SIERRA CLUB

September 2, 2020

Via Electronic Filing

Public Utility Commission of Oregon
Attn: Filing Center
201 High St. SE, Suite 100
Salem, OR 97301

Re: Docket No. UE 374 - In the Matter of PACIFICORP, dba PACIFIC POWER, Request for a General Rate Revision.

Enclosed for filing in the above-caption docket please find the Sierra Club Pre-Hearing Brief. The confidential and highly confidential version of the Pre-Hearing Brief will be served in accordance with OAR 860-001-0070(3) and the Commission's Covid-19 Response outlined in Order 20-088 on all eligible party representatives electronically via encrypted password protected ZIP folders

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

Respectfully submitted,

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BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

In the Matter of PACIFICORP d/b/a PACIFIC POWER, Request for a General Rate Revision	UE 374

CERTIFICATE OF SERVICE

I hereby certify that on this 2nd day of September, 2020, I have served the foregoing Sierra Club Prehearing Brief upon all party representatives on the official service list for this proceeding. The public version of these documents was served upon parties via email, and the confidential and highly confidential versions of these documents were served pursuant to General Protective Order No. 20-040 and Modified Protective Order No. 20-131 upon all eligible party representatives electronically via encrypted password protected ZIP folders.

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Dated this 2nd day of September, 2020 at Redwood City, CA.

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BEFORE THE PUBLIC UTILITY COMMISSION

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Sierra Club Pre-Hearing Brief

Public Version

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I. Introduction

Pursuant to Administrative Law Judge's March 6, 2020 ruling, Sierra Club submits this pre-hearing brief urging the Commission to reject PacifiCorp's request to increase rates by approximately $78.0 million. Specifically, Sierra Club challenges the prudency of PacifiCorp's capital expenditures of $218.6 million ($56.9 on an Oregon-allocated basis) at the Jim Bridger coal plant and $24.4 million ($6.3 million on an Oregon-allocated basis) at the Hayden coal plant. The Company's decision-making process to install selective catalytic reduction ("SCR") emissions controls at Jim Bridger was fundamentally flawed and failed to incorporate new information that should have alerted the Company to the rapidly eroding economics of the projects. From the beginning, PacifiCorp rushed towards a self-selected compliance deadline while the costs of its own fuel increased and the costs of alternatives fell. Specifically, falling gas prices and an increase to fuel costs in the fall of 2013 substantially changed the key assumptions that the Company relied on to support its decision. Despite clear indications known to the Company that the value of its coal plant was falling, PacifiCorp never re-ran its net present value analysis once it had obtained approval from its regulators in Wyoming and Utah in May 2013. PacifiCorp could have delayed installation of the environmental retrofits but instead blindly pushed the project through. As a result, PacifiCorp asks that ratepayers not only bear the cost of these retrofits but also the continued use of a coal plant that operates at costs well above alternatives—resulting in millions of dollars of damages to customers.

PacifiCorp's decision-making process for the Hayden SCRs was likewise flawed and therefore imprudent. There, despite learning that the project would result in significant ratepayer loss, the Company failed to take any action in opposition of the SCRs and, in fact, [redacted]. Without only limited and perfunctory review, PacifiCorp concluded that it had no viable options to oppose the project and thus did nothing.

This brief summarizes the key issues addressed by Sierra Club witnesses Drs. Jeremy Fisher and Ezra Hausman and Alliance of Western Energy Consumers ("AWEC") witness Mr. Michael Gorman, and addresses the testimony of PacifiCorp witnesses Mr. Dana Ralston, Mr. Rick Link, and Mr. James Owen.

