SIERRA CLUB

September 28, 2021

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Public Utility Commission of Oregon
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Re: In the Matter of PacifiCorp, dba Pacific Power, 2022 Transition Adjustment Mechanism (Docket No. UE 390)

Enclosed please find Sierra Club's Reply Brief for filing in the above-captioned docket. The confidential version of this filing will be provided to parties eligible to receive protected information under Order No. 16-128 via encrypted password protected .zip folders, consistent with Order No. 20-088.

If you have any questions or require any additional information, please do not hesitate to contact me.

Respectfully submitted,

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Enclosure

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

In the Matter of PACIFICORP d/b/a PACIFIC POWER, 2022 Transition Adjustment Mechanism	Docket UE 390

CERTIFICATE OF SERVICE

I hereby certify that on this 28th day of September, 2021, I have served a true and correct copy of the confidential version of Sierra Club's Reply Brief upon all eligible party representatives electronically via encrypted password protected .zip folders in compliance with OAR 860-001-0180 and Order No. 20-088.

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BEFORE THE PUBLIC UTILITY COMMISSION
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Sierra Club's Reply Brief

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In the Matter of PACIFICORP d/b/a PACIFIC POWER, 2022 Transition Adjustment Mechanism	SIERRA CLUB'S REPLY BRIEF

I. Introduction

Sierra Club submits this Reply Brief urging the Public Utility Commission of Oregon ("Commission") to find PacifiCorp's Transition Adjustment Mechanism ("TAM") rates unjust and unreasonable because PacifiCorp's dispatching processes cause the utility to forecast far more coal generation than is economically reasonable, particularly at Jim Bridger, one of the Company's highest-cost coal plants. By manipulating the incremental cost of the Company's coal fleet, PacifiCorp ensures that its coal plants are selected over lower-cost and cleaner alternatives. At the Jim Bridger plant, the incremental price is calculated not by utilizing economic principles but by ensuring that forecasted generation consumes base quantities of coal that the Company self-determines at its Bridger Coal Company mine ("BCC" or "Bridger mine").

Changes to other coal plants' incremental prices are largely done to ensure consumption of minimum take requirements contained within the Company's coal supply agreements. Due to the significant impact that coal supply agreements have on PacifiCorp's dispatch decision-making, Sierra Club further urges the Commission to establish best practices for the Company moving forward and to find that the minimum take quantities in the newly signed coal supply agreements for the Hunter plant are imprudent.

In sum, Sierra Club recommends that the Commission take the following actions to protect ratepayers and ensure that PacifiCorp's coal dispatch decision-making aligns with Oregon's climate goals:

1. Require that the Company use accurate incremental pricing for its coal fleet in modeling future generation;
2. Require that the Company disclose to the Commission dispatch tier adjustments made in order to meet minimum take requirements;
3. Disallow $[redacted] ($[redacted] on an Oregon-allocated basis) associated with excessive forecasted generation at Jim Bridger;
4. Require future reporting to (a) ensure that forecasting changes required in this TAM are carried through to actual operations and (b) document steps taken to reduce Bridger mine costs;
5. Adopt best practices for future coal supply agreements against which to assess the prudency of the agreements.
6. Find that the new Hunter coal supply agreements are imprudent and direct PacifiCorp to model the Hunter plant without minimum take assumptions.

II. Standard of Review

In this proceeding, PacifiCorp "has the burden of proof to show that its proposal is fair, just and reasonable."[1] This burden is borne by PacifiCorp "throughout the proceeding and does

[1] *In the Matter of PacifiCorp, dba Pacific Power, 2017 Transition Adjustment Mechanism*, Docket No. UE 307, Order No. 16-482 at 4 (Dec. 20, 2016); *see also* ORS 757.210(1)(a) ("the utility shall bear the burden of showing that the rate or schedule of rates proposed to be established or increased or changed is fair, just and reasonable").

not shift to any other party."[2] When a party opposes a utility's proposed costs, that party "may in turn show that the costs are not reasonable."[3] However, the utility:

> still must show, by a preponderance of evidence, that the change is just and reasonable. If the company fails to meet that burden, either because the opposing party presented persuasive evidence in opposition to the proposal, or because PacifiCorp failed to present adequate information in the first place, then PacifiCorp does not prevail because it has not carried its burden of proof. [4]

III. Assumptions Made in PacifiCorp's GRID Model Unreasonably Favor Coal at the Expense of Lower Cost Resources

PacifiCorp uses modeling to "optimize" its forecasted generation patterns, but it also manipulates the inputs in order to ensure minimum levels of coal-fired generation. The Company's Generation and Regulation Initiative Decision Tool ("GRID") is a cost production model with the ability to forecast economically optimal generation commitment and dispatch of its fleet.[5] The Company relies on GRID to simulate its power system on an hourly basis and to estimate its future generator commitments, dispatch decisions, and Net Power Costs ("NPC") for the purposes of the TAM.[6] While PacifiCorp witness Douglas Staples opined that GRID is incapable of forecasting imprudent operations,[7] this is simply incorrect. In fact, GRID's output does not represent the most economically optimal generation forecast because PacifiCorp imposes pricing manipulations and other constraints that inhibit the model from neutrally evaluating and projecting the least-cost, least-risk generation mix for the Company's customers.

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[2] *In the Matter of PacifiCorp, dba Pacific Power, Request for a General Rate Revision*, Docket No. UE 246, Order No. 12-493 at 2 (Dec. 20, 2012).
[3] *In the Matter of PacifiCorp, dba Pacific Power, Request for a General Rate Revision,* Docket No. UE 374, Order No. 20-473 at 5 (Dec. 18, 2020).
[4] *Id.*
[5] Sierra Club/100 at Burgess/24:12-14.
[6] *See id.* at Burgess/19:6-10.
[7] Aug. 26, 2021 Hearing Transcript at 9:21-23 (Staples, PacifiCorp) ("[B]ut GRID being what it is, I don't think it's really capable of modeling imprudent actions.") [hereinafter "Hearing Tr."].

PacifiCorp justifies these manual modifications to GRID as a means of ensuring that GRID reflects how PacifiCorp actually operates its system[8] and to ensure that previously incurred "minimum take" obligations under its coal supply agreements are met.[9] However, as noted by Sierra Club witness Ed Burgess,[10] mimicking actual operations through GRID and forcing the model to project minimum quantities of coal burn does not demonstrate that PacifiCorp is operating its system in the most economically prudent manner for the benefit of ratepayers. PacifiCorp agrees that only prudently incurred costs may be recovered and that the Commission must ensure, through the TAM, that PacifiCorp is forecasting prudent operations.[11] Yet, PacifiCorp's modeling decisions result in excessive, high-cost coal dispatch forecasts, particularly at the Company's Jim Bridger coal plant, and thus will result in the recovery of imprudently incurred costs absent Commission intervention.

A. PacifiCorp Fails to Use Accurate Incremental Pricing in GRID

PacifiCorp's GRID model includes two separate tiers for fuel costs: a "dispatch tier" and a "costing tier."[12] The dispatch tier's price input is based on a generation unit's incremental cost, or the cost to produce one additional megawatt hour of energy.[13] Accordingly, the incremental cost excludes previously incurred or fixed costs associated with that generation (i.e., the cost of fuel subject to take or pay provisions).[14] Conversely, the costing tier represents a generation

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[8] *See, e.g.*, PacifiCorp ("PAC")/400 at Staples/16:11-13 ("[T]he Company continues to improve its modeling and pricing systems and search for additional adjustments so that forecasts better reflect the Company's actual operations.").
[9] *See, e.g.*, PAC/400 at Staples/54:20-55:1 (describing the use of an "iterative process" in GRID pricing to ensure that minimum take provisions are met).
[10] Sierra Club/100 at Burgess/19:20-20:3.
[11] Hearing Tr. at 9:12-14 (Staples, PacifiCorp); PAC/400 at Staples/33:8-10 (quoting *In the Matter of PacifiCorp, dba Pacific Power, 2018 Transition Power Mechanism*, Docket No. UE 323, Order No. 17-444 at 11 (Nov. 1, 2017) (The Commission reviews "GRID dispatch issues to determine whether the Company is meeting its obligation to operate prudently, with prudent unit commitment and dispatch decisions that minimize costs.").
[12] Hearing Tr. at 11:14-17 (Staples, PacifiCorp).
[13] *Id.* at 11:18-12:1, 12:13-17 (Staples, PacifiCorp).
[14] *Id.* at 12:20-13:2 (Staples, PacifiCorp).

unit's average cost, [15] and thus includes costs that are excluded from the dispatch tier. Because PacifiCorp considers the costs associated with meeting contractual minimums for coal supply agreements to be fixed costs, the Company excludes these costs from the dispatch tier.[16] The lower-priced dispatch tier is used to forecast least-cost, least-risk generation, whereas the costing tier is used to calculate the NPC ultimately charged to customers.[17]

Because the dispatch tier excludes fixed costs, it is often significantly lower than the costing tier for some coal plants, particularly for the Jim Bridger, Hayden, Huntington, and Colstrip plants.[18] At Jim Bridger—one of PacifiCorp's most expensive coal plants—the dispatch tier is [redacted] percent lower than the costing tier,[19] meaning that when GRID forecasts anticipated generation from PacifiCorp's coal fleet, it assumes that Jim Bridger is significantly less expensive than is accurate.

