BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

In the Matter of the Application of PacifiCorp (U 901 E) for Approval of its 2022 Energy Cost Adjustment Clause and Greenhouse Gas-Related Forecast and Reconciliation of Costs and Revenue.	A.21-08-004 (Filed August 3, 2021)

REPLY BRIEF OF PACIFICORP

[PUBLIC VERSION]

Carla Scarsella
Deputy General Counsel
PacifiCorp
825 NE Multnomah Street, Suite 2000
Portland, Oregon 97232
Telephone: (503) 813-6338

Email: carla.scarsella@PacifiCorp.com

Attorney for PacifiCorp

Michael B. Day
Megan Somogyi
Nirvesh Sikand
Downey Brand, LLP
455 Market Street, Suite 1500
San Francisco, California 94105
Telephone: (415) 848-4808
Facsimile: (415) 848-4801
E-mail: mday@downeybrand.com

Attorneys for PacifiCorp

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In accordance with Rule 13.12 of the Rules of Practice and Procedure of the California Public Utilities Commission (Commission) and the schedule adopted in the Email Ruling of Administrative Law Judge (ALJ) John Larsen on February 3, 2022, PacifiCorp d/b/a Pacific Power (PacifiCorp or the Company) hereby submits its Reply Brief in this proceeding. This brief is timely filed.

I. SIERRA CLUB'S RECOMMENDATIONS SHOULD BE REJECTED BY THE COMMISSION

PacifiCorp submits that Sierra Club's recommendations are unsupported by the record, will increase costs for customers unnecessarily, and are contrary to the methodology used by PacifiCorp to forecast net power costs (NPC) for its Energy Cost Adjustment Clause (ECAC) proceedings—a methodology that has been repeatedly approved by the Commission. In addition, Sierra Club seeks to impose requirements for unnecessary studies that will not provide relevant information for the Commission's review of PacifiCorp's ECAC Application. The Commission should reject these recommendations. PacifiCorp addresses each of Sierra Club's recommendations below.

A. Sierra Club's Recommendation to Disallow Jim Bridger Plant Fuel Costs Is Contradicted by the Substantial Evidence Provided by PacifiCorp

PacifiCorp has provided credible evidence supporting the estimated costs for fuel from the mines serving the Jim Bridger Plant for 2022.[1] By contrast, Sierra Club's recommendation to disallow all Black Butte mine costs (after April 30, 2022) and all Bridger Coal Company (BCC) mine costs is unsupported by the record.

1. Contrary to Sierra Club's Assertions, PacifiCorp Has Provided Evidence to Support its Estimates of Third-Party Coal Fuel Costs

PacifiCorp has provided estimates for third-party coal fuel expense because neither the Naughton[2] nor the Black Butte contracts had been renegotiated and signed by the date that the 2022 ECAC Application was filed.[3] Sierra Club makes the unfounded statement that, "PacifiCorp's 2022 ECAC application is devoid of any analysis demonstrating the reasonableness of any presumed future Black Butte purchases."[4] On the contrary, PacifiCorp provided detailed evidence that it had a reasonable basis for the estimates of third-party coal fuel costs, and that the price per ton of coal was both reasonable and very close to the prices approved by the Commission in the previous ECAC proceeding.[5] The estimates of the cost of coal fuel from third-party suppliers were then used in the Aurora dispatch modeling in order to forecast the amount of generation from the Naughton and Jim Bridger plants and to forecast the NPC for 2022.[6] PacifiCorp's estimate also relied upon a reasonable basis for assuming that coal

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[1] Opening Brief of PacifiCorp, pp. 14–18.

[2] Sierra Club Opening Brief, p. 2, fn. 3. Sierra Club states that it is no longer challenging the reasonableness of coal fuel expense for the Naughton plant.

[3] Exh. PAC/800-C, pp. 3:5 – 4:2.

[4] Sierra Club Opening Brief, p. 8.

[5] Opening Brief of PacifiCorp, pp. 15–16

[6] Exh. PAC/700-C, pp. 8:5 – 9:4.

purchases from third-party suppliers such as Black Butte would contain a minimum take requirement.[7] Sierra Club's Opening Brief suggests that minimum take and minimum production requirements for the Black Butte and BCC mines do not exist.[8] This is a direct misrepresentation of the facts. The Black Butte mine contract that expired in April 2022 contained a minimum take requirement; Black Butte clearly advised PacifiCorp that the new contract would also contain a minimum take requirement,[9] as nearly all of PacifiCorp's coal supply agreements do; and PacifiCorp justifiably assumed in its estimate of 2022 third party coal costs that the Black Butte coal supplies would be subject to such a requirement.

Now that the new Black Butte contract has been executed in June 2022, PacifiCorp will submit the contract for prudency review in the 2023 ECAC, which will be filed mere days after this brief, and it will include a minimum take requirement. Sierra Club simply cannot wish minimum take requirements out of existence given the crucial role they play in coal contracting.[10]

It is significant that Sierra Club provided no expert testimony suggesting that the actual price per ton for coal from third party suppliers was unreasonable. Nor could it make such an assertion in light of the fact that the Naughton coal price was [redacted] than that adopted in the 2021 ECAC and the Black Butte price was only [redacted] than the price approved in 2021.[11] Sierra Club instead relies on hypothetical model runs that include unrealistic assumptions to suggest that coal fuel expenses could somehow be lower. PacifiCorp will address

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[7] Exh. PAC/800-C, p. 7:2–15.

[8] Sierra Club Opening Brief at p. 5.

[9] *Id*., p. 7:2–15.

[10] Exh. PAC/800, p. 7:4–12; 2021 PacifiCorp ECAC, A.20-08-002, Rebuttal Testimony of Seth Schwartz, Exh. PAC/100, p. 8:1–12.