II. Legal Standard

PacifiCorp bears the burden of showing that its proposed rates are "fair, just, and reasonable."[1] "This burden is borne by the utility throughout the proceeding and does not shift to any other party."[2] If a proposed rate change is challenged by another party, "PacifiCorp still has the burden to [s]how, by a preponderance of evidence, that its suggested change is just and reasonable. If it fails to meet that burden, either because the opposing party presented compelling evidence in opposition to the proposal, or because PacifiCorp initially failed to present compelling information, then PacifiCorp does not prevail."[3]

For the recovery of capital investments, a utility must show that (1) "the investment is presently used for providing utility service[,]" and (2) "that the investments were prudently

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[1] Or. Rev. Stat. § 757.210(1)(a).
[2] *In Re Pacificorp*, 212 P.U.R.4th 379 (Or. P.U.C. Sept. 7, 2001).
[3] *Id.*

made."[4] The Commission has recognized that the prudence of a utility's action is "based on all that it knew or should have known at the time . . . in light of the circumstances which then existed."[5] Not only is the utility's ultimate decision relevant to a prudency review, but also "the process used by the utility to make [the] decision."[6]

III. PacifiCorp's Flawed Decision-Making Process to Install the Jim Bridger SCRs Resulted in Unnecessary and Imprudent Expenditures of Customer Funds

PacifiCorp's request for rate recovery of the Jim Bridger SCRs should be denied for at least five separate reasons. **First**, PacifiCorp self-selected an artificial deadline for these investments based on a self-serving arrangement with the Wyoming Department of Environmental Quality, rather than simply hewing to the EPA deadline under the Clean Air Act. In this way, PacifiCorp manufactured a sense of urgency and inability to reconsider the project in light of changing circumstances.

Second, PacifiCorp failed to adequately evaluate or react to dramatically falling gas prices before proceeding with the projects. These falling gas prices were rapidly pulling value out of the project, and ultimately did in fact render it severely uneconomic. PacifiCorp's arguments that it acted reasonably in disregarding these major market changes are not credible.

Third, PacifiCorp failed to meaningfully evaluate changes at its Bridger coal mine that supplied a substantial majority of the fuel for the plant. These changes, which involved the early closure of the underground portion of the mine and exclusive reliance on surface mining, significantly increased the cost of fuel for the Bridger plant, further degrading the economics of the SCR project.

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[4] *In the Matter of Pacificorp, DBA Pac. Power Request for A Gen. Rate Revision*, Docket No UE 246, Order No. 12 493, at 2-3 (Dec. 20, 2012) [hereinafter "Order No. 12-493"].
[5] *Id.* at 25 (internal citation omitted).
[6] *Id.* at 26.

Fourth, PacifiCorp failed to delay construction after it became aware of falling gas prices and changes at the Bridger mine, despite the ability to do so.

Finally, PacifiCorp failed to adequately assess potentially lower cost alternatives for Regional Haze compliance, including retirement of the Jim Bridger plant or converting it to run on gas.

A. PacifiCorp orchestrated arbitrary 2015 and 2016 deadlines for the Bridger SCR projects

PacifiCorp's basic premise in this case is that it was under legal obligation to install the Bridger 3 and 4 SCRs by 2015 and 2016, respectively, and because of this rushed and onerous legal burden, it had to move quickly, making an irrevocable commitment by December 1, 2013.

According to Mr. Owen, a 2009 Best Available Retrofit Technology ("BART") permit that the Company itself sought from the Wyoming Department of Environmental Quality imposed a state law obligation to comply with the 2015, 2016 deadlines.[7] This claim is not accurate.

PacifiCorp installed the Bridger SCRs under the guise of the Clean Air Act's Regional Haze Program. Like most Clean Air Act programs, the Regional Haze Rule requires states like Wyoming to submit state implementation plans ("SIPs") to meet the Act's goals subject to EPA's final approval. EPA may approve, disapprove or partially disapprove a SIP. A disapproved state plan results in a federal implementation plan ("FIP"). To be clear, a Clean Air Act requirement only becomes enforceable after EPA takes final action on a proposed rule, i.e., SIP, and that legal obligation is under federal, not state, law. In the case of Wyoming's regional haze SIP, EPA stepped in, partially disproved the state plan, and issued a FIP. In that FIP, EPA explained how this process works:

[7] PAC/2500 at Owen/4:3-5.