[15] Sierra Club/100 at Burgess/24:16-17.
[16] Hearing Tr. at 12:24-13:2 (Staples, PacifiCorp).
[17] Sierra Club/100 at Burgess/24:11-16.
[18] *Id.* at Burgess/25:1-2 (Confidential Table 4), 12:13-17.
[19] *Id.* at Burgess/25:1-2 (Confidential Table 4), 34:6.

Confidential Table 1: GRID 2022 Tiers[20]

COAL PLANT NAME	GRID COSTING TIER 2022 ($/MMBTU)	GRID DISPATCH TIER 2022 ($/MMBTU)	DIFFERENCE
COLSTRIP	[redacted]		
CRAIG			
DAVE JOHNSTON			
HAYDEN			
HUNTER			
HUNTINGTON			
JIM BRIDGER			
NAUGHTON			
WYODAK			

Making generation projections and dispatch decisions based on marginal or incremental costs may be economically sound, but establishing the appropriate incremental price point for GRID is critical and depends in large part upon the time frame being considered.[21] In the short term, such as day-ahead decision-making, most fuel costs may be unavoidable and thus appropriately treated as fixed and excluded from the dispatch tier.[22] However, as the TAM projects NPC over the coming year, PacifiCorp may have opportunities prior to that test year to avoid certain costs that would be considered fixed in the very near term. For instance, the majority of PacifiCorp's coal supply agreements contain minimum take provisions which may be unavoidable in the near or short term. However, if the coal contract contains a provision that allows the Company to avoid a minimum take requirement, such a provision may be invoked

[20] This table originally appeared as "Confidential Table 4: GRID 2022 Tiers" in Sierra Club/100 at Burgess 25:1-2.
[21] Sierra Club/100 at Burgess/28:21-22.
[22] *Id.* at Burgess/28:22-29:2.

prior to the forecasted period in the TAM and the minimum take requirement would thus become a variable cost.[23]

Additionally, where no minimum take requirement applies to a coal supply or the minimum-take requirement has never been approved by the Commission, it would be inappropriate for PacifiCorp to treat any predetermined amount of coal consumption as "previously incurred" because such costs may be avoided or deemed imprudent by the Commission.[24] In the 2022 TAM, there are six coal plants where the minimum take requirement is not yet a sunk cost for ratepayers because: (a) new agreements have not yet been approved by the Commission; (b) agreements for 2022 have yet to be entered; (c) there is no minimum take requirement; and/or (d) the minimum take requirement can be avoided under an existing contract.[25] These plants are: Craig, Dave Johnston, Hunter, Naughton, Jim Bridger, and Wyodak.[26] For these plants, at least a portion of their coal supply is a variable cost that should be included in the dispatch tier cost.

Nevertheless, PacifiCorp's dispatch tier pricing often fails to accurately reflect a coal plant's variable costs; instead, PacifiCorp removes certain costs as "fixed" that should be treated as variable. For instance, the Company has chosen to assume that it is bound by minimum take requirements before the Commission has approved the requirement, such as at the Hunter, Dave Johnston, and Craig plants. The Company has made the same assumption at other plants *even though coal supply agreements have not been signed* for 2022. For the Jim Bridger plant, the Company assumed that its ratepayers are bound by a minimum take requirement from the Black Butte mine, despite the fact that *no contract is in place with Black Butte for the 2022 test*

[23] *See id.* at Burgess/29:2-6.
[24] *Id.* at Burgess/32:13-33:5; *see also id.* at Burgess 29:20-30:3.
[25] *Id.* at Burgess/31:1-2 (Confidential Table 6).
[26] *Id.*

period.[27] This price manipulation, along with other faulty assumptions discussed in Section IV, contributes to the large disparity between Jim Bridger's incremental price, $[redacted]/MMBtu,[28] and its average price, $[redacted]/MMbtu.[29]

By assuming that minimum take requirements are sunk costs for ratepayers before Commission approval or even before entering into an agreement with a minimum take requirement, PacifiCorp forces GRID to assume lower costs for its coal plants than are accurate. Predictably, this leads to higher forecasted generation. The Commission should direct PacifiCorp to include all variable coal costs in future forecast modeling, without making premature assumptions that ratepayers will be bound by minimum take requirements. Additionally, NPC rates associated with coal costs for "open positions" (e.g., at Jim Bridger (Black Butte), Naughton (Kemmerer), and Dave Johnston (unspecified Powder River Basin source) should only be approved on an interim basis, until such time that PacifiCorp provides a supplemental filing, including the specific contract details and additional GRID model runs.[30]

B. PacifiCorp's "Iterative Process" Is an Indication that Minimum Take Requirements Are Driving Uneconomic Coal Consumption

As PacifiCorp acknowledged in its Opening Brief, the Company often further manipulates its coal plants' incremental price of production through an "iterative process" designed to ensure that minimum coal quantities are consumed.[31] For instance, at the Huntington plant, the Company first performed an initial GRID run, which excluded costs associated with Huntington's minimum take requirement.[32] This GRID run, based on Huntington's incremental

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[27] Hearing Tr. at 101:14-22 (Ralston, PacifiCorp).
[28] Sierra Club/100 at Burgess/26:4-5 (Confidential Table 5)
[29] *Id.*
[30] Sierra Club/100 at Burgess/2:15-22.
[31] PAC Opening Brief at 44:6-9.
[32] Hearing Tr. at 14:2-6 (Staples, PacifiCorp).

price, did not forecast high enough generation at the Huntington plant to meet the associated minimum take requirements.[33] As a result, PacifiCorp manually reduced the incremental price until the minimum take requirement was met.[34] In this proceeding, a manual adjustment was made for the Huntington, Colstrip, and Hayden plants.[35]

While Company witness Dana Ralston insisted, upon prompting by his counsel,[36] that manual adjustments to the incremental price do not indicate uneconomic generation,[37] it is undisputed that the "iterative process" is required when GRID does not forecast high enough economic generation at a particular plant to meet that plant's contractual obligations.[38] Moreover, Mr. Ralston conceded that manual adjustments year-over-year *would* indicate uneconomic generation.[39] Yet, neither Mr. Ralston nor Mr. Staples was able to confirm whether manual adjustments have been required year-over-year for any particular plant,[40] indicating that the Company is not sufficiently evaluating the economics of its coal plants. Incredibly, Mr. Ralston testified that this burden is on TAM intervenors, who should, through discovery, "ask what the actual burns were and the dispatch prices were for the last several years,"[41] presumably in order to watchdog whether the Company is making appropriate adjustments when GRID consistently demonstrates that minimum take requirements are driving coal generation.

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[33] *Id.* at 14:21-25 (Staples, PacifiCorp).
[34] *Id.* at 15:1-4 (Staples, PacifiCorp).
[35] *Id.* at 15:25-16:2 (Staples, PacifiCorp).
[36] *Id.* at 112:25-113:4 (Ralston, PacifiCorp).
[37] *Id.* This claim was also asserted in the Company's Opening Brief. *See* PAC. Opening Brief at 43:22-45:8.
[38] Hearing Tr. at 15:5-11 (Staples, PacifiCorp).
[39] *Id.* at 106:6-11 (Ralston, PacifiCorp) ("Q. What, within the TAM, would signal uneconomic production? A. If there was multiple years that we had to force the burns to make the minimum requirement, not just one year, but let's just say the last several years, that would be uneconomic.").
[40] *Id.* at 111:14-19 (Ralston, PacifiCorp) (directing Sierra Club counsel to Mr. Staples to answer whether Jim Bridger required adjustments to its dispatch tier price over the past several years); Confidential Hearing Tr. at 15:2-5 (Staples, PacifiCorp) [redacted]); *see also id.* at 106:17-107:3 (ALJ Rowe questioning Mr. Ralston about whether any TAM filings indicate that there's been a history of forcing uneconomic burn at coal plants and Mr. Ralston responding no).
[41] Hearing Tr. at 107:11-14 (Ralston, PacifiCorp).

Alternatively, the Company's position on this issue appears to be that minimum take requirements resulting in forced coal burn that "would potentially not be burned if there were no minimum take" requirements is justified in order to secure lower coal prices.[42] The Company goes so far as to state that losses on uneconomic generation are likely lower than the supposed benefits from coal supply agreements with minimum take requirements[43]—a statement completely devoid of evidentiary support.