[11] *Id*., p. 5:1–6; See also Opening Brief of PacifiCorp, p. 15.

the errors in these model runs in detail below. However, such sophistry does not succeed in creating a reasonable doubt in the face of PacifiCorp's factual evidence to support the reasonableness of its estimates for third-party coal fuel costs.

2. Contrary to Sierra Club's Assertions, PacifiCorp has Provided Evidence Supporting Its Estimate of the Cost of Coal Production From the BCC Mine

With regard to coal fuel expense from the BCC mine serving the Jim Bridger plant, again Sierra Club provides no factual or expert testimony to suggest that PacifiCorp's estimates for price or volumes of coal supplied by the BCC mine are excessive, or that any specific element of the costs of mining at BCC, as reflected in the annual mine plan, is unreasonable. In the absence of any factual evidence of unreasonable costs, and despite PacifiCorp's direct and rebuttal testimony supporting those costs,[12] Sierra Club simply claims that the BCC coal fuel expense estimated by PacifiCorp has not been justified.[13]

Sierra Club's assertion is contradicted by the following record evidence. PacifiCorp provided a detailed explanation of the multi-step process used to develop the annual mine plan for the BCC, utilizing preliminary generation forecasts, analyzing the levels of production available at the mine, estimating the price of coal, and selecting the least cost, least risk plan that fits the forecasted generation requirements for 2022.[14] The mine plan itself was admitted into evidence by Sierra Club, and includes detailed cost figures for every aspect of production at the BCC mine.[15] In addition, PacifiCorp provided the specific quantity of coal

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[12] Exh. PAC/800-C, pp. 12:10 – 13:11.

[13] Sierra Club Opening Brief at p. 5 ("Neither the Black Butte nor the BCC fuel costs have been justified in this proceeding and should be excluded from PacifiCorp's 2022 Offset Rate.").

[14] Exh. PAC/800-C, pp. 14:21 – 15:10; RT Vol. 1, pp. 91:2 – 93:4. PacifiCorp witness James Owen explained that various generation forecasts were used in the development of the BCC mine plan, and not as part of the NPC forecasting process in the ECAC.

[15] Exh. SC-5-C.

forecast to be purchased from BCC and demonstrated that the cost per ton of BCC coal for 2022 would be less than the prices approved as reasonable in 2021 and 2020.[16] In testimony PacifiCorp witness Michael Wilding demonstrated that the cost of generation from PacifiCorp's coal-fired power plants, including Jim Bridger, was significantly less than the current market prices for alternative resources such as natural gas generation or purchased power from other utilities in the Northwest or Southwest.[17] All of these facts support the reasonableness of the BCC coal fuel cost estimated by PacifiCorp in the 2022 ECAC NPC.

Sierra Club asserts that, "[PacifiCorp] appears unwilling to evaluate meaningful changes to its fueling practices at Jim Bridger."[18] This assertion is also contradicted by the evidence in the record. First, PacifiCorp is planning to convert Jim Bridger units 1 and 2 to natural gas in 2024.[19] This will result in a significant decrease in future coal fuel purchasing and usage at the Jim Bridger plant. In addition, PacifiCorp is considering multiple other factors that may require modification of its fueling for its coal plants, including Jim Bridger. PacifiCorp stated its intention to address these factors in the PacifiCorp Long Term Fuel Supply Plan for the Jim Bridger Plant, provided to the Public Utility Commission of Oregon in April, 2022.[20] These factors include U.S. Environmental Protection Agency action on the regional haze obligations of the Jim Bridger plant, revised dates for Idaho Power's exit from its share of ownership in the Jim Bridger plant, and PacifiCorp's recent commitment to study carbon capture, utilization and storage at the plant.[21]

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[16] Exh. PAC/800-C, pp. 12:18 – 13:11.

[17] RT Vol. 1, p. 35:11–23; p. 42:1–25; Exh. SC-01-C, p. 12, Table 3.

[18] Sierra Club Opening Brief, p. 2.

[19] RT Vol. 1, p. 125:24–27.

[20] Exh. PAC/801-HC.

[21] *Id*., at p. 4.

Sierra Club is equally wrong to suggest that minimum production requirements do not exist at the BCC mine. The BCC mine will continue to incur substantial expenses regardless of the amount of coal produced,[22] so it is entirely reasonable to include the unavoidable fixed costs associated with the estimated production of BCC coal at a $0 cost in the incremental dispatch model used to estimate the NPC for 2022.[23] Sierra Club wrongly suggests that minimum take provisions "may be driving generation at the plant."[24] PacifiCorp witness James Owen confirmed that the forecasted level of generation at the Jim Bridger plant was in excess of the minimum take obligations (both Black Butte minimum purchase requirements and BCC unavoidable costs) and this demonstrates that the minimum take obligations at BCC were not impacting generation forecasts or changing fuel cost estimates.[25]

As the foregoing demonstrates, PacifiCorp has constructed a detailed record to support the reasonableness of its estimates of coal fuel expense from the BCC mine.

3. Sierra Club Misinterprets the Requirement for Pre-Contracting Analysis of New or Renewed Coal Supply Agreements Adopted in D.21-11-001

Lastly, Sierra Club resorts to misinterpreting the requirement adopted in D.21-11-001 (the 2021 ECAC decision), which adopted a new procedure for a prudency review for new or renewed coal supply agreements. Sierra Club notes the expiration of the Black Butte coal supply contract in April 2022 and makes the entirely misguided assertion that, "[PacifiCorp] should have analyzed not only whether estimated future prices from Black Butte were reasonable, but also, in light of anticipated Black Butte prices, whether alternative, cleaner generation would be more beneficial and economic for California ratepayers. The record

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[22] Exh. PAC/800-C., p. 15:11–18; RT Vol. 1, pp. 103:3–14; 154:21 – 156:10.

