PAC/400, Dickman/56; PAC/800, Dickman/21. Staff's brief does not address the undisputed fact that its production cost calculation was also based export volumes that were reported for greenhouse gas compliance purposes, and not the actual energy transfers resulting from the EIM.
[141] Staff's Response Brief at 46. Staff's brief blames the Company for not providing a workpaper showing its calculations. But, as described at hearing, the Company used Staff's own workpaper and did not prepare anything additional. And despite Staff's claimed inability to verify the Company's calculations, Staff cross-examined Mr. Dickman at length, but chose not to ask him anything to verify the calculations.
[142] PAC/800, Dickman/21, n. 44. The workpaper is an Excel filed called "Crider workpaper CONFIDENTIAL EIM Revenues 2015." The production costs were calculated by dividing the total costs for production by the total volumes (refer to tab "Revenue" and divide cell Q34 by cell O34).

the imports. Import benefits equal the difference between the avoided costs and the cost paid, but Staff's calculation did not account for the cost paid.[143] PacifiCorp calculated this amount by summing the costs for imports identified in Staff's workpaper for 2015.[144]

Staff also agrees that the Company's benefits should be calculated using the marginal production costs,[145] even though Staff's methodology relies on the average cost of production.[146] Staff's response brief fails to reconcile these contradictory positions. Staff's methodology also assigns a zero marginal cost to hydro resources, rather than the cost of replacement power used in the Company's calculation.[147] Staff never disputes that hydro resources are finite and every megawatt-hour of hydro sold into the EIM must be replaced with non-hydro energy.[148] Finally, Staff argues that the marginal cost for wind should be zero.[149] The Company uses a *negative* marginal price for wind, meaning that the marginal price is *added* to the revenue to calculate the benefits.[150] Staff's zero marginal price *reduces* EIM benefits.

5. CUB's proposal to ignore transmission overstates EIM benefits.

CUB argues that the inter-regional benefits should be based on "actual operations" and not account for available transmission.[151] CUB's adjustment cannot be reconciled with its concessions that: (1) actual transfers with CAISO are subject to the transmission available to move the energy from PacifiCorp to CAISO; and (2) modeling the same transmission for

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143 Staff's Response Brief at 43.
144 Referring to Staff's workpaper, the costs for imports are found in column M (labeled "Total Cost") of the first tab (labeled "from PAC") in the cells labeled "Import." Summing the import values in column M for January through December 2015 results in the [redacted] identified in PAC/800, Dickman/21.
145 Staff's Response Brief at 44.
146 Staff/300, Crider/13.
147 Staff's Response Brief at 45.
148 TR. 87 (Brown).
149 Staff's Response Brief at 45.
150 PAC/900, Brown/6 (negative marginal price based on value of the production tax credit and REC).
151 CUB's Response Brief at 14.

EIM and non-EIM transactions does not reflect actual operations and is physically impossible.[152] CUB wrongly implies that the Company's models export benefits exclusively based on available transmission, not historical exports.[153] The Company's benefits are based on the historical exports, scaled to account for the available transmission forecast in 2017.[154]

6. It is reasonable to use voluminous data to calculate EIM benefits.

While Staff recommends a simplified approach to calculating EIM benefits, it has never disputed that its approach still requires the analysis of every five-minute interval in the year—thereby relying on the same data as the Company.[155] Staff's methodology unreasonably compromises accuracy for simplicity, as demonstrated by its erroneous results.

CUB argues that the TAM is a streamlined process and "producing an accurate NPC forecast" that "require[s] complex analysis of voluminous data" is "utterly contradictory to the core purpose of the TAM."[156] The Commission has repeatedly stated that the goal of the TAM is to produce the best NPC forecast and has approved complex modeling to further that goal, as it did just last year.[157] CUB's argument is also contradicted by its own testimony that "getting the forecast right is important."[158]

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152 PAC/400, Dickman/77; CUB/100, McGovern/16.
153 CUB's Response Brief at 14.
154 PAC/400, Dickman/77.
155 Staff's Response Brief at 46; PAC/800, Dickman/13; Staff/300, Crider/13.
156 CUB's Response Brief at 13.
157 *In the Matter of PacifiCorp d/b/a Pacific Power's 2016 Transition Adjustment Mechanism*, Docket No. UE 296, Order No. 15-394 at 4 (Dec. 11, 2015) (approving modeling changes to create a "more accurate estimate of net power costs").
158 CUB/100, McGovern/14.