As PacifiCorp has acknowledged that its "iterative process" could indicate uneconomic, forced generation at a coal plant, it is critical that the Commission be aware of when adjustments to a plant's dispatch tier are made and to what degree. Sierra Club recommends that the Commission require PacifiCorp to file testimony in future TAM proceedings indicating the "initial" incremental price for each coal plant, the final dispatch tier price, and the magnitude of any difference, similar to the information requested in ALJ Bench Request 5 for the Huntington plant. PacifiCorp should provide historical information, over the past five years, in order to allow the Commission to determine whether iterative adjustments have been required year-over-year. Notably, PacifiCorp is already required to provide similar information to the California Public Utilities Commission, which found in the Company's 2020 Energy Cost Adjustment Clause proceeding (which is analogous to the TAM) that "additional transparency and information are needed as part of PacifiCorp's practice of adjusting the [d]ispatch [t]ier inputs to meet minimum take provisions."[44]

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[42] PAC Opening Brief at 45:4-8.
[43] *Id.*
[44] *In the Matter of the Application of PacifiCorp (U901E) for Approval of its 2020 Energy Cost Adjustment Clause and Greenhouse Gas-Related Forecast and Reconciliation of Costs and Revenue*, A.19-08-002, D. 20-12-004 at 14 (Cal. P.U.C. Dec. 7, 2020). *See also id.* at 16 (directing PacifiCorp to "include information on the marginal fuel cost assumed for each coal plant, the specific coal plants where adjustments were made to align forecasted generation with minimum take provisions, and the magnitude of adjustments made.").

IV. PacifiCorp's Modeling Assumptions for the Jim Bridger Plant Result in Excessive and Imprudent Generation

PacifiCorp's Jim Bridger plant is one of the Company's most expensive coal generating resources.[45] As Mr. Burgess explained, while the average cost of PacifiCorp's coal fleet is approximately $[redacted]/MWh, Jim Bridger's average cost is over [redacted] percent higher at $[redacted]/MWh.[46]

Although PacifiCorp has known for many years that generation costs at Jim Bridger are very high, "in the 2022 TAM, PacifiCorp's generation estimates (MWh) at Jim Bridger represent only a [redacted] percent reduction from 2020 actual generation levels and a [redacted] percent reduction versus 2019 generation levels."[47] GRID continues to forecast relatively high generation at Jim Bridger, despite its high cost, because PacifiCorp manipulates the dispatch tier price by excluding variable costs associated with the PacifiCorp-owned Bridger Coal Company ("BCC" or "Bridger mine") coal supply.[48] Even though the BCC coal supply has no genuine minimum take requirement,[49] PacifiCorp treats the BCC base quantity of coal from the mine as though it were a minimum take requirement,[50] thereby greatly reducing the incremental price for Jim Bridger. Predictably, this results in GRID forecasting higher anticipated dispatch at the Jim Bridger plant than would occur if PacifiCorp allowed GRID to consider the plant's true costs.[51]

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[45] In this proceeding, [redacted]. Sierra Club/100 at Burgess/13:6-7 (Confidential Table 2).
[46] Sierra Club/100 at Burgess/13:6-7 (Confidential Table 2), 15:3-6.
[47] *Id.* at Burgess/18:13-15 (internal citation omitted).
[48] As discussed above, the Jim Bridger dispatch tier was additionally artificially lowered because PacifiCorp assumed minimum take requirements for coal from the Black Butte mine (and thus excluded those costs from its dispatching forecast) even though the Company has yet to sign a coal supply contract for the 2022 test period. Hearing Tr. at 101:14-102:1 (Ralston, PacifiCorp).
[49] PAC/400 at Staples/64:13-14 (stating that BCC has fixed costs that "act like a minimum take provision").
[50] *Id.*
[51] Sierra Club/100 at Burgess/62:10-20 (describing lower forecasted generation at Jim Bridger when the plant is modeled with its average cost).

A. PacifiCorp Inappropriately Uses the BCC Supplemental Coal Price for the Jim Bridger Dispatch Tier, Artificially Suppressing Jim Bridger's True Incremental Price

The Jim Bridger plant's four units are primarily served by the BCC mine and Black Butte Coal Company ("Black Butte").[52] The Bridger mine, which is owned by PacifiCorp and Idaho Power Company,[53] includes both a surface mine and an underground mine, the latter of which is anticipated to close by the end of 2021.[54] Pricing for the Jim Bridger coal supply falls into three tiers: the Black Butte price, the BCC "base" price (which is tied to assumed generation levels at the BCC mine),[55] and the BCC "supplemental" price (which represents coal available to PacifiCorp once the base quantity has been purchased).[56] The Black Butte and BCC base prices are significantly more expensive than the BCC supplemental coal supply.[57] Specifically, PacifiCorp prices Black Butte coal at $[redacted]/MMBtu, BCC base coal at $[redacted]/MMBtu, and supplemental BCC coal at $[redacted]/MMBtu.[58] Although the BCC supplemental coal supply only accounts for a small percentage of overall coal consumption at the Jim Bridger plant,[59] PacifiCorp uses a single dispatch tier for the Jim Bridger plant that is derived from the supplemental BCC price.[60]

Because PacifiCorp ties the Jim Bridger dispatch tier price to the supplemental BCC coal price, the price used to determine Jim Bridger generation is [redacted] percent lower than its average

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[52] *Id.* at Burgess/51:3-5.
[53] PAC/600 at Ralston/42:4-5.
[54] Hearing Tr. at 89:1-3 (Ralston, PacifiCorp).
[55] Sierra Club/100 at Burgess/26:4-5 (Confidential Table 5); *see also* PAC/1200 at Ralston/27:8-16 (describing how BCC base coal pricing is calculated).
[56] Sierra Club/100 at Burgess/26:4-5 (Confidential Table 5); *see also* Hearing Tr. at 21:3-6 (Staples, PacifiCorp).
[57] Sierra Club/100 at Burgess/26:4-5 (Confidential Table 5); *id* at Burgess/25:12-26:1 (emphasizing that the supplemental price used to inform the dispatch tier is significantly lower than the other two fuel supplies).
[58] *Id.* at Burgess/26:4-5 (Confidential Table 5).
[59] *Id.*
[60] Hearing Tr. at 20:25-21:2 (Staples, PacifiCorp). In this proceeding, the Jim Bridger dispatch tier is the same price as the supplemental BCC coal. Sierra Club/100 at Burgess/25:12-14, 26:4-5 (Confidential Table 5).

cost.[61] The Company justifies this large discrepancy by asserting that the supplemental price "represents the marginal cost associated with procuring additional coal above the minimum mine plan volumes coupled with the Black Butte contract[,]"[62] even though the Company is not subject to a minimum take requirement in this proceeding at *either* the BCC or Black Butte mines. In his surrebuttal testimony, Mr. Staples presented a hypothetical scenario that supposedly demonstrated why forecasting Jim Bridger generation based on the lower BCC supplemental price makes economic sense.[63] Specifically, the hypothetical assumed that the incremental cost to produce an item was $20, but the company sold that item for $25.[64] According to Mr. Staples, in this situation a firm "should produce and sell that item,"[65] because, "that production and sale [of the incrementally priced item] is either going to defray costs or increase profits . . . ."[66] However, Mr. Staples' example failed to include *total revenue*.[67] At hearing, Mr. Staples acknowledged that even if incremental production was profitable, the hypothetical company could still be losing money *overall* if its losses on the base quantity were higher than the profit from the supplemental production.[68]

This is precisely the situation at Jim Bridger and the BCC mine: the Company structures its GRID modeling to ensure that supplemental BCC coal, e.g., incremental production, is consumed, even though the Company incurs a loss on the large quantity of "base" BCC coal required before the supplemental price is available.[69] Mr. Burgess depicted this in Table 1 of his rebuttal testimony, wherein he showed that when the supplemental price is significantly lower