[23] RT Vol. 1, pp. 135:17 – 137:21.

[24] Sierra Club Opening Brief, p. 9.

[25] Exh. PAC/800-C, pp. 5:20 – 6:4.

evidence demonstrates that PacifiCorp did not complete this crucial second step." Sierra Club is seeking to disallow all of the coal fuel expenses for the Jim Bridger plant (excepting the Black Butte coal purchases prior to May, 1 2022) because it believes the coal supply agreement (CSA) pre-contracting analysis is a precondition to cost recovery in the 2022 ECAC—it is not.

Sierra Club was a party to the 2021 ECAC proceeding in which the Commission adopted the requirement that a detailed analysis of alternative resources be undertaken before executing or renewing a coal supply agreement[26] and presumably is familiar with the decision in that proceeding. D.21-11-001 clearly states that the analysis for a renewed contract described by Sierra Club is to be provided *in the proceeding in which the coal supply contract costs are proposed for inclusion in rates*.[27] With respect to the June 2022 Black Butte contract, that proceeding will be the 2023 ECAC. PacifiCorp has undertaken the "crucial second step" to analyze alternatives to the renewed contract with Black Butte and will present the results of its analysis in the 2023 ECAC. Sierra Club fails to acknowledge the timing adopted by the Commission for the procedure adopted in D.21-11-001, and ignores the fact that in this case PacifiCorp is seeking approval of *an estimate* for 2022 coal fuel costs for Black Butte and other coal suppliers. That estimate was prepared well before the Naughton and Black Butte contracts were negotiated. Sierra Club's assertion that the absence of the pre-contracting analysis for the Black Butte contract in *this* ECAC proceeding means that all the costs related to that contract should be disallowed as unsupported until the analysis is reviewed is a strained and wholly unreasonable interpretation of the analysis requirement in D.21-11-001.

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[26] D.21-11-001, Ordering Paragraphs 4 and 5.

[27] *Id*.

If coal fuel costs are to be disallowed from the expiration of the existing contract until the analysis and prudency review occur in a subsequent ECAC, it would create an up and down cycle of rate swings that could be extremely unsettling to customers.[28] Sierra Club seeks to exclude virtually all the fuel costs for the Jim Bridger plant in 2022, but has no specific proof that those costs are unreasonable. Its recommendation is based solely on the lack of the analysis of the new Black Butte contract it contends is required by D.21-11-001.[29] If the Commission finds that the renewed contract is reasonable after examining PacifiCorp's analysis in the 2023 ECAC, it will have to increase rates substantially in 2023 to recover the shortfall caused by Sierra Club's disallowance recommendation in this case—which would reduce the proposed 2022 ECAC rates by $203 million on a total company basis.[30] The Sierra Club has offered no valid justification for disallowing millions of dollars in legitimate coal fuel costs solely due to its refusal to acknowledge the use of an estimate until the actual prudency review occurs in the next ECAC cycle.

PacifiCorp submits that the Commission should reject Sierra Club's proposal to subject customers to artificial rate decreases and increases that serve no legitimate regulatory purpose. If the Commission adopts PacifiCorp's estimates in this ECAC, but later concludes in the 2023 ECAC that the costs associated with the Black Butte contract are to some degree unreasonable, the portion of the contract costs to be disallowed can be returned to ratepayers in the next ECAC's Balancing Rate. However, it is highly unlikely the Commission would

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[28] Sierra Club acknowledges the potential for the disallowance and recovery of the same costs in successive ECAC cases, but entirely ignores the impact of these rate swings on customers. See Sierra Club Opening Brief, p. 21 (first full paragraph).

[29] Sierra Club's Opening Brief, pp. 21–22. Sierra Club states that, "at this time, recovery [of Jim Bridger fuel costs] would be inappropriate because the Company has not presented evidence demonstrating the prudence of an assumed future contract with Black Butte . . . ."

[30] Exh. SC-01-C, p. 43:13–22; Exh. PAC/800-C, pp. 12:18 – 13:11.

disallow 100 percent of such costs, as Sierra Club suggests, particularly when the estimated Black Butte costs are *only* [redacted] than those approved in the 2021 ECAC, and the BCC cost of coal per ton is [redacted] *than the price approved in the 2021 ECAC.*[31] These facts demonstrate that it is unreasonable and inefficient to disallow estimated costs in the 2022 ECAC that are highly likely to be found prudent when the actual contract is presented with the analysis required by the Commission in the next ECAC proceeding. It is routine for estimated or forecasted costs from one ECAC to be reviewed and subject to a true-up based on recorded numbers in the next ECAC. The Commission should continue this practice in order to avoid large rate swings.

Sierra Club's disallowance recommendations are excessive, unsupported by the record, and would create arbitrary rate swings harmful to customers. The Commission should flatly reject such recommendations.

B. The Commission Should Reject Sierra Club's Proposed Requirement to File an Annual BCC Mine Plan

Sierra Club recommends that, "the Commission should require that PacifiCorp present its yearly BCC mine plan for Commission review, including alternative mine plans that were considered."[32] In the 2021 ECAC decision, the Commission confirmed that there is no need to adopt an additional requirement to require the filing of an annual mine plan, as the content of the mine plan is already subject to review as part of the general prudency review in each ECAC.[33] That review continues to be available to the Sierra Club, which has routinely conducted discovery regarding the BCC mine plan in recent ECAC proceedings, including this proceeding. Sierra Club complains that the mine plan, "and any alternatives that were

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[31] Exh. PAC/800-C, pp. 4:13 – 5:7, 12:18 – 13:4.