7. The Company's EIM benefits calculation does not violate the modeling moratorium.

CUB argues that the Company's EIM calculations violate the TAM's current modeling moratorium.[159] Refinements to the calculation of EIM benefits are not covered by this moratorium because they do not involve changes to the GRID model.[160] In this case, the Company simply used a full year of actual results, rather than the partial forecast used in docket UE 296,[161] and a more precise method to identify the resources supporting EIM export.[162] These are minor refinements, not changes to the GRID model.

CUB also argues that the Company improperly changed its calculation of transfers to NVE during this case.[163] The Company initially calculated transfers to NVE using the same methodology as transfers with CAISO, *i.e.*, the Company assumed that the benefits would depend on available transmission.[164] In its reply update, the Company updated its calculation for actual results, which indicated that transfers to NVE were not similarly constrained.[165] Contrary to CUB's claim that it had to "sort through pages and pages of workpapers" to discover this change, the Company explained it in its reply testimony.[166] Notably, the update increases EIM benefits—and CUB recommends the same change for CAISO transfers.[167]

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[159] CUB's Response Brief at 12.
[160] *In the Matter of PacifiCorp d/b/a Pacific Power's 2016 Transition Adjustment Mechanism*, Docket No. UE 296, Order No. 15-353 at 2 (Oct. 26, 2015) ("We are imposing a one-year moratorium on PacifiCorp changing the GRID model[.]").
[161] PAC/400, Dickman/12.
[162] PAC/400, Dickman/52.
[163] CUB's Response Brief at 6, 17.
[164] TR. 15-19 (Dickman).
[165] *Id.*
[166] PAC/400, Dickman/54; CUB's Response Brief at 13. CUB also faults the Company for not including this change in its list of corrections. But the change was not a correction.
[167] CUB's Response Brief at 14.

8. Staff incorrectly calculates the EIM benefits from NVE's participation.

For the first time in its response brief, Staff contends that the additional benefits resulting from NVE's participation in the EIM are $9.8 million, based on the difference between the EIM benefits in the initial filing and reply update.[168] Although Staff does not propose a separate adjustment based on this calculation, Staff claims that its benefits do not include this amount and are therefore a conservative estimate. But NVE's participation was included in both filings; the increase was due to additional months of actual results for all EIM participants, not just NVE.[169]

9. CUB concedes its opportunity cost adjustment.

CUB's response brief ignores its recommendation to increase EIM benefits by removing a purported opportunity cost offset; therefore, CUB abandoned this adjustment.[170]

D. The Commission should affirm the system balancing transactions adjustment approved in the 2016 TAM.

1. The parties ignore the Commission's order approving the adjustment.

In Order No. 15-394, the Commission approved the system balancing transactions adjustment after concluding that it would produce a more accurate NPC forecast.[171] The Commission rejected the parties' objections and made several specific factual findings, including that parties "had sufficient time and opportunity to review and assess" the adjustment.[172] Staff, CUB, and ICNU have renewed their objections to the adjustment, without acknowledging that they were rejected last year. Staff states only that the

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[168] Staff's Response Brief at 37; PAC/400, Dickman/56.
[169] PAC/400, Dickman/53.
[170] Order No. 13-387 at 10 ("Parties must clearly present all proposed adjustments in their briefs.").
[171] Order No. 15-394 at 4.
[172] *Id.*

Commission approved the adjustment without addressing the details of the order.[173] ICNU acknowledges that the Company introduced the adjustment in the 2016 TAM, but not that it was approved.[174] CUB argues that the Company failed to meet its burden of proof, without recognizing that last year the Commission found the Company met its burden.[175]

None of the response briefs describe the Commission's rationale for approving the adjustment or explain why that rationale no longer applies. No party explains why the Commission was wrong when it approved an adjustment Staff now claims is arbitrary, irrational, and unrealistic, or explains why the Commission must reverse itself just one year later. No party identified any factual findings that are wrong or any facts that changed in the last year justifying a reversal. Instead, the parties act as if this adjustment is an issue of first impression and that the 2016 TAM never happened.