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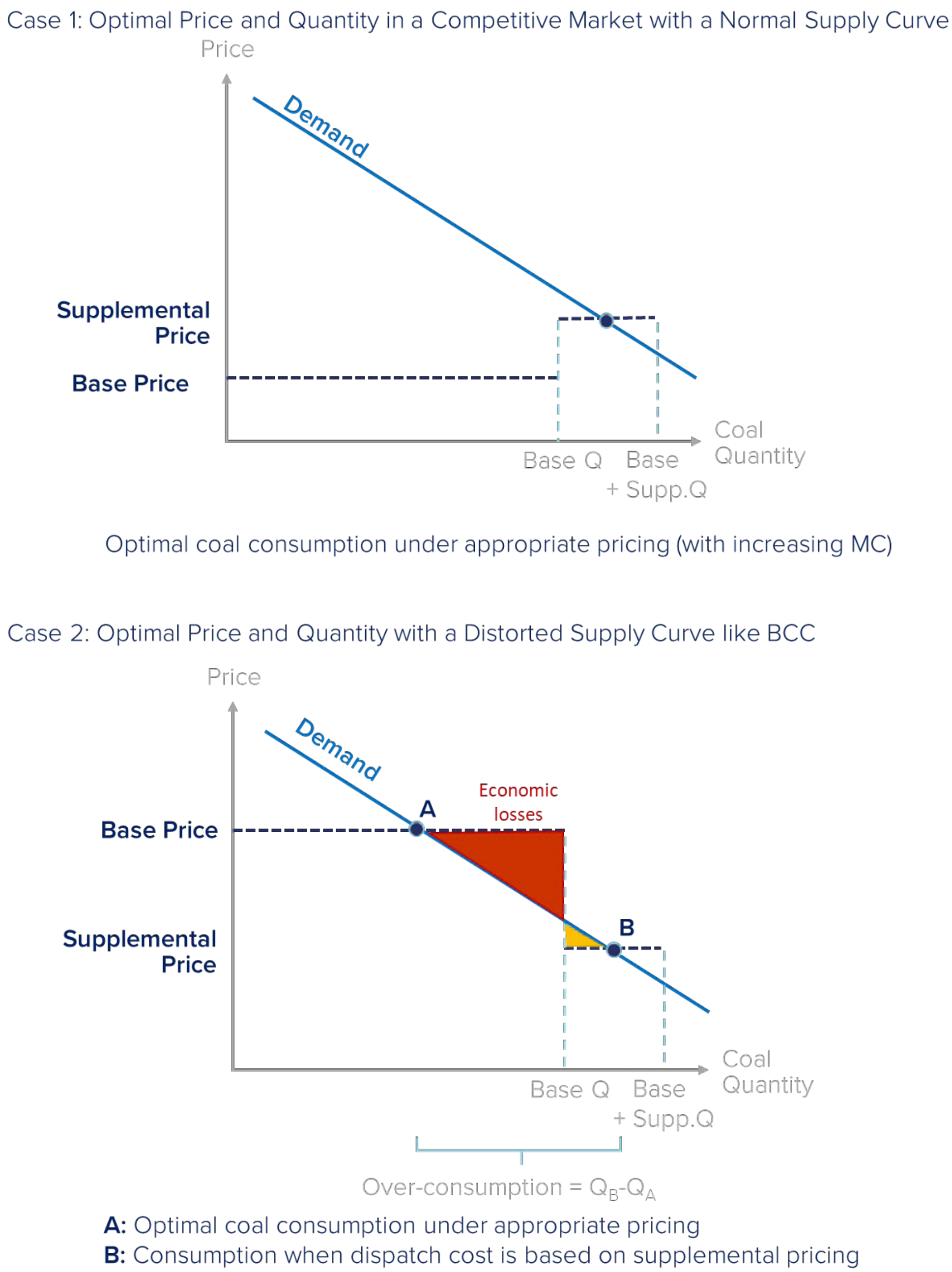
[61] Sierra Club/100 at Burgess/25:1-2 (Confidential Table 4).
[62] PAC/400 at Staples/67:14-17.
[63] PAC/1000 at Staples/22:10-23:11.
[64] *Id.* at Staples/22:10-11.
[65] *Id.* at Staples/22:11-12.
[66] Hearing Tr. at 24:17-19 (Staples, PacifiCorp).
[67] *Id.* at 24:6-8 (Staples, PacifiCorp).
[68] *Id.* at 24:21-25:2 (Staples, PacifiCorp).
[69] *See id.* at 21:3-8 (Staples, PacifiCorp).

than the base price, as with BCC coal, forcing production to meet the supplemental price results in economic loss.

Table 2: Coal Fuel Supply Curves[70]



[70] This table originally appeared as "Table 1: Coal Fuel Supply Curves" in Sierra Club/200 at Burgess/16:1-3.

As Mr. Burgess explained, a company may choose to sell at an overall loss in order to recover fixed or sunk costs over a limited time period, but "in the long run the seller should either shut down operations to avoid additional losses, reduce the portion of costs that are fixed, or increase the price . . . ."[71] Mr. Staples attempted to brush aside this commonsense approach by insisting that if the base production represents fixed costs, then the company "may as well generate the revenue [from the incremental production]."[72] However, a company subject to market forces could only maintain incremental production if the company expects that its profit forecasts will turn around in the near term because it is able to reduce fixed costs or increase its selling price. Otherwise, the company would soon go out of business. Without Commission intervention, PacifiCorp is insulated from these market realities, instead relying on ratepayers to cover its losses.

PacifiCorp maintains that the lower cost BCC supplemental coal is a benefit to ratepayers; however, Mr. Burgess showed through his rebuttal testimony that it would be "generally favorable for the model to select an alternative resource that can displace coal from BCC, even if the alternative is more expensive on a per unit basis than the BCC supplemental coal supply."[73] Mr. Burgess provided a numerical example in Confidential Table 2 of his rebuttal testimony,[74] which PacifiCorp criticized in surrebuttal testimony and in its opening brief, arguing that Mr. Burgess had not appropriately adjusted the per-unit price of coal.[75] Mr. Ralston purported to "correct" Mr. Burgess's error; however, Mr. Ralston's new calculation failed to remove or reduce supposedly "fixed" costs that would actually go down along with reduced

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[71] Sierra Club/200 at Burgess/13:16-19.
[72] Hearing Tr. at 25:2-5 (Staples, PacifiCorp).
[73] Sierra Club/200 at Burgess/18:10-13.
[74] *Id.* at Burgess/19:1-2 (Confidential Table 2).
[75] PAC Opening Brief at 56:17-19; PAC/1200 at Ralston/40:14-41:7.

operations, most notably labor costs. As discussed below, Mr. Ralston's assumption that the Company could not reduce labor costs *in any way* if it reduced Bridger mine production is unreasonable and incorrect.

B. PacifiCorp Could Substantially Reduce Costs at the Bridger Mine if Production Was Similarly Reduced

As discussed above, PacifiCorp forecasts Jim Bridger dispatch based on the BCC supplemental price because the Company insists that it cannot reduce certain immutable fixed costs that act as a minimum take requirement.[76] However, PacifiCorp is capable of reducing both production and the associated costs at the Bridger mine, and the Commission should reject the Company's attempt to force a minimum take requirement upon its ratepayers where none exists.

To begin, PacifiCorp annually develops a BCC mine plan that establishes anticipated coal production.[77] Accordingly, along with its co-owner Idaho Power Company, each year PacifiCorp *self-determines* the level of production that will occur at the Bridger surface and underground mines in the years to follow. This alone indicates that, even within the TAM's year-long test period, the Company could take action to reduce production if it chose to do so. While Mr. Ralston asserted that the Company evaluated a range of production levels for the BCC mine plan,[78] the Company did not evaluate any production level below the current base plan.[79] Specifically, PacifiCorp considered coal production levels between [redacted] and [redacted] tons and coal delivery levels between [redacted] and [redacted] tons.[80] The BCC base plan assumes production of [redacted] tons and deliveries of [redacted] tons.[81]

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[76] PAC Opening Brief at 55:5-10.
[77] Sierra Club/103, PacifiCorp Response to Sierra Club Data Request 2.8 ("At Bridger Coal, mine plans are developed on an annual basis and base volumes are determined by balancing short-term and medium-term fueling needs.").
[78] PAC/1200 at Ralston/28:13-14.
[79] Sierra Club/304, PacifiCorp Confidential Response to Sierra Club Data Request 6.1.
[80] *Id.*
[81] *Id.*

Second, PacifiCorp has the ability to reduce its so-called "fixed" costs at the mine. Through discovery, PacifiCorp identified "wholly identifiable" fixed costs of approximately $[redacted],[82] which account for [redacted] percent of BCC's total costs.[83] Of this amount, approximately $[redacted] represent reclamation costs.[84] While mine land must be reclaimed, the amount of reclamation required is tied to the amount of land disturbed by mining.[85] In other words, if PacifiCorp reduced production at the Bridger mine, its total reclamation costs would likely also go down. Accordingly, it is not appropriate to treat reclamation costs as wholly fixed, as PacifiCorp has done. Without including reclamation costs as a "fixed" cost, PacifiCorp's "wholly identifiable" fixed costs account for only [redacted] percent of total BCC costs.[86]

Additionally, PacifiCorp asserted that other fixed costs "are embedded in labor and benefits, materials/supplies, electricity, outside services, and other miscellaneous costs that are independent of coal production activities."[87] However, with the exception of labor and benefits, PacifiCorp has *never* quantified the fixed portion of these costs, even in surrebuttal testimony wherein Mr. Ralston strenuously objected to Mr. Burgess's characterization of these "embedded" costs as likely *de minimus*.[88] However, Mr. Burgess did so because some of these costs, like electricity, materials, and supplies, are clearly tied to production and would reduce if production similarly reduced[89] (i.e., these costs are, at least to some degree, variable) and because PacifiCorp has not bothered to quantify the fixed portion, if any, of these costs.

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[82] Sierra Club/112, Confidential PacifiCorp Response to Sierra Club Data Request 2.5(c).
[83] Sierra Club/100 at Burgess/56:12-14 (Confidential Table 9).
[84] *Id.*; Sierra Club/112, Confidential PacifiCorp Response to Sierra Club Data Request 2.5(c).
[85] Sierra Club/100 at Burgess/57:18-20.
[86] *Id.* at Burgess/56:12-14 (Confidential Table 9).
[87] Sierra Club/112, Confidential PacifiCorp Response to Sierra Club Data Request 2.5(c).
[88] *See, e.g.*, PAC/1200 at Ralston/26:7-12.
[89] Sierra Club/200 at Burgess/2:19-3:2.