[32] Sierra Club Opening Brief, p. 22.

[33] D.21-11-001, p. 28 (noting that mine plans are already subject to review as part of a general prudence review in an ECAC proceeding).

considered are not presented to the Commission for review."[34] However, Sierra Club presented no testimony or evidence to question any specific mine plan expenses for the BCC mine in any of the last three ECAC proceedings. Under these circumstances, PacifiCorp submits that Sierra Club has not demonstrated a valid reason to impose a specific requirement for the filing of mine plans or preliminary alternative plans for affiliated mines.

The general requirement that PacifiCorp, as the applicant, has the burden of making a prima facie case for the reasonableness of its forecasted NPC is sufficient to ensure that, whether through testimony or discovery, PacifiCorp will provide all the evidence necessary to support the prudency of its fuel procurement, including purchases from affiliated mines. As PacifiCorp witness James Owen explained, the alternative mine plans developed for the BCC mine are simply part of the preliminary, iterative process of evaluating possible production levels for the mine, which are then compared to the forecasted generation requirements of the Jim Bridger plant for the next year.[35] These alternative mine plans are not intended to duplicate the analysis of PacifiCorp's long term resource mix, which is properly the subject of PacifiCorp's Integrated Resource Plan (IRP) proceedings.

C. <u>The Commission Should Reject Sierra Club's Proposed Requirement of Annual Long Term Fuel Supply Plan for Jim Bridger Plant</u>

Similarly, the Commission should reject Sierra Club's proposal to require PacifiCorp to update its Long Term Fuel Supply plans for the Jim Bridger plant on an annual basis.[36] While complaining that PacifiCorp could update the Long Term Fuel Supply plan for the Jim Bridger plant more often, Sierra Club admits that the plan has been updated four times in

[34] Sierra Club Opening Brief, p. 23.

[35] Exh. PAC/800-C, pp. 14:21 – 15:10.

[36] Sierra Club Opening Brief, p. 22.

the last seven years.[37] The filing of a Long Term Fuel Supply update for the Jim Bridger plant in April 2022 with the Oregon Commission and in the record in this proceeding as Exhibit PAC/801-HC should adequately address Sierra Club's request.[38]

PacifiCorp performs long-term analyses of all of its generation assets in its IRP filings on a bi-annual basis. Like the Long Term Fuel Supply plan, an IRP proceeding considers alternative resources over a long term procurement horizon. Between the frequent IRP filings and updates to the Long Term Fuel Supply plans, PacifiCorp submits that there is no valid justification for requiring such long term plan updates on an annual basis. Such plans involve extensive modeling, and a commitment of resources from the Company's subject matter experts. It would be a burdensome waste of resources to require a long term fuel supply plan on an annual basis. PacifiCorp is already committed to filing annual ECAC applications—which permit the Commission and any intervenor, including Sierra Club to conduct extensive reviews of PacifiCorp's coal fuel supply. No long-term resource analysis should be repeated every single year.

Sierra Club also requests that PacifiCorp should use its Aurora or PLEXOS models for the Long Term Fuel Supply plan. This is a completely unnecessary requirement, as PacifiCorp is phasing out the use of the Generation and Regulation Initiative Decision Tools (GRID) model by the end of 2022, and will be using Aurora and PLEXOS for ECAC and IRP

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[37] *Id*., p. 23, listing updates in December 2015, March 2018, March 2019, and April 2022.

[38] Exh. PAC/800-C, p. 16:2–20, see fn.20. PacifiCorp witness James Owen noted that while the Oregon Commission required PacifiCorp to file the updated Long Term Fuel Supply plan, it was specifically stated that the purpose was to explain the status of the mine planning process, and that the updated plan was not to be used for decision making. RT Vol. 1, p. 111:2–18.

analyses in the future.[39] PacifiCorp will also be using PLEXOS for pre-contracting analyses of new CSAs.[40]

D. The Commission Should Not Restrict Incremental Dispatch for Coal Fuel Expenses Prior to Commission Approval of Renewed Contracts

The Aurora cost model properly treats the coal purchased under minimum take requirements as having $0 cost for purposes of incremental dispatch.[41] This is entirely consistent with the methodology approved by the Commission in PacifiCorp's last two ECAC proceedings.[42] Sierra Club's proposal to limit this practice to only those contracts that have been approved by the Commission after a pre-contracting analysis is examined[43] is a ploy to disallow costs due to regulatory lag, given the new procedures adopted in D.21-11-001 for submitting detailed analyses of new or renewed CSAs. This proposal will not decrease costs or provide any benefit for customers, and will create large rate swings for no legitimate regulatory purpose.

Unless a new or renewed CSA is executed at least a month prior to the August 1st filing date for an ECAC Application, it cannot be included in that application or the accompanying testimony.[44] As such, for a contract executed after July 1st, an estimate of the fuel costs from that supplier would have to be included in the NPC calculations and the Commission's review of the prudence of the cost of the contract (and the associated pre-contracting analysis) would be delayed just one ECAC cycle and submitted in the next ECAC application.[45] Sierra Club offers no persuasive justification for why the incremental dispatch

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[39] Exh. PAC/700-C, p. 24:10–14.

[40] *Id.*, pp. 17:14 – 18:2.

[41] RT Vol. 1, pp. 32:5 – 33:13.

[42] D.20-12-004, pp. 13–15; D.21-11-001, p. 15, Findings of Fact 1, 3, Conclusion of Law 2.

[43] Sierra Club Opening Brief, p. 2, Recommendation 4.

[44] RT Vol. 1, p. 65:7–20.