> In the context of acting on a regional haze SIP, EPA must assure that it meets the requirements of the Act and the RHR, including requirements regarding BART. EPA . . . **<u>is not required to defer to the state's technical judgments</u>**. Instead, EPA is not only authorized, but **<u>required to exercise independent technical judgment in evaluating the adequacy of a state's regional haze SIP</u>**, including its BART determinations, just as EPA must exercise such judgment in evaluating other SIPs.[8]

There was only one legal mandate that PacifiCorp was required to follow to comply with the Regional Haze rule, and EPA determined that requirement on January 30, 2014 in its federal implementation plan for Wyoming. EPA made this a final determination some five years after Mr. Owen's putative compliance date of 2009, when the company requested a BART permit. Contrary to Mr. Owen's testimony, the 1970 Clean Air Act did not create two simultaneous and independent compliance obligations. It created just one process where a state submits a proposed plan, which becomes final and enforceable upon EPA's action on that plan. It defies credulity that a utility as sophisticated as PacifiCorp could fail to understand the workings of the federal Clean Air Act's Regional Haze program.

It likewise defies credulity that PacifiCorp would not ask the state of Wyoming to point to an actual state law requiring it to comply with an unapproved SIP. Instead the Company also claims it was bound by a 2010 administrative "BART settlement" between PacifiCorp and Wyoming DEQ as the mandate to spend hundreds of millions of customer dollars on a significant years-long construction project. Beyond this argument's multiple legal infirmities, there is a provision in the settlement itself that explicitly conditions the effectiveness of the agreement on EPA approving the "portions of the Wyoming Regional Haze SIP that are consistent with the terms of this Settlement Agreement."[9] Nothing that happened prior to EPA

[8] 79 Fed. Reg. 5032, 5064 (Jan. 30, 2014) (emphasis added).
[9] Sierra Club/105 at Fisher/4.

acting upon Wyoming's Regional Haze SIP on January 30, 2014 legally bound PacifiCorp to do anything but wait for a final rule.

In fact, the record shows the Company self-selected a 2015 and 2016 deadline to construct SCRs at Jim Bridger 3 and 4. Sierra Club will show that as far back as 2005, PacifiCorp's internal plan was to simply begin installing air pollution controls without formal requirements from state or federal authorities.[10] It continued implementing that plan in 2009, when it sent Wyoming DEQ two different letters on the same day: one letter publicly opposing SCRs at Jim Bridger; and another, confidential letter [redacted]. In that secret letter, [redacted][11] According to that letter, [redacted][12] From that 2009 date, those SCR installation dates never changed.

The Company made a public show of challenging Wyoming DEQ's regional haze SIP, and then turned around and "settled" the case with the agency in 2010[13] [redacted]

From as early as 2005 until 2013, PacifiCorp stubbornly adhered to its internal plan to install pollution controls even with mounting evidence that the projects neither were cost effective, necessary nor required by federal regulations. In fact, by the time EPA's BART

[10] Sierra Club/412.
[11] Sierra Club/410 at Fisher/1.
[12] *Id.* at Fisher/2.
[13] PAC/2500 at Owen/12:11-15.

determination for Wyoming adopted the state's (and PacifiCorp's) proposed dates for SCR at Bridger, the Company had already finalized its construction contracts.

PacifiCorp's business plan severely harmed its customers. By September 2013, the Company's own analysis indicated that the value of the SCR decision was in steep decline. By January 30, 2014, the relative value of the SCRs compared to, e.g., converting the plant to gas operations, had dropped significantly again. This timeline is important because PacifiCorp all along had the option of working with EPA to satisfy regional haze requirements in a manner protective of the environment and its customers. It chose not to do so.