PacifiCorp did quantify labor and benefits as approximately $[redacted],[90] all of which were characterized as fixed. While not all labor costs could likely be avoided with reduced operations, it is incorrect to characterize the entire labor cost as fixed, over a year before they will even be incurred.

First, Mr. Ralston acknowledged that the Company is able to transition workers from coal production to reclamation.[91] Reclamation costs are a separate category of fixed cost for the BCC mine that is additionally collected from ratepayers,[92] and, as Mr. Ralston stated, the reclamation fund "includes what it would cost to reclaim the area. So it includes everything, materials, supplies, *labor*, everything, what we think it would cost to reclaim that area."[93] Accordingly, to the extent that the mine workforce could be transitioned from production to reclamation, production labor costs would go away and the costs of reclamation work would be covered by the Company's reclamation fund.

Second, the Company could reduce its workforce at BCC, with the payment of proper severance.[94] Effectively conceding that labor costs could, in fact, be reduced, Mr. Ralston and Mr. Schwartz alternatively asserted that it would be imprudent to reduce the labor force only to increase it the following year.[95] However, there is no indication that the economics of coal would suddenly support ramping production back up in the coming years. In fact, this argument implicitly recognizes and supports Sierra Club's position that while the TAM provides PacifiCorp with recovery for forecasted fuel expenses over a one year test period, limiting the

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[90] Sierra Club/112, Confidential PacifiCorp Response to Sierra Club Data Request 2.5(c).
[91] *See, e.g.,* PAC/600 at Ralston/44:21-45:4 (describing PacifiCorp's ability to "switch mining activities between coal production and reclamation").
[92] Sierra Club/112, Confidential PacifiCorp Response to Sierra Club Data Request 2.5(c).
[93] Hearing Tr. at 82:6-9 (Ralston, PacifiCorp) (emphasis added).
[94] PAC/1200 at Ralston/32:1-3; *see also* Sierra Club/300, Working Agreement between Pacific Minerals, Inc. and the International Brotherhood of Boilermakers Local S1978 § 14.8. While severance may constitute a fixed cost, it would undoubtedly be less than full employment costs.
[95] PAC/1200 at Ralston/30:10-12; PAC/500 at Schwartz/20:12-19.

Commission's evaluation of prudent spending to that year alone is unduly myopic and not in customers' best interest. In this instance, considering the long-term trajectory of coal economics, reducing production at the BCC mine is in ratepayers' best interest and had PacifiCorp evaluated spending at the Bridger mine year-over-year, it would have already acted to reduce its BCC costs. The Company failure to do so makes its planned operations at BCC in this TAM imprudent.

For these reasons, Mr. Burgess found that "most of the [the BCC] coal costs are variable in the 2022 timeframe and as such the GRID dispatch tier should be subject to only minimal price adjustments."[96] Mr. Burgess found that only the "wholly identifiable" fixed costs (excluding reclamation for the reasons described above) are legitimately fixed a year before the test period. To account for these fixed costs, Mr. Burgess estimated that a [redacted] percent reduction to the BCC base price could be appropriate when forecasting Jim Bridger generation.[97] Because all other costs are variable, they should be included in the Jim Bridger dispatch tier.

C. Accurately Pricing Jim Bridger's Dispatch Tier Price Would Result in NPC Savings of Approximately $[redacted] (Oregon Allocated)

Because PacifiCorp is not subject to a minimum take requirement at Black Butte[98] and the majority of BCC costs are variable, the BCC supplemental price tier is not an appropriate incremental price point for the Jim Bridger plant. Rather, as Mr. Burgess testified,[99] the Jim Bridger dispatch tier should more closely resemble the BCC base price ($[redacted]/MMBtu) because Jim Bridger's fuel supply has few truly sunk costs that would appropriately be excluded. If

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[96] Sierra Club/100 at Burgess/59:6-8.
[97] *Id.* at Burgess/59:10-11.
[98] While PacifiCorp does not have a coal supply agreement with Black Butte for the 2022 test year, it is required to purchase [redacted] tons from Black Butte in 2022, which were "deferred" from 2021. PAC Response to ALJ Bench Request 1.
[99] Sierra Club/100 at Burgess/59:4-6; *id.* at Burgess/26:4-5 (Confidential Table 5) (outlining the different fuel costs at Jim Bridger).

PacifiCorp would model Jim Bridger using the BCC base price, GRID's economic forecast would reduce Jim Bridger's output, likely eliminating the need for Black Butte and BCC supplemental coal and reducing BCC base coal. This would result in savings to ratepayers, as Jim Bridger's high generation would be curtailed.

In fact, a GRID run using Jim Bridger's costing tier price (i.e., its average cost) demonstrates the savings that could be achieved. In this GRID model run, the only change that PacifiCorp made to the model inputs was to use Jim Bridger's costing tier price ($[redacted]/MMBtu) as its dispatch tier price.[100] Importantly, Sierra Club's argument is *not* that PacifiCorp should model Jim Bridger based on average costs, as PacifiCorp has asserted,[101] but rather that PacifiCorp should use an *accurate* incremental price to forecast Jim Bridger's generation. While Jim Bridger's incremental price should closely resemble the BCC base price (with a [redacted] percent reduction, discussed above), the average cost is a reasonable approximation. In fact, because Jim Bridger's costing tier price ($[redacted]/MMBtu) is approximately [redacted] percent lower than the BCC base price ($[redacted]/MMBtu), the average cost GRID run was a conservative approach that effectively assumed more fixed costs at the BCC mine than is accurate.

Under this average cost GRID run, total fuel consumed at Jim Bridger for 2022 was forecasted as [redacted] MMBtus, compared to over [redacted] MMBtus from PacifiCorp's TAM application.[102] The resulting NPC savings were approximately $[redacted] ($[redacted], Oregon allocated).[103] Nevertheless, PacifiCorp dismissed the results of this GRID run, insisting that it would not result in high enough Jim Bridger generation to cover fixed costs at the Bridger

[100] Sierra Club/200 at Burgess/21:3-7.
[101] *See, e.g.*, PAC. Opening Brief at 54:3-4.
[102] Sierra Club/100 at Burgess/62:13-16.
[103] Sierra Club/200 at Burgess/20:12-13; *see also* Sierra Club/123.

mine and that it has no ability to reduce these costs.[104] However, as Mr. Burgess explained, the average price GRID run also resulted in Jim Bridger expenses of $[redacted][105] (which would be recovered from ratepayers). This recovery would cover PacifiCorp's remaining fixed costs, *assuming that the Company took action to appropriately scale down production at the Bridger mine*.[106] In fact, Mr. Burgess quantified PacifiCorp's fixed BCC costs under a reduced production schedule and found that total fixed costs would amount to $[redacted], which is [redacted] *less* than the total cost projected in the average cost GRID model run.[107] Accordingly, the Commission should reduce PacifiCorp's requested NPC by $[redacted] (Oregon allocated),[108] as the average cost GRID run clearly demonstrates that accurately pricing Jim Bridger results in lower forecasted generation and lower customer costs.

D. The Commission Should Require Future Reporting to Ensure that Actual Operations Match Forecasts, as Adjusted in this Proceeding

Reducing PacifiCorp's proposed NPC in this proceeding to account for the excessive projected Jim Bridger generation is an important step to protect ratepayers. However, adjusting the forecast does not necessarily mean that PacifiCorp will make similar changes in its unit commitment and dispatch practices. As Mr. Burgess explained, PacifiCorp's energy traders similarly rely on the lower cost BCC supplemental pricing tier when making actual unit commitment and dispatch decisions.[109] "The extreme difference between the BCC supplemental

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[104] PAC Opening Brief at 56:11-15; PAC/1200 at Ralston/23:20-24:3.
[105] Sierra Club/200 at Burgess/23:9-10.
[106] *Id.* at Burgess/24:1-2 (Confidential Table 3).
[107] *Id.*
[108] Notably, because reclamation costs (identified by PacifiCorp as $[redacted]) are variable, Mr. Burgess did not include these in the $[redacted] assumed fixed costs for the mine. However, even if the Commission should find that PacifiCorp properly treated reclamation costs as fixed, the proposed NPC reduction could be adjusted to accommodate the full reclamation costs. Specifically, the Commission could reduce NPC by $[redacted] ($[redacted] Oregon allocated) in order to fully cover PacifiCorp's claimed BCC reclamation costs. Sierra Club/200 at Burgess/25:5-14.
[109] Sierra Club/100 at Burgess/70:6-11.

price and the BCC base price is significant enough that generation from Jim Bridger is likely being systematically over forecasted . . . ."[110]

While actual commitment and dispatch decisions are reviewed in the PCAM, there is no reason why the Commission may not use the evidence in this proceeding to inform future PCAMs.[111] Accordingly, the Commission should require PacifiCorp to provide "a transparent accounting of how plant specific fuel cost assumptions used by its energy traders correspond to those used in the TAM forecast."[112] This reporting should include: (1) marginal fuel costs assumed by PacifiCorp's energy traders; (2) expected operating costs; (3) expected market price; (4) whether the plant was operated as "must run" or economically committed; and (5) what the assumed cycling costs were.[113] Similarly, the Commission should require PacifiCorp to include a report or testimony in future TAMs identifying steps it has taken to reduce BCC costs.[114] This reporting could be made in either the PCAM or the TAM, as deemed appropriate by the Commission.