[45] *Id.*, pp. 63:1 – 65:6.

methodology approved by the Commission should not be applied to an estimate of coal fuel costs in the ECAC NPC calculation until the Commission can examine the actual contract terms and provisions in the next ECAC cycle. Estimates are used for all manner of cost categories in prospective ratemaking before the Commission, including both general rate cases and energy offset cases. Sierra Club has not presented evidence to specifically challenge the reasonableness of PacifiCorp's coal fuel cost estimates.

The Commission has concluded that replacing incremental dispatch with average cost dispatch (which is the practical effect of Sierra Club's recommendation to disallow the practice of pricing volumes of coal required to be purchased at $0 for incremental dispatch) increases customer costs and is contrary to basic economic principles.[46] Nor does Sierra Club address the impact on customers of the rate decreases and subsequent increases its recommendation will cause due to the timing of the contract approval process adopted in D.21-11-001.[47]

Instead, Sierra Club continues to insist that PacifiCorp should have conducted the same analysis of Black Butte contract prices and quantities in relation to alternative resources that will be submitted with the executed Black Butte and Naughton contracts in the 2023 ECAC.[48] Sierra Club proposes to completely reverse the Commission's approved methodology for incremental dispatch in NPC calculations merely because PacifiCorp did not produce a duplicate analysis of alternatives to the Black Butte contract one year in advance of when the

[46] D.20-12-004, pp. 13, 29, 30. See Finding of Fact 19, Conclusion of Law 2; D.21-11-001, pp. 12–13, 15. On page 15, the Commission stated, "[t]he evidence supports finding that the least-cost methodology for estimating NPC remains the adjusted incremental cost approach used by PacifiCorp and approved by the Commission in the 2020 ECAC proceeding."

[47] RT Vol. 1, pp. 63:26 – 64:13.

[48] Sierra Club Opening Brief, pp. 6–10.

Commission requires that such an analysis be filed. This is, by any reasonable standard, completely unnecessary. Such duplication of effort is particularly inappropriate when PacifiCorp did provide substantial evidence of the reasonableness of the *estimated* price, quantities, and terms of coal fuel from Black Butte used in its NPC calculations.[49] In light of the factual support for PacifiCorp's estimated costs of third-party coal fuel costs, and the lack of a justification to reverse the Commission's approval of incremental dispatch methodology, the Sierra Club recommendation to penalize PacifiCorp and its customers due to the timing of contract reviews should be rejected.

E. **The Commission Should Reject Sierra Club's Proposed Requirement for an Analysis of Cycling Coal Plants**

Sierra Club's vague recommendation for PacifiCorp to conduct a broad, undefined study of the benefits of cycling all coal plants, or some coal plants, at unspecified times of the year for unspecified periods[50] is both burdensome and of no use to PacifiCorp or to the Commission. Sierra Club's witness Ed Burgess admitted that there are instances when it is *not* cost effective to shut down or "cycle" a power plant due to additional startup costs or reliability considerations,[51] but he proceeds to state, without providing any evidence whatsoever, that, "it's likely there are several instances where this can be done safely and where doing so would reduce overall costs."[52] Sierra Club has never introduced any evidence that cycling a particular coal plant would reduce costs, so the assertion of its witness that "it's likely" that cycling would reduce costs is simply an unsubstantiated claim, and provides no support for Sierra Club's recommendation.

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[49] See Section I.A.1., pp. 2–4 above.

[50] Sierra Club Opening Brief, p. 2, Recommendation 5.

[51] Exh. SC-01-C, p. 50:6–8; Sierra Club Opening Brief, p. 28.

[52] *Id*., p. 50:8–10.

PacifiCorp witness Michael Wilding directly contradicted Mr. Burgess' claim by testifying that the costs of alternative resources at present market prices are substantially higher than any of PacifiCorp's coal-fired plants, thus conclusively demonstrating that cycling a coal plant during this ECAC cycle is *highly unlikely to reduce costs*.[53] In addition, as PacifiCorp established in its testimony, there are several other factors that discourage cycling coal plants, including the length of time needed to restart such plants, and factors that affect the reliability of the grid, such as renewable energy integration, transmission congestion, voltage support, and the maintenance of system inertia.[54] In addition, the fact that other plants and facilities are undergoing scheduled maintenance in the spring, when cycling has been considered in the past, has to be considered before risking shutting down other plants at the same time.[55] As a result of all these factors, PacifiCorp tends to operate its coal plants at their new, lower minimum operation levels, so that they can be quickly ramped up if needed.[56] This increases the Company's ability to bring on additional generation in the event of a risk to the reliability of the system. All of these factors, and particularly the evidence that demonstrates that cycling coal plants is extremely unlikely to be cost effective at current market prices for alternative energy, support the conclusion that requiring a broad and unfocused study of coal plant cycling is not worthwhile.

It is important to note that Sierra Club's related complaints suggesting that PacifiCorp should remove "must run" constraints from its Aurora modeling[57] directly affects the

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[53] Opening Brief of PacifiCorp, pp. 20–21; RT, Vol. 1, pp. 40:10–41:10; p. 35:12–18; p. 42:1–20; Exh. SC-01-C, p. 12, Confidential Table 3.

[54] Opening Brief of PacifiCorp, p. 19.

[55] *Id.*, pp. 19–20; RT Vol. 1, p. 39:6–16.

[56] RT Vol. 1, p. 38:5–25.

[57] Sierra Club Opening Brief, p. 28.