2. The adjustment creates a more accurate forward price curve.

Staff argues that there is no evidence that the adjustment produces a more accurate NPC forecast.[176] But Staff agrees that the Company's short-term power purchases systematically exceed the costs of short-term sales, and there is no dispute that the adjustment's refinement to the forward price curve reflects this reality by including a higher purchase price and a lower sales price.[177] Thus, the adjustment reflects a forward price curve

[173] Staff's Response Brief at 26.
[174] Response Brief of ICNU at 4.
[175] CUB's Response Brief at 18.
[176] Staff's Response Brief at 26-27. Staff misstates how the adjustment works, claiming that it "account[s] for the fact that the Company tends to be a price-taker, paying more in heavy-load hours (HLH) than average actual market prices, and selling for lower than average market prices during light load hours (LHL)." Staff's Response Brief at 26. In fact, the adjustment accounts for the fact that the Company historically buys at higher than the average monthly price and sells at lower than the average monthly price *across all hours*. PAC/100, Dickman/17.
[177] *Id.* at 26.

that is more indicative of the actual prices the Company will experience in the test period.[178] In Order No. 15-394, the Commission found that the refined forward price curve produced a "more accurate estimate of net power costs" and Staff has provided no analysis that warrants reversal of this finding.[179]

Staff further argues that the Company's historical under-recovery of NPC is not related to system balancing transactions.[180] But in Order No. 15-394, the Commission found that the system balancing transactions adjustment includes NPC costs that are not in GRID, a conclusion confirmed here.[181] Given that the adjustment includes costs that are actually incurred and not captured in GRID, the adjustment creates a more accurate forecast, and the historical absence of the adjustment contributed to the under-recovery of NPC.

3. The adjustment is not arbitrary, irrational, or unrealistic.

Staff argues that the adjustment's use of monthly averages is arbitrary because the selection of "any time period would be arbitrary."[182] But Staff's own proposal to refine the forward price curve also uses monthly average prices and the differential between the purchase and sale price holds regardless of the period used to determine the average price.[183]

Staff also claims that the adjustment does not address the correlation between market prices and demand because PacifiCorp makes simultaneous purchases at one market hub and sales at another.[184] Staff does not dispute the historical evidence that the Company buys high and sells low, however, even when it is engaged in simultaneous transactions at different

[178] PAC/100, Dickman/18-19.
[179] Order No. 15-394 at 4.
[180] Staff's Response Brief at 27.
[181] Order No. 15-394 at 4; PAC/100, Dickman/18-20; CUB's Response Brief at 18 (". . .GRID does not accurately capture DA-RT[.]").
[182] Staff's Response Brief at 28.
[183] Staff/200, Kaufman/36.
[184] Staff's Response Brief at 29.

hubs that reduce overall NPC.[185] Thus, the refined forward price curve is accurate even though the Company is not exclusively buying or selling in each hour. Without the adjustment there would be a single price each hour regardless of whether demand is high or low, which has less correlation between market prices and demand than the adjustment.[186]

Staff further argues that the adjustment is irrational because the volume of overall market transactions should correlate to balancing costs, *i.e.*, as the Company engages in more market transactions in GRID, the adjustment should increase.[187] Such a result is not expected in all circumstances, however.[188] Because the adjustment captures system balancing costs that are not modeled in GRID, it is logical that when GRID models more system balancing transactions, the size of the adjustment decreases.

4. The adjustment does not exclude benefits.

Staff claims the adjustment "embeds costs associated with a fixed volume of historic sales at historic prices" without a compensating adjustment for reduced fuel costs that may have offset the increased balancing costs.[189] The Company testified, however, that Staff's reasoning is flawed and that changes in fuel use resulting from changes in market prices would actually *increase* NPC.[190] Staff's response brief did not rebut this testimony and Staff's own proposal makes no adjustment for changes in fuel costs, indicating the superficiality of Staff's concern.[191]

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[185] *Id.* at 26. To be clear, the scenario described by Staff occurs when Company buys at relatively high prices in one market and sells at relatively low prices in another market, but still earns revenue overall. The pricing adjustment reflects the diminished differential between the two markets in the GRID results.
[186] PAC/800, Dickman/35.
[187] Staff's Response Brief at 30-31.
[188] PAC/800, Dickman/33.
[189] Staff/200, Kaufman/12; Staff's Response Brief at 31-32.
[190] PAC/400, Dickman/28.
[191] Staff/400, Kaufman/36.