V. PacifiCorp's Coal Contracting Practices Result in Inflexible Contracts that Predetermine Coal Fleet Operations and Lock Ratepayers into Unreasonable Fuel Costs.

PacifiCorp's coal contracts do not merely play an important role in dispatch decisions—they dictate how the coal fleet operates. As detailed in Section II above, PacifiCorp manipulates its modeling inputs to ensure that its coal plants operate frequently enough to justify the minimum take provisions.

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110 Sierra Club/200 at Burgess/31:10-13.
111 *Id.* at Burgess/32:7-9 ("[I]t does not make sense to construct artificial procedural barriers to gathering relevant information on PacifiCorp's dispatch practices that may inform future TAM and/or PCAM proceedings.").
112 Sierra Club/100 at Burgess/72:18-20.
113 *Id.* at Burgess/74:8-11.
114 *Id.* at Burgess/74:12-14.

Many plants are under contract for [redacted] of their anticipated burn.[115] Others have very high minimum take requirements, including the Hunter plant under its newly signed coal supply agreements.[116] As Oregon strives to decarbonize its energy supply while reducing costs for ratepayers, it is imperative that utilities like PacifiCorp prudently manage their coal supply agreements by maintaining maximum flexibility and minimizing minimum take obligations. The Commission should establish "best practices" by which to judge the prudency of PacifiCorp's new coal supply agreements, including the following:

1. Analyze long-run marginal costs in order to ensure the prudency of any minimum take provisions by using average cost modeling, a variety of demand scenarios, and without must-run constraints;
2. Pursue a minimum take requirement that is low enough to provide flexibility, meaning 50 percent of projected coal burn or less;
3. Require provisions allowing for adjustment of minimum take requirements under changing regulatory and economic conditions;
4. Minimize the length of coal contracts; and
5. Provide copies of PacifiCorp's coal supply agreements and affiliate mine plans to the Commission for review.

In addition, Sierra Club recommends that the Commission require PacifiCorp to produce evidence in future TAM proceedings showing that it incorporated these best practices before executing each new coal contract.

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[115] PAC Response to ALJ Bench Request 1.
[116] *Id.*; *see also* Sierra Club/100 at Burgess/45:8-10.

A. Analyze Long-Run Marginal Costs in Order to Ensure the Prudency of Any Minimum Take Provisions by Using Average Cost Modeling, a Variety of Demand Scenarios, and Forgoing Must-Run Constraints

Because minimum take obligations predetermine PacifiCorp's coal fleet operations, PacifiCorp has an obligation to ensure the prudency of any new coal contract by carefully analyzing multiple pieces of information before agreeing to any minimum take obligation. Importantly, there are three areas of analysis that PacifiCorp needs to complete before signing any new contract.

First, when negotiating a new coal contract, PacifiCorp should forecast anticipated generation based on the full cost of the coal being purchased, i.e., the incremental/dispatch tier and the average/costing tier should be equal.[117] Using the average cost, rather the marginal cost, would accurately reflect the true cost of generation because, until PacifiCorp agrees to a minimum take obligation, there is no "previously incurred," "fixed," or "sunk" cost associated with any particular coal quantity.[118] Modeling coal plant dispatch using the average cost would illustrate the most likely quantity of economically dispatched coal considering the full set of costs associated with that coal burn. If the generation quantity estimated using the average or costing tier price is less than the minimum take provision up for negotiation, then the minimum take provision is not prudent.[119] As discussed below, PacifiCorp should also ensure that there is an adequate buffer between its forecasted coal consumption and the minimum take requirement to provide the Company with flexibility should economics change.

Second, PacifiCorp should evaluate multiple demand scenarios over multiple years in order to predict future coal burn under likely market conditions. The Company attempted to

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[117] Sierra Club/100 at Burgess/32:10-13.
[118] *Id.* at Burgess/33:1-3.
[119] *Id.* at Burgess/33:8-10.

conduct such an analysis in negotiating its new coal supply agreements for the Hunter plant, and the Hunter analysis represented some important positive developments, such as considering a range of possible coal prices at low, medium, and high demand conditions.[120] It is important for PacifiCorp to consider a range of potential demand scenarios in preparation for every new coal supply contract because it provides information regarding the likely coal burn at various price points and therefore provides information on what a reasonable minimum take requirement could be. However, in order for this analysis to be meaningful, PacifiCorp also needs to input information that accurately reflects real-world alternatives. Additionally, PacifiCorp should ensure that generation forecasts developed in anticipation of coal contract negotiations incorporate every coal unit's generation requirements, rather than modeling each generation unit separately.[121]

Third, as Staff recommends,[122] PacifiCorp must consider the possibility that a coal plant "economically cycles" (i.e., turns off to avoid incurring fuel costs) by allowing the model to choose other resources. Designating a unit as "must run" ensures that it will be dispatched at a level between its operational minimum and maximum capabilities,[123] meaning that PacifiCorp can artificially force the model to choose to dispatch a coal unit even if it may be cheaper to turn off the coal plant and select lower cost alternatives. By incorporating must-run constraints, a model will inflate the projected coal burn for a unit because it requires that the plant be on and operating. In the Hunter contract analysis, PacifiCorp only permitted Hunter Units 1 and 2 to

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[120] PAC/700 at MacNeil/5:5-7; *see also* Sierra Club/117, Confidential Attachment to PacifiCorp Response to OPUC Data Request 71-2 ("Tons" tab).
[121] Sierra Club/100 at Burgess/37:5-7 (noting that generation forecasts could be overstated because there appears to be no single forecast for PacifiCorp's coal units, instead "every [coal] unit's generation is projected separately").
[122] Staff/1400 at Anderson/4:7-9.
[123] PAC/400 at Staples/35:8-12 (describing the "must run" constraint that eliminates the possibility for economic cycling).

cycle in the spring months and did not allow Unit 3 to cycle at all.[124] Similarly, for the Craig and Dave Johnston contract analyses, PacifiCorp did not evaluate economic cycling.[125]

B. Pursue a Minimum Take Requirement that Is Low Enough to Provide Flexibility, Meaning 50 Percent of Projected Coal Burn or Less

The Commission should require PacifiCorp to provide a detailed explanation for any minimum take requirement set at more than 50 percent (or would reach 50 percent in combination with other existing minimums) of the forecasted generation for the receiving plant. Minimum purchase requirements leave the Company no flexibility to adjust to evolving market conditions,[126] and the Company recognizes that lower minimum requirements are a benefit to ratepayers.[127] There is an industry trend towards lower coal generation than forecast;[128] yet, PacifiCorp regularly exceeds the 50 percent threshold of forecasted coal burn for any given plant.[129] Sierra Club recognizes that a 50 percent threshold is not currently the industry standard. However, the purpose of this requirement is to anticipate trends in coal economics and ensure appropriate steps are taken to comply with Oregon's energy policies, including House Bill 2021.

C. Require Provisions Allowing for Adjustment of Minimum Take Requirements Under Changing Regulatory and Economic Conditions

There are multiple provisions that PacifiCorp has secured in its coal contracts that allow the Company flexibility to reduce contractual minimum take requirements under specific conditions. For example, several coal supply agreements allow PacifiCorp to reduce or avoid minimum take requirements if there are changes to environmental legislation or regulations.[130]

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[124] Sierra Club/114, A.20-08-002, PacifiCorp Response to Sierra Club Data Request 8.9 (Cal.P.U.C. Feb. 25, 2021).
[125] PAC/600 at Ralston/15:7-9, 15:17-19.
[126] Sierra Club/100 at Burgess/35:11-13.
[127] Hearing Tr. at 100:5-13 (Ralston, PacifiCorp).
[128] Sierra Club/100 at Burgess/45:10-12 (citing U.S. Energy Information Administration report indicating that for "total coal consumption" 79 percent of Annual Energy Outlook forecasts since 1994 were overestimated).
[129] PAC Response to ALJ Bench Request 1.
[130] Sierra Club/103 at Burgess/5 (PacifiCorp Response to Sierra Club Data Request 1.28).

PacifiCorp has also secured provisions allowing the Company to avoid minimum take requirements in [redacted].[131] PacifiCorp agrees that these provisions are valuable for ratepayers.[132] And yet, PacifiCorp continues to sign new contracts that lack these provisions.[133] The Commission should require that PacifiCorp incorporate these provisions in every new contract unless the Company can provide evidence showing that omitting these provisions is in the best interests of ratepayers.