NPC calculation in the ECAC, not the analysis of alternative resources to be performed before executing a new or renewed CSA. PacifiCorp has complied with the direction in D.21-11-001 to perform such analyses of new CSAs without imposing "must run" constraints.[58]

II. SIERRA CLUB'S USE OF PRODUCTION COST MODEL RUNS WITH UNREALISTIC ASSUMPTIONS DOES NOT SUPPORT ITS RECOMMENDATIONS

In its Opening Brief, Sierra Club makes the following assertion:

> "the record evidence demonstrates not only that PacifiCorp failed to justify its proposed fuel costs for the Jim Bridger plant but also that economic generation at Jim Bridger is significantly lower—between 45 and 59 percent lower —than PacifiCorp forecasts in its 2022 ECAC application, meaning that Jim Bridger's prudent fuel costs are similarly significantly lower than the Company proposes."[59]

This statement is not accurate. The record evidence does not support a lower level of generation at Jim Bridger, or lower fuel costs. Sierra Club provides no direct evidence of a different, prudent level of generation or fuel costs for the plant. What Sierra Club does is to repeat the tactic it has used in previous PacifiCorp proceedings, including other states such as Oregon. This tactic involves obtaining alternative model runs, not initially developed by PacifiCorp, but requested by either Sierra Club or regulatory staff, with significant constraints and exclusions that PacifiCorp objects to as unrealistic and out of place in an analysis that purports to mirror actual system operations. Sierra Club then makes the broad, unfounded assertion that these distorted model runs support Sierra Club's claim that the Jim Bridger plant can operate less often and at a lower fuel cost at the same time. This is not the case, and the Commission should place no weight on these alternative model runs.[60]

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[58] D.21-11-001, p. 32, Conclusion of Law 10.

[59] Sierra Club Opening Brief, p. 20.

[60] Exh. PAC/700-C, pp. 24:15 – 30:12; Exh. PAC/800-C, pp. 20:4 – 21:7.

In this proceeding Sierra Club relies upon three such alternative production cost model runs: an average cost run from the last Oregon TAM (energy cost offset) proceeding;[61] an average cost run required in the last California ECAC proceeding;[62] and one run requested by the Oregon Commission in the 2021 IRP proceeding, based on the unrealistic assumption that PacifiCorp would not have any contractual obligations in future fueling contracts for the Jim Bridger plant.[63] As explained in detail below, each of these three model runs contain assumptions and constraints that render them useless for modeling the actual operation of the PacifiCorp system, and which run contrary to this Commission's previous determinations in recent ECAC proceedings that it is in customers' best interests to use incremental cost dispatch and recognize contractual minimum take obligations in CSAs in constructing an NPC forecast.

A. <u>Oregon Transition Adjustment Mechanism (TAM) Run</u>

Sierra Club suggests the model from the Oregon TAM predicts that generation at the Jim Bridger plant will drop [redacted] and reduce fuel costs by [redacted].[64] However, the numerical result of this run is due to [redacted].[65] As explained above, PacifiCorp's estimate of third-party coal fuel costs justifiably includes the cost of minimum take requirements. The third-party coal supply contracts in place when this Application was filed contained such provisions, and the coal suppliers indicated that future contracts would include minimum take provisions.[66]

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[61] Exh. SC-01-HC, pp. 27:4 – 28:4.

[62] *Id.*, pp. 28:18 – 29:18.

[63] *Id.*, pp. 32:10 – 33:22.

[64] Exh. SC-01-HC, p. 27:7–8.

[65] Exh. PAC/700-C, pp. 24:20 – 25:10.

[66] See page 3, *supra*.

In addition, the BCC mine that serves the Jim Bridger plant cannot operate at the [redacted] reduced capacity level and still produce coal at the same dispatch price assumed in the Oregon TAM model run because of reduced economies of scale and unavoidable labor and equipment costs.[67] Essentially, the unavoidable costs of maintaining the BCC mine operation will be spread over a smaller volume of coal production and the price per ton of produced coal will simply have to rise as a consequence. This model run is not a realistic analysis of the operation of the PacifiCorp system. In addition, it must be noted that the Oregon Commission did not adopt any of Sierra Club's proposed adjustments to the Company's NPC forecast in the Oregon proceeding.[68] The mere fact that a model is developed in a TAM proceeding does not indicate that the results of an artificially constrained model have sufficient weight to contradict PacifiCorp's proposed NPC forecast.

B. Aurora Run Using Average Costs

In response to the December 21, 2021 Ruling of Administrative Law Judge Larsen, PacifiCorp provided on February 21, 2022, an Aurora model run that removed any minimum take volumes and costs, along with the supplemental tiers for all of PacifiCorp's coal units. PacifiCorp then used a flat-average cost from the initial filing instead of incremental costs for dispatch to forecast the NPC.[69] In order to correct for the exclusion of fixed costs that flawed the Oregon TAM model run, PacifiCorp added back the cost of minimum take-related costs for any plants that did not dispatch to the level of their required minimum take obligations—which included just three plants, Jim Bridger, Hayden and Huntington.[70] When those costs were

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[67] Exh. PAC/700-C, p. 26:12–19.

[68] *Id.*, p. 27:1–5.

[69] Exh. PAC/700-C, p. 27:12–16.

[70] *Id.*, p. 27:16–20.

properly included in the analysis, this average cost model run produced an NPC that was *$57.5 million higher* on a total company basis.[71] Instead of producing a result that reduced costs while imposing a [redacted] reduction in generation at the Jim Bridger plant, as Sierra Club claims,[72] the actual result of this average cost dispatch calculation is a substantial increase in total NPC—which is consistent with the Commission's previous determination that average cost dispatch is contrary to basic economic principles and does not benefit customers.[73]

C. <u>Oregon IRP PLEXOS Run</u>

The final model relied upon by Sierra Club is a model created at the request of the Oregon Commission in PacifiCorp's 2021 IRP proceeding in Oregon.[74] This model, created with the PLEXOS software program, was prepared for use in the IRP proceeding, and used a 20 year planning horizon, instead of the one year ECAC forecasting period used in this proceeding.[75] This fact renders the model already suspect in terms of its value for forecasting NPC in an ECAC proceeding, as the Commission has found that "the ECAC process is not directly comparable to PacifiCorp's IRP, since the IRP process uses a much longer planning horizon which considered average coal fuel cost as well as the topology of PacifiCorp's generation fleet."[76]

The bench request by the Oregon Commission for this hypothetical model run included the assumption that PacifiCorp would have no new contractual obligations of any kind

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[71] *Id.*, p. 28:1–3.