Staff also argues that the adjustment excludes the benefits of arbitrage transactions.[192] Staff argues that, "[a]ccording to PacifiCorp, the [adjustment] adder only incorporates arbitrage benefits to the extent that sale prices are above average and purchase prices are below average."[193] At hearing, the Company testified that "any transactions that resulted in [the Company] doing better than market" are included in the adjustment and that these benefits are *in addition to* the benefits of arbitrage transactions.[194]

To be clear, the additional volumes included in the adjustment are priced to cover the Company's historical average net system balancing costs not already in GRID.[195] The historical net system balancing costs include revenue earned through arbitrage transactions. Thus, to the extent that arbitrage revenue is not already reflected in GRID, it is included in the calculation of the adjustment. Further, Staff agrees that the Company typically buys high and sells low, despite the impact of historical arbitrage transactions.[196]

Staff also claims that the adjustment limits arbitrage opportunities in GRID, without providing any evidence that historical arbitrage transactions are higher than those in GRID after the application of the adjustment.[197]

Staff claims that 64 percent of the transactions included in the adjustment are arbitrage.[198] This figure is not in Staff's testimony and cannot be verified because it is not apparent from the record how Staff identified purported arbitrage transactions.[199]

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[192] Staff's Response Brief at 32.
[193] *Id.* at 34.
[194] TR. 63 (Dickman).
[195] PAC/400, Dickman/22.
[196] Staff's Response Brief at 26.
[197] *Id.* at 33.
[198] *Id.* at 32.
[199] The exhibit Staff used for this calculation appears to pair all transactions occurring on the same day, without consideration of whether the transactions were within the same hour. The sales and purchase volumes also differ, which should not occur if Staff were truly measuring arbitrage transactions.

5. The Company engages in monthly system balancing transactions.

Staff argues the Company does not engage in monthly transactions at every market hub included in the adjustment in every month.[200] But the Company never claimed it engages in monthly transactions *at every single market hub in every single month*; rather, as Staff concedes, it engaged in monthly transactions in every month.[201]

6. The adjustment does not double count day-ahead integration costs.

ICNU argues that the Company's day-ahead integration costs are captured in the adjustment and therefore the separate day-ahead integration charge must be removed.[202] ICNU incorrectly assumes that the day-ahead integration charge quantifies the impact of market transactions that are otherwise included in the system balancing transactions adjustment. On the contrary, the day-ahead integration charge primarily accounts for the costs resulting from the change in the dispatch of the Company's resources.[203] PacifiCorp can balance its system by going to market or by re-dispatching its own resources. The system balancing transactions adjustment is designed to capture only the costs of balancing with market transactions. ICNU is wrong that the adjustment captures both the balancing costs of market transactions and the balancing costs resulting from less than optimal resource dispatch due to day-ahead forecast uncertainty.[204]

7. There is no reason to reject the adjustment to allow time for refinement.

In the 2016 TAM, Staff asked the Commission to reject the system balancing transactions adjustment to allow additional time for the parties to propose alternatives.[205]

[200] Staff's Response Brief at 34-35.
[201] *See* Staff/606.
[202] Response Brief of ICNU at 6.
[203] TR. 10-11 (Dickman); PAC/400, Dickman/39-40; PAC/800, Dickman/30-32.
[204] Response Brief of ICNU at 7.
[205] Order No. 15-394 at 3-4.

The Commission ruled against Staff after finding that parties "had sufficient time and opportunity to review and assess" the adjustment in that case.[206] The parties have now had an additional year, and Staff again recommends rejection so the parties can develop alternatives.[207] Staff's argument this year has no more merit than last year.

Staff claims that it has provided a "specific methodology" to refine the forward price curve and produce a single stream of prices, instead of the system balancing transactions adjustment.[208] But Staff's "proposal" consists of three sentences presented in its final testimony and no workpapers.[209] The Company cannot implement Staff's proposal because it lacks details and it is unknown whether it will produce a more accurate NPC forecast.

Moreover, Staff's use of a single stream of prices will increase NPC because the single stream will include greater variation relative to the Company's refined forward curve with two prices—a point Staff has not contested.[210] Greater variation means more expensive resources are dispatched more frequently, while less expensive resources are backed down more frequently, resulting in an overall NPC increase.[211] There is no reason to *decrease* the NPC forecast by rejecting the system balancing adjustment while parties develop a methodology to *increase* the forecast.