Instead, Mr. Owen asserts that EPA's 2014 final Regional Haze determination required it to retrofit Bridger 3 and 4 within two years: in 2015 and 2016. And based on that rushed timeline, the Company was forced to speculate what EPA might require in its final rule. The company has never explained, in the face of declining project economics, why it did not simply ask EPA to impose the normal five-year BART deadline to install those major retrofits.[14] In the 2014 rule, EPA was acting under its authority to require BART controls. Had the Company not supported the 2015/2016 installation dates for units 3 and 4, it could have easily delayed the need to install SCRs until 2019. Finally, it is notable that PacifiCorp chose to sue EPA over the 2014 Regional Haze FIP for Wyoming regarding the SCR requirements for its other coal units, but did not challenge EPA's decision to require SCRs at Bridger. Why not? After suing EPA, PacifiCorp requested that the court stay implementation of EPA's BART decision pending resolution of the federal litigation. As of this writing, the FIP remains stayed, and the Company has not moved forward on those other SCR projects.

[14] 40 CFR 51.308(e)(1)(iv).

B. PacifiCorp Failed to Reassess Project Costs in Light of Rapidly Falling Gas Prices Leading up to the Final Decision

Once PacifiCorp began implementing its plan to install SCRs at Jim Bridger, from that point on, the Company refused to factor into its analyses any information that might call its decision into question or require reconsideration of its chosen course. The first of these refusals was the Company's failure to reassess the SCR costs in light of rapidly falling gas prices. In August 2012, PacifiCorp sought pre-approval from both the Wyoming and Utah commissions and provided its analysis supporting the installation of SCRs at Jim Bridger 3 and 4 in those dockets. In 2012, the Company's application indicated a [redacted] project benefit over the alternative of gas conversion.[15] The Company received pre-approval for the SCR projects in Utah and Wyoming on May 10, 2013 and May 29, 2013, respectively. The record shows that once it had secured the two certificates of public convenience and necessity ("CPCN"), the Company ceased engaging in any meaningful alternatives analysis before committing to the SCR project through a final notice to proceed ("FNTP") signed December 1, 2013.

As the Company moved through the contracting process in late 2012 and into 2013, the record shows that at each contracting milestone, the relative value of the SCRs continued to decline as compared to the gas conversion alternative. By September 2013, the Company's internal analysis indicated that the value of the decision had dropped from [redacted] down to $130 million,[16] almost exclusively due to falling gas prices. By December 2013, the value of the SCR project dropped again to only $36.7 million.[17] While this figure is based on the Company's December 2013 official forward price curve ("OFPC") for gas—completed just 30 days after

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[15] Sierra Club/103, *In The Matter of the Application of Rocky Mountain Power for Approval of a Certificate of Public Convenience and Necessity to Construct Selective Catalytic Reduction Systems on Jim Bridger Units 3 And 4 Located Near Point of Rocks, Wyoming*, Docket No.20000-418-EA-12, Direct Testimony of Mr. Rick Link, at 2:5. (Wyo.P.S.C. Aug. 2012).
[16] PAC/700 at Link/107:13.
[17] Sierra Club/100 at Fisher/46:7.

signing the FNTP and three months after its September 2013 analysis—the Company has admitted that it had the information it needed to develop the OFPC before signing the FNTP, discussed below.[18] This loss in value of the SCRs was alarming, as was its rapidity. From August 2012 until the EPA issued its final Regional Haze Rule on January 10, 2014 – a period of only 17 months – nearly [redacted] of the estimated [redacted] value of the project had been wiped out.

Despite the precipitous loss of value over an incredibly short period of time, the Company continues to argue[19] that a "reasonable utility" would not have reversed course, paused the projects, re-evaluated the projects, or even prepared an updated gas forecast analysis prior to committing to the SCRs. Instead, PacifiCorp has steadfastly maintained that, despite evidence of dramatically falling gas prices and the corresponding rapid loss of value in the SCR project, it had no duty to reevaluate the project so long as projected gas prices remained above Mr. Rick Link's nominal "breakeven point" of $4.86/MMBtu.