[72] Exh. SC-01-HC, p. 29:13–18; p. 32:1–6. Sierra Club's estimate of savings is dependent on removing the legitimate minimum take and fixed cost obligations for the Jim Bridger plant.

[73] D.20-12-004, p. 13; p. 29, Finding of Fact 19; p. 30, Conclusion of Law 2.

[74] Exh. SC-01-0HC, p. 32:12–20.

[75] *Id.*, pp. 21–24.

[76] D.20-12-004, p. 15.

for future coal supplies beyond the current contracts.[77] This is a wildly unrealistic assumption,[78] effectively removing all minimum take requirements for coal fuel supply at the Jim Bridger plant.[79] As explained above, minimum take requirements will continue to be part of any CSA with the Black Butte mine, including the new contract to be presented in the 2023 ECAC, and unavoidable costs will continue to be incurred at the BCC mine as long as the mine is operated, regardless of the level of production.[80] This PLEXOS run also assumed that large volumes of coal could be obtained from alternative suppliers in the Southern Powder River Basin. However, studies which looked at supplying the Jim Bridger plant from that basin concluded that substantial capital investments would be needed to enable sufficient deliveries, in the range of [redacted], and that PacifiCorp might have to bear all of that expense, which would exceed the theoretical benefits of the scenario in the PLEXOS run.[81]

In addition, this model focused on reduced generation at Jim Bridger units 3 and 4 between 2022 and 2037,[82] which ignores the fact that Jim Bridger units 1 and 2 will continue to be operated using coal during the ECAC forecast period, and are not scheduled to convert to natural gas until 2024.[83] This model does not address all the units that will be operating at the Jim Bridger plant during the ECAC forecast period and its focus on long term planning horizons substantially reduces its credibility for purposes of forecasting NPC for the one year ECAC period.

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[77] Exh. PAC/800-C, p. 20:7–9.

[78] *Id.*, p. 20:9–14.

[79] Exh. SC-01-HC, p. 32:12–20.

[80] See Section I.A.1. above at pp. 2–3; Section I.A.2. at p. 6; and RT Vol. 1, pp. 103:3–14, 154:21 – 156:10.

[81] Exh. PAC/800-C, pp. 20:14 – 21:7.

[82] Exh. SC-01-HC, p. 33:5–8.

[83] Exh. PAC/700-C, pp. 29:18 – 30:2.

D. Sierra Club's Three Alternative Models Fail to Create Reasonable Doubt as to PacifiCorp's Forecasted NPC in the 2022 ECAC

Sierra Club is grasping at straws by relying on modified cost models with distorted assumptions in order to achieve any result that will show reduced generation at the Jim Bridger plant—even though the key assumptions of these models are completely inconsistent with actual operation of the PacifiCorp system. PacifiCorp's testimony has established that CSAs will continue to contain minimum take provisions, because all coal suppliers insist on them, and they reduce overall costs.[84] In addition, the unavoidable fixed costs of production at the BCC mine will require a continued level of production sufficient to recover those costs.[85] Both the minimum take obligations and the fixed costs at the BCC mine are properly treated as incremental costs in the NPC forecast dispatch methodology, rendering Sierra Club's repeated reliance on average cost models that exclude these costs unpersuasive.

Another failing of Sierra Club's strategy of relying on distorted model runs is that it fails to account for the fact that dramatically reducing generation at the Jim Bridger plant, which is centrally located at the nexus of the PacifiCorp West and PacifiCorp East balancing control areas, would create significant reliability risks. Sierra Club has blithely dismissed this concern, stating in multiple data responses that, "it is Sierra Club's understanding that Aurora inherently accounts for system reliability when selecting a combination of resources to meet system needs."[86] Sierra Club made similar assumptions about the GRID and PLEXOS model runs.[87] However, Sierra Club has falsely assumed that system reliability is assured just because a

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[84] Exh. PAC/800, p. 7:4–12; 2021 PacifiCorp ECAC, A.20-08-002, Rebuttal Testimony of Seth Schwartz, Exh. PAC/100, p. 8:1–12.

[85] RT Vol. 1, p. 156:11–17.

[86] Exh. PAC/910, Sierra Club Response to Data Request PAC 2.18.

[87] Exh. PAC/907, PAC/908, and PAC/911.

model presents a solution based on the inputs and constraints it is given. The three models that Sierra Club has advanced in this proceeding called for massive reductions in generation from the Jim Bridger plant, specifically, a [redacted] reduction in the Oregon TAM model,[88] a [redacted] reduction in the Aurora model revised to dispatch based on average costs,[89] and an [redacted] reduction in generation at Jim Bridger units 3 and 4 between 2022 and 2037 as calculated in the "No Minimum Scenario" PLEXOS run in the 2021 PacifiCorp IRP proceeding before the Oregon Commission.[90] Removing such large generation resources from the PacifiCorp system creates a significant risk that system reliability will be compromised.