E. The TAM Guidelines' methodology for forecasting QF generation is reasonable.

Staff and CUB continue to recommend adjustments to decrease the Company's forecast of QF energy.[212] Neither party, however, disputes that the Company has historically under-forecast QF generation, nor have they provided any justification for increasing this

[206] *Id.* at 4.
[207] Staff's Response Brief at 35.
[208] Staff's Response Brief at 29-30.
[209] Staff/400, Kaufman/36.
[210] PAC/800, Dickman/36.
[211] *Id.*
[212] Staff's Response Brief at 48-49; CUB's Response Brief at 16-17.

forecasting error. Staff never quantified its adjustment; CUB quantified its adjustment without explaining the basis for the quantification. CUB testified that "getting the forecast right is important," so there is no basis to reduce a forecast that is already understated.[213]

F. The Commission should affirm the prudence of the Glenrock and Seven Mile Hill wind projects.

The Commission found the Glenrock and Seven Mile Hill wind projects were prudent in 2008, despite the projects' siting on avian-sensitive areas and the risk of non-compliance with the Migratory Bird Treaty Act.[214] Eight years later, Staff now argues that the Commission should reverse its decision because there is no evidence in the record *in this case* that the Company considered alternate sites for the projects in 2008.[215] Based on what was known in 2008, the Commission found the projects prudent; Staff's improper hindsight review must be rejected.[216]

Staff argues the Commission must "restore to ratepayers the full benefits of the assets approved by the Commission in UE 200."[217] The Commission rejected this argument last year, confirming that rates should be set using the "most recent reliable data," not the estimates used to demonstrate prudence in 2008.[218]

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[213] CUB/100, McGovern/14. CUB's brief also refers to an article published in the Bend Bulletin regarding the potential construction delays related to several QF projects. As described in more detail in the Company's response to CUB's Motion for Official Notice, this article does not strengthen CUB's position because the purported delays in the article are already reflected in the Company's reply update modeling and additional delays can be further updated as needed in the Company's final attestation.
[214] PAC/800, Dickman/39.
[215] Staff's Response Brief at 56.
[216] Order No. 02-469 at 4-5.
[217] Staff's Response Brief at 56.
[218] Order No. 15-394 at 7; *In the Matter of PacifiCorp 2009 Renewable Adjustment Clause Schedule 202*, Docket No. UE 200, Order No. 08-548 at 21 (Nov. 14, 2008).

G. The Company diligently worked with parties to facilitate review of this filing.

CUB complains that the Company has "not been forthcoming in its duty to work with parties to understand its calculations and adjustments."[219] To the contrary, the Company accelerated production of its workpapers to expedite the parties' review of its filing.[220] The Company held two technical workshops and a settlement conference workshop and provided a tour of its trading floor to interested parties, including CUB.[221] The Company met individually with both Staff and CUB to ensure each had access to GRID and understood how to use the model and to provide additional training if requested.[222] The Company also offered to perform alternative GRID runs for the parties.[223] And over the course of this case, the Company responded to more than 350 data requests before it filed its reply testimony.[224] CUB's response brief does not acknowledge any of these efforts or explain why they were insufficient to allow CUB to understand the Company's filing. In fact, the only specific deficiency CUB identified in this case was the lack of a Commissioner workshop.[225] But CUB never explained why having an additional workshop would have been sufficient for it to understand the issues in this case, while the three workshops that were held were not.

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[219] CUB's Response Brief at 3.
[220] PAC/400, Dickman/15.
[221] PAC/400, Dickman/15-16; PAC/800, Dickman/8.
[222] *Id.*
[223] *Id.*
[224] PAC/400, Dickman/16.
[225] CUB/200, McGovern/8.