D. Minimize the Length of Coal Contracts

PacifiCorp agrees that limiting the terms of coal supply agreements as much as practicable minimizes risk and adds flexibility;[134] yet, the Company arbitrarily limits itself to "typically . . . not execut[ing] a CSA with a term greater than five years."[135] At issue in this proceeding, PacifiCorp has signed [redacted] contract, [redacted] contracts, and [redacted] contract.[136] While these terms are an improvement over past coal supply agreements, the market for power generated by coal power plants is changing rapidly, as evident by continually declining electrical output from coal plants. While PacifiCorp objects to a bright-line rule prohibiting contracts longer than two years, [137] the potential value in protecting ratepayers through shorter contracts should at least be evaluated before lengthier contracts are approved,

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[131] Sierra Club/302 (describing the [redacted] coal supply agreement).
[132] PAC Opening Brief at 50:17-18 (noting PacifiCorp's "success" in securing these provisions in some coal supply agreements).
[133] Hearing Tr. at 96:21-25, 97:7-11 (Ralston, PacifiCorp) (indicating the Dave Johnston contracts do not have provisions allowing avoidance of minimum take obligations due to changes in environmental law or the inability to economically use the coal).
[134] PAC Opening Brief at 31:8-10.
[135] *Id.* at 31:10-11.
[136] PAC/200 at Ralston/3:14-15 (Dave Johnston contract term lengths); *id.* at Ralston/7:7-9 (Hunter contract term lengths); *id.* at Ralston/9:9-11 (Craig contract term length).
[137] PAC Opening Brief at 50:14-16.

and PacifiCorp should be required to show that it considered shorter agreements—between one and two years in length.[138]

E. Provide Copies of PacifiCorp's Coal Supply Agreements and Affiliate Mine Plans to the Commission for Review

The Commission should require that PacifiCorp present new coal supply agreements and affiliate mine plans as part of the confidential record in future TAM proceedings. Scrutinizing PacifiCorp's coal supply agreements, in line with the recommendations made above, can assist the Commission and intervening parties in ensuring that PacifiCorp is acting in the best interest of ratepayers in its fueling decisions and making meaningful efforts to decarbonize its electric supply.

By refusing to provide new coal supply agreements as record evidence, PacifiCorp imposes an unnecessary hurdle on the Commission's ability to exercise its required oversight. Instead, PacifiCorp would have the Commission rely on the Company's own characterization of contract terms, which may fail to include critical information. For instance, in this proceeding, Mr. Ralston's testimony did not provide any information on the Company's ability (or inability) to avoid minimum take provisions under the newly signed contracts.

The current procedures impose significant hardship on intervening parties attempting to review these contracts as well. Parties are required to schedule video conferences with PacifiCorp's counsel, during which PacifiCorp's counsel utilizes screen sharing technology in order to allow parties to view the contracts.[139] Parties often need to review numerous documents during these sessions but are unable to candidly discuss various provisions with colleagues, while having the benefit of reviewing the specific provision language, because the viewing

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[138] Sierra Club/100 at Burgess/48:20-49:1.
[139] *In the Matter of PacifiCorp, dba Pacific Power, 2022 Transition Adjustment Mechanism*, Docket No. UE 390, Order No. 21-086 ¶ 15 (Mar. 23, 2021) [hereinafter "Modified Protective Order 21-086"].

sessions are not private. Moreover, parties are only permitted to "make limited notes . . . for reference purposes only."[140] Verbatim or substantive transcript of the documents is expressly prohibited.[141] While parties may request a "specific part of a document . . . for inclusion in testimony . . . or for use at hearing[,]"[142] there is no ability to request portions of contracts simply for a more thorough review.[143] These constraints are both burdensome and harmful to intervening parties' ability to critically evaluate newly signed coal supply agreements.[144] As Staff noted, these hurdles are in stark contrast to PacifiCorp's access to and use of the contracts and "should not continue."[145]

While PacifiCorp has raised concerns about the confidentiality of its coal supply agreements,[146] the Commission has special procedures for filing confidential materials specifically put in place to protect sensitive information.[147] Moreover, where PacifiCorp has an ownership interest in the supplying coal mine (as is the case at the Bridger and Trapper mines) or the coal plant at issue has few potential coal suppliers (as is the case for the majority of PacifiCorp's coal plants with the exception of the Dave Johnston plant) there is no functional market for the supplied coal; rather those circumstances reflect a monopoly where there is no true market sensitivity regarding the terms and details of the contract.

[140] *Id.*
[141] *Id.*
[142] *Id.*
[143] *See* Staff/1400 at Anderson/7:1-4 (describing how the web platform "does not allow parties an ability to revisit contract provisions easily at a later date, and to spend ample time reviewing and analyzing contract provisions and how they relate to one another outside of the purview of the Company.").
[144] Sierra Club/100 at Burgess/49:6-7 ("Without access to the contracts themselves, it is impossible to truly scrutinize whether the contracts are just and reasonable.").
[145] Staff/1400 at Anderson/7:8-9.
[146] *See, e.g.*, PAC Opening Brief at 51:14-15.
[147] *See In the Matter of PacifiCorp, dba Pacific Power, 2017 Transition Adjustment Mechanism*, Docket No. UE 307, Order No. 16-128 (Mar. 28, 2016).

VI. The New Hunter Coal Supply Agreements Are Imprudent

Although the new Hunter coal supply agreements contain some improvements over the prior agreements, PacifiCorp ultimately agreed to high minimum take provisions that put ratepayers at risk of uneconomic generation or paying minimum take penalties. The Commission should find the new agreements imprudent and, as a remedy, direct PacifiCorp to model Hunter in future TAMs without minimum take assumptions.

Over the contracts' [redacted] terms,[148] PacifiCorp estimated, prior to entering into the agreements, that the minimum take requirement will be approximately [redacted] percent of Hunter's expected burn, but at least [redacted] percent of a low burn scenario.[149] Notably, in its analysis, the Company only incorporated the burn requirements for the Huntington and Jim Bridger plants, not the remainder of PacifiCorp's coal fleet,[150] meaning that reductions in Hunter's output could be necessary to accommodate burn requirements at other plants. Even if this is not the case, it already appears that Hunter will operate under, at least, a low burn scenario, as the Company estimates that the minimum take requirements will account for [redacted] percent of Hunter's expected coal consumption in the 2022 TAM.[151] However, this figure may be an underestimate, as PacifiCorp's response to ALJ Rowe's Bench Request differs from Mr. Ralston's initial workpapers filed with his direct testimony regarding anticipated coal consumption at Hunter:

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[148] PAC/200 at Ralston/7:7-9.
[149] Sierra Club/200 at Burgess/30:9-12.
[150] Hearing Tr. at 61:7-12 (MacNeil, PacifiCorp).
[151] PAC Response to ALJ Bench Request 1.

Expected Coal Consumption at Hunter (tons)	**PacifiCorp Share of Hunter Minimum Take (tons)[152]**	**Minimum Take Percentage of Expected Coal Consumption**
[redacted] (Ralston Initial Filing Workpaper)[153]	[redacted]	[redacted] percent
[redacted] (PacifiCorp Response to ALJ Bench Request)[154]	[redacted]	[redacted] percent

While Mr. Ralston indicated in his reply testimony that "[a] mistake was made in the initial filing that only included the PacifiCorp share of [Hunter's] forecasted generation[,]"[155] this does not explain why PacifiCorp's share of Hunter generation has suddenly increased by approximately [redacted] percent between PacifiCorp's initial filing and its response to ALJ Rowe's Bench Request.[156] Rather, according to Mr. Ralston's reply testimony, PacifiCorp's expected share of coal consumption should have remained constant, with additional consumption from PacifiCorp's co-owner.

Accordingly, Hunter's minimum take requirements could be as high as [redacted] percent of expected consumption *in the contract's first year*, which may *still* be an underestimate of true economic consumption because, as Staff has noted, the Company did not model full economic cycling at the plant.[157] Instead, the Company determined, without any formal analysis, that it should limit Hunter's ability to economically cycle due to reliability concerns.[158]

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[152] PAC Response to ALJ Bench Request 2.
[153] Confidential workpaper accompanying the Direct Testimony of Dana Ralston (PAC/200) "HUNTER.xlsx".
[154] PAC Response to ALJ Bench Request 2.
[155] PAC/600 at Ralston/25:8-9.
[156] Sierra Club understands that PacifiCorp's share of expected coal consumption for Hunter, as stated in its response to ALJ Rowe's Bench Request, is derived from total Hunter coal consumption identified in Mr. Ralston's workpapers filed with his rebuttal testimony. This fact does not change the discrepancy between PacifiCorp's estimate of Hunter coal consumption in Mr. Ralston's initial workpapers, his explanation of the error made therein, and PacifiCorp's new estimate of Hunter coal consumption.
[157] Staff/1400 at Anderson/11:17-21.
[158] Hearing Tr. at 59:14-60:6 (MacNeil, PacifiCorp) (indicating that the decision whether to model economic cycling is based on Mr. MacNeil's professional judgment).