In response to Sierra Club's recommendation that all the coal fuel costs for the Jim Bridger plant should be disallowed, PacifiCorp analyzed the impact on the system of removing all generation from the plant for the 2022 ECAC period. The result of the study was an increase in NPC of [redacted].[91] More importantly, as explained by PacifiCorp witness Michael Wilding, the removal of Jim Bridger generation made it impossible for the Aurora model to solve for a dispatch solution without assuming an [redacted] increase in hypothetical "emergency purchases" to balance the system.[92] Mr. Wilding stated that this was indicative of a severe lack of generation.[93] Mr. Wilding also explained that the Jim Bridger plant [redacted]

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[88] Exh. SC-01-HC, p. 27:8, also Confidential Table 6.

[89] *Id.*, p. 29:17.

[90] *Id.*, p. 33:3–8.

[91] Exh. PAC/700, p. 13:4–6.

[92] *Id.*, p. 14:5–8.

[93] *Id.*

[redacted].[94]

Whether Sierra Club is proposing to eliminate all generation from the Jim Bridger plant by disallowing all its coal fuel costs, or reducing generation by [redacted], any of these outcomes will severely strain the PacifiCorp system, and increase the risk that PacifiCorp will not be able to safely and reliably serve its customers' load. Ensuring reliable system operation is too important for the Commission to rely on distorted models that remove massive amounts of generation from the system, particularly when there is evidence that it will be extremely difficult, if not impossible, to replace that generation with other reliable resources. For this reason alone, the alternative models relied upon by Sierra Club should play no role in the Commission's determination of an ECAC forecast for 2022.

During Sierra Club witness Burgess' testimony, he was asked by ALJ Larsen what criteria he would recommend for determining whether the proposed coal supply for the Jim Bridger plant was prudent. His answer was striking.

> Q: [ALJ LARSEN] "And do you have any specific criteria for determining whether a future Black Butte Coal Supply Agreement or Bridger Coal Company Operating Plan is prudent that the Sierra Club is proposing?"
>
> A: [BURGESS] "Well, at a minimum, I think there needs to be an analysis provided that shows -- that demonstrates that the entering into that new agreement or executing the mine plan would be in PacifiCorp's customers' best interest. And, you know, a robust economic evaluation to look at alternatives to that coal fuel for other sources in generation is necessary."[95]

Only PacifiCorp has presented evidence as to the economic "best interest" of its customers in this proceeding, and that evidence conclusively demonstrated that the primary

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[94] *Id.*, pp. 12:10 – 13:1.

[95] RT Vol. 1, p. 172:2–20.

alternative resources for the coal in PacifiCorp's generation mix--natural gas and purchased power--are considerably more expensive than any of PacifiCorp's coal-fired units at present market prices.[96]

Sierra Club's call for an analysis of what is in the customers' best interest rings rather hollow given that it has not presented any evidence in this proceeding comparing the cost of the coal fuel estimated by PacifiCorp to the price of any alternative fuels. Rather, Sierra Club has merely relied upon distorted model runs in an attempt to obtain results that drive down coal generation relative to other resources by excluding fixed costs of mine production or the cost of contractual minimum take obligations that must be incurred. Sierra Club has not presented an actual comparison of the prices of alternative resources.[97]

The reason Sierra Club has offered no such comparison is because the available alternative resources are substantially more expensive than coal-fired generation, and that would undermine Sierra Club's overall position. Sierra Club's failure to present the very analysis its expert recommends—a credible economic analysis of the price of actual alternative resources—conclusively demonstrates that Sierra Club has failed to create any reasonable doubt about the estimated fuel costs contained in PacifiCorp's NPC forecast or PacifiCorp's own testimony as to the significantly higher cost of alternative resources under current market conditions.

III. CONCLUSION

Sierra Club's recommendations are not supported by the evidence in this proceeding, and its testimony does not create a reasonable doubt with respect to PacifiCorp's

[96] RT Vol. 1, p. 35:11–23; p. 42:1–25; Exh. SC-01-C, p. 12, Table 3.

[97] In a previous ECAC proceeding, Sierra Club attempted to contrast coal prices with the cost of a single low cost Wyoming wind resource, only to have PacifiCorp point out that the "cherry-picked" price for wind energy was only available for a small quantity of capacity, and that there was no evidence that sufficient low cost wind resources were available to replace the extremely large amount of coal generation Sierra Club sought to displace. D.20-12-004, A.19-08-002, p. 13; PacifiCorp Opening Brief, pp. 23–26. In this proceeding, Sierra Club did not attempt a similar argument.

prima facie case in this proceeding. PacifiCorp has provided specific evidence of the reasonableness of its NPC forecast, including both third party coal fuel costs and the cost of coal produced by the BCC mine. PacifiCorp is complying with the newly adopted procedures for analyzing new or renewed CSAs, and will present the required information in the 2023 ECAC Application to be filed in August 2022. The Commission should refuse Sierra Club's invitation to require that such a review must take place before reasonable estimates of fuel costs can be included in the ECAC NPC forecast, as such a process would generate unnecessary rate swings without any legitimate regulatory purpose. The Commission should issue a decision granting PacifiCorp's application and finding its proposed NPC, Offset Rate, and Balancing Rate to be reasonable.

Respectfully submitted on July 25, 2022, at San Francisco, California.

PACIFICORP
Carla Scarsella
Deputy General Counsel
825 NE Multnomah Street, Suite 2000
Portland, Oregon 97232
Telephone: (503) 813-6338
Email: carla.scarsella@pacificorp.com

By *Is/ Carla Scarsella*
Carla Scarsella

Attorneys for PacifiCorp

DOWNEY BRAND, LLP
Michael B. Day
Megan Somogyi
Nirvesh Sikand
455 Market Street, Suite 1500
San Francisco, California 94105
Telephone: (415) 848-4800
Facsimile: (415) 848-4801
Email: mday@downeybrand.com

By *Is /Michael B. Day*
Michael B. Day

Attorneys for PacifiCorp