H. The Commission's methodology for calculating transition charges is reasonable.

1. Noble Solutions has not provided a reliable value for freed-up Renewable Energy Certificates (RECs).

Noble Solutions claims that its proposal here no longer requires PacifiCorp to sell the freed-up RECs because the Commission can simply assign the RECs value.[226] Without an actual sale, however, there is no reliable method to value the RECs.[227] Noble Solutions relies on national data and the results of PacifiCorp's recent RFP to value RECs.[228] Generic data is not indicative of the value that PacifiCorp could actually realize, particularly given the Company cannot sell all of the RECs it markets.[229] Noble Solutions does not contest the Company's evidence that the RFP transactions are materially different from hypothetically selling a limited quantity of freed-up RECs.[230] Valuing RECs is therefore different from valuing freed-up energy, which relies on well-established modeling that produces reasonable and reliable results. And even using Noble Solutions' own analysis indicates that the value is roughly one percent of the transition charges paid by participants in the five-year program.[231]

Noble Solutions contends that the Company will not need to track the hypothetically sold RECs because participants in the five-year program will not return, ignoring the fact that these customers have the right to return.[232] Noble Solutions claims that if one- and three-year program customers return they are entitled to the new RECs generated upon their return.[233]

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[226] Noble Solutions' Response Brief at 13.
[227] PAC/400, Dickman/91; PAC/800, Dickman/44-45; TR. 34-35 (Dickman).
[228] Noble Solutions' Response Brief at 11, 15.
[229] PAC/400, Dickman/91; PAC/800, Dickman/44-45; TR. 34-35 (Dickman).
[230] TR. 34 (Dickman) (RFP different in terms of volume and duration).
[231] Noble Solutions' Response Brief at 7, 11.
[232] *Id.* at 16-17; *In the Matter of PacifiCorp's Transition Adjustment, Five-Year Cost of Service Opt-Out*, Docket No. UE 267, Order No. 15-060 at 13 (Feb. 24, 2016).
[233] Noble Solutions' Response Brief at 17.

But that is not the issue. It is inequitable for a returning customer to receive value from the same REC that was hypothetically sold when the customer left.[234]

2. Oregon law does not require the Commission to freeze generation costs after five years for purposes of the consumer opt-out charge calculation.

The consumer opt-out charge can recover only uneconomic investments, which according to Noble Solutions are statutorily defined as investments made before the departure of the direct access customer.[235] The Commission, however, has never adopted Noble Solutions' interpretation, and it has consistently included fixed generation costs incurred after the customer departs in transition adjustments.[236] Noble Solutions concedes that these transition adjustments are legal and reasonable and has failed to articulate any basis for treating the consumer opt-out charge differently.[237]

Noble Solutions also argues that the Commission's rules require freezing the fixed generation costs after year five.[238] But the ongoing valuation methodology compares the Company's fixed generation costs to the value of freed-up energy *over the entire valuation period*, not for the first five years only.[239] Noble Solutions' methodology is contrary to the Commission's rules, which require that the fixed generation costs and freed-up energy are valued over the same time period.

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[234] PAC/800, Dickman/45-47.
[235] Noble Solutions' Response Brief at 18-19.
[236] Noble Solutions/100, Higgins/11; PAC/800, Dickman/47.
[237] PAC/800, Dickman/48.
[238] Noble Solutions' Response Brief at 21.
[239] OAR 860-038-0005(41).

3. Holding fixed generation costs constant in real terms is a reasonable method for forecasting fixed generation costs.

Ongoing valuation requires the Commission to value fixed generation costs over the same 10-year period that it values the freed-up energy.[240] Because the departing customer pays the consumer opt-out charge in years one through five, the Commission must forecast the fixed generation costs for years six through 10, just as it forecasts the value of freed-up energy during that same time period. The record demonstrates that using an inflation adjustment to keep generation costs constant in real terms is a reasonable methodology to forecast generation costs in years six through 10.[241] Noble Solutions' only counter to this methodology is the meritless claim that the generation costs must be capped after five years.

Noble Solutions claims that PacifiCorp has changed its position and now agrees that the consumer opt-out charge accounts for new generation investment in years six through 10.[242] This is untrue. The Company's position here has not changed—the consumer opt-out charge can legally account for new generation investment, but does not actually do so.[243]

III. CONCLUSION

PacifiCorp respectfully requests that the Commission approve the 2017 TAM and allow a rate increase of $16.2 million, or 1.3 percent overall, subject to the TAM final

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[240] *Id.*
[241] Order No. 15-394 at 12; PAC/400, Dickman/93-94.
[242] Noble Solutions' Response Brief at 24.
[243] PAC/800, Dickman/51.

update. The purpose of the TAM is to forecast the Company's 2017 NPC as accurately as possible. The Commission can accomplish this by approving the Company's filing and rejecting the parties' proposed adjustments.

Respectfully submitted this 5th day of October, 2016.

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