This means that if actual burn is [redacted] percent lower than the current GRID forecast, PacifiCorp will either incur minimum take penalties or force the plant to operate uneconomically.[159] Such a deviation from the "expected" burn scenario is not unreasonable. As Mr. Burgess explained in testimony, similar reduced burn expectations have occurred at other PacifiCorp plants.[160]

PacifiCorp has stressed that the minimum take requirement should be viewed not on a single year basis, but over the course of the contract term.[161] However, as CUB noted, Hunter's generation has reduced by 32 percent between 2018 and 2020,[162] indicating that over the course of the contracts' terms, the minimum take requirement is likely to make up *more* of the expected burn compared to its first year, not less. This evidence supports Mr. Burgess's recommendation that minimum take requirements be set as low as possible, and not over 50 percent of anticipated burn, because "it anticipates where trends are headed given the general headwinds for coal economics."[163] Nevertheless, PacifiCorp's view of Hunter's requirements has remained largely unchanged.[164] As PacifiCorp noted, it replaced its prior Hunter contract with two new agreements that collectively have the same minimum take requirement as before: [redacted] tons.[165]

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[159] *See also,* Sierra Club/200 at Burgess/30:12-14 (noting that under PacifiCorp original estimate, prior to entering into the coal supply agreements, PacifiCorp would not be able to accommodate a burn [redacted] percent lower than expectations).
[160] *See* Sierra Club/100 at Burgess/44:1-11 (describing deviation between generation forecasts for Jim Bridger and actual coal consumption in 2016 and 2017).
[161] PAC Opening Brief at 33:1-3; *see also* PAC/500 at Schwartz/29:14-17 (emphasizing that Hunter's minimum take obligation applies over full contract term).
[162] CUB/100 at Jenks/12:5-7.
[163] Sierra Club/200 at Burgess/28:20-29:1.
[164] PAC Response to ALJ Bench Request 2 (Confidential Table for Bench Request 2 - Hunter Plant Coal Deliveries and Consumption vs Contract Minimums).
[165] *Id.*

As a result, contrary to PacifiCorp's assertions,[166] it is likely that within the contracts' time frame, Hunter will not economically meet its minimum take obligations. Yet, the contracts do not contain provisions that would protect ratepayers from this possibility. First, the contract terms are [redacted] and [redacted]. PacifiCorp agrees that shorter contract lengths benefit ratepayers by providing flexibility, but there is no indication that shorter terms for Hunter were evaluated. Second, the Hunters contracts do not have provisions that would allow PacifiCorp to reduce or avoid the minimum take requirements due to an inability to economically use the coal,[167] despite the fact that [redacted].[168] [redacted].[169] While the Hunter contracts have provisions allowing PacifiCorp to reduce or avoid the minimum take requirements due to changes in environmental laws,[170] it is clear that PacifiCorp is likely to narrowly construe these provisions, as it has done with the Huntington contract.[171]

In sum, PacifiCorp has not met its burden to demonstrate that the new Hunter coal supply agreements were prudently executed. Despite evaluating a range of possible scenarios, the final terms of the agreements do not indicate that PacifiCorp is reasonably managing risk at the Hunter plant, particularly the likelihood that generation will continue to decline over the coming years. As a remedy, the Commission should direct PacifiCorp to model Hunter without an assumed minimum take requirement in future TAM proceedings, which would ensure that TAM rates only reflect economic generation at Hunter.

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[166] *See, e.g.*, PAC/500 at Schwartz/29:17-19.
[167] Hearing Tr. at 96:2-7 (Ralston, PacifiCorp).
[168] [redacted] Sierra Club/302.
[169] *Id.*
[170] Hearing Tr. at 95:22-96:1 (Ralston, PacifiCorp).
[171] *See, e.g.*, PAC/600 at Ralston/27:16-18.

VII. Economic Cycling, Average Cost Informational Model Run, 2023 TAM Filing Date

A. Economic Cycling

Sierra Club agrees with both Staff[172] and CUB[173] that PacifiCorp must thoroughly evaluate the benefits of economic cycling at its coal plants, particularly the Jim Bridger plant. While PacifiCorp maintains that it has evaluated economic cycling in previous TAMs,[174] PacifiCorp's analysis to date has not been sufficient. As Mr. Burgess noted,[175] PacifiCorp's coal cycling study provided with its testimony in this proceeding stated that "[redacted]."[176] As a result, the study did not evaluate all relevant information and is therefore of minimal value.

Additionally, Mr. Burgess performed an analysis indicating that from January 2020 through May 2021, "there were many [ ] instances where the generation units at the Jim Bridger plant were operating at an economic loss[,]" and that "many of the instances . . . showed losses that were greater than the startup/cycling costs, meaning it would have been more cost effective to cycle the unit off."[177] PacifiCorp argued that Mr. Burgess used an "arbitrarily high" average price for Jim Bridger; however, this price was taken from Mr. Ralston's workpaper identifying Jim Bridger's cost in the 2021 TAM.[178]

The benefits of economic cycling have not been fully evaluated by PacifiCorp and are not considered in any systematic way, which could be leading to excessive fuel costs for Oregon

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172 Staff/1400 at Anderson/10:3.
173 CUB/100 at Jenks/16:10-18; CUB/200 at Jenks/14:20-15:3.
174 PAC Opening Brief at 36:17-18.
175 Sierra Club/100 at Burgess/22:12-15.
176 PAC/107 at Webb/5.
177 Sierra Club/200 at Burgess/33:20-34:3.
178 Sierra Club/303 at cell P:70.

ratepayers. Sierra Club supports Staff and CUB's recommendation that PacifiCorp evaluate the benefits of cycling Jim Bridger Unit 1 for the entirety of quarter two.[179]

B. Informational Average Cost Model Run

In the 2021 TAM settlement, PacifiCorp agreed to complete an informational model run that used average coal pricing for dispatching coal plants and removed operational constraints related to minimum take requirements.[180] The settlement did not address whether take-or-pay penalties or liquidated damages would be "re-averaged" into the model results. Only after the model run was completed did parties learn that PacifiCorp had unilaterally chosen to take this additional step.

PacifiCorp's "re-averaging" step "obfuscates the intent of this informational run[,]"[181] and Sierra Club agrees with Staff that the average cost model run should not include post-modeling adjustments from PacifiCorp As Mr. Burgess explained, "[e]ven if there are legitimate fixed costs that PacifiCorp is authorized to recover, it is still useful to understand the optimal operating costs to inform future TAM cycles, contracting decisions, and mine plans."[182] PacifiCorp's opposition to providing the informational model run,[183] as requested by the parties, is perplexing and appears to be yet another attempt to shield from scrutiny a true accounting of its coal costs and the associated impacts on commitment and dispatch decisions.

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[179] CUB/100 at Jenks/176:14-15; Staff/1400 at Anderson/17:20-18:9; *see also* Sierra Club/200 at Burgess/38:11-16.
[180] *In the Matter of PacifiCorp, dba Pacific Power, 2021 Transition Adjustment Mechanism*, Docket No. UE 375, Order No. 20-392, App'x A at 6 (Oct. 30, 2020). At the time of the settlement, the parties anticipated that PacifiCorp would be utilizing AURORA, but as PacifiCorp did not transition to AURORA by the 2022 TAM, the informational model run was completed with GRID.
[181] Sierra Club/200 at Burgess/39:3-4.
[182] *Id.* at Burgess/39:5-7.
[183] PAC Opening Brief at 47:3-4.

C. 2023 TAM Filing Date

Both Staff and CUB have recommended an earlier filing date for the 2023 TAM to provide parties with additional time to review PacifiCorp's new AURORA model,[184] and PacifiCorp has indicated that it is not opposed to an earlier filing date.[185] Sierra Club similarly supports an earlier filing for the 2023 TAM and is supportive of a February 14, 2022 filing date.[186] As CUB recommends, "the docket and protective order should be pre-established, and parties should have access to and training on how to use AURORA before the filing is made."[187]

VIII. Conclusion

In conclusion, Sierra Club recommends that the Commission take the following action:

1. Require that the Company use accurate incremental pricing for its coal fleet in modeling future generation by not assuming fixed costs where none exist;
2. Require that the Company disclose manual adjustments to its coal plants' dispatch tier prices in order to meet minimum take requirements over the past five years, in each future TAM;
3. Disallow $[redacted] (Oregon allocated) associated with excessive forecasted generation at Jim Bridger;
4. Require future reporting in either the TAM or PCAM to (a) ensure that forecasting changes required in this TAM are carried through to actual operations and (b) document steps taken to reduce Bridger mine costs;

[184] Staff/1000 at Enright/13:11-16; CUB/200 at Jenks/21:17-22:6.
[185] PAC Opening Brief at 63:9.
[186] *See* Staff/1000 at Enright/14:5-6 (recommending a February 14, 2022 filing); CUB/200 at Jenks/22:11-12 (recommending a March 1, 2022 or earlier filing date).
[187] CUB/200 at Jenks/22:14-16.

5. Adopt best practices for future coal supply agreements against which to assess the prudency of the agreements, including minimizing must-take provisions and contract terms and including provisions that allow for avoidance of must-take provisions.
6. Find that the new Hunter coal supply agreements are imprudent and direct PacifiCorp to model the Hunter plant without minimum take assumptions

Dated: September 28, 2021

Respectfully submitted,

/s/ Rose Monahan

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