Importantly, Mr. Link's "breakeven point" was not a robust indicator that the SCR project would be economic.[20] The Company's September 2013 official forward price curve projected gas prices at $5.35/MMBtu, significantly less than what the Company projected in December of 2011, although still above $4.86/MMBtu. As Dr. Fisher testified, at a 90 percent confidence interval, the SCR project could very well have already been a liability to ratepayers, even with gas prices as high as $5.35/MMBtu.[21]

PacifiCorp has claimed that its December 2013 official forward price curve, which showed the thin remaining value of just $36.7 million, was not available to it until December 31,

[18] PAC/2300 at Link/25:3-8; PAC/3800 at Link/5:11-12, Link/5:18-19, Link/6:3-4.
[19] PAC/3800 at Link/9.
[20] Sierra Club/100 at Fisher/45:9-12.
[21] *Id.* at Fisher/45:9-12.

2013, four weeks after the Company had already signed the FNTP.[22] But it has also admitted that it had all the information necessary to construct that OFPC by December 11, just 10 days after it had issued the FNTP for the SCR.[23] The Company further admitted that it had two of three third-party "fundamental" forecasts,[24] and access to market forward prices prior to December 1, 2013.[25] In fact, Mr. Link explicitly acknowledged that of the two long-term fundamental forecasts the Company had in its possession on December 1, 2013, one was roughly [redacted] than the breakeven point, and the other was roughly [redacted] the $4.86/MMBtu breakeven point.[26] And the Company had ready access to market forward prices, which Dr. Fisher testified had fallen substantially in the run up the FNTP, and comprise more than 41 percent of the levelized cost of gas[27] used by the Company to assess the cost effectiveness of the SCRs. Mr. Link disputed none of these points, and explicitly acknowledged that "the Company could have created an ad hoc OFPC before December 1, 2013."[28]

In surrebuttal, Mr. Link only disputed whether an ad hoc OFPC would have shown projected gas prices below $4.86/MMBtu. The evidence is clear that if the Company had generated an interim, or ad hoc, OFPC before December 1, 2013 it would have certainly shown a continued degradation of the value of the SCR project, with an outcome at or near Mr. Link's breakeven point. Such a conclusion, drawn against all of the other risk variables, including the dramatic change in the Company's plan for the Bridger mine, and the opportunity to defer the SCRs or retire at a later date, would have sent a prudent Company back to the drawing table. Instead, the Company, pressured by its self-selected deadlines, either dismissed each as

[22] PAC/2300 at Link/23:5-9.
[23] PAC/3800 at Link/7:4-5.
[24] *Id,* at Link/25:3-8.
[25] *Id.* at Link/6:3
[26] PAC/2300 at Link/25.
[27] Sierra Club/400 Fisher/6:2-4.
[28] PAC/3800 at Link/6:13-14.

insignificant, or failed to consider them at all. Mr. Link's narrow focus on a single, unreliable variable—a breakeven gas price—as his sole mechanism of determining if the project should go forward or not was inappropriate to both the scale of the investment, and failed to consider the other factors which disrupted the economics of the project.

PacifiCorp knew that the economics of the SCR decision had degraded rapidly from its initial application for CPCNs from the Wyoming and Utah commissions. What the Company previously perceived as a clear economic choice was undermined by, amongst other factors, a lower cost for alternatives; yet, PacifiCorp did not go back to examine its modeling or core assumptions. As Ms. Soldavini testified on behalf of Staff, "[g]iven that natural gas prices fell significantly between May and December . . . a reasonable Company would have . . . rerun its [System Optimizer] model as economics began to change."[29] PacifiCorp did not do so, apparently because the Company "had effectively already bet on the SCR being deemed prudent."[30]

C. PacifiCorp Failed to Reassess Costs after a Major Disruption to the Mining Plan for Bridger Mine

The SCR project had additional problems beyond the rapidly falling gas prices. PacifiCorp also did not factor in significant changes at the Bridger mine; specifically, changes to the Company's mining plan, made in October 2013, which devalued the economics of the SCR project even further.

The Jim Bridger coal plant is one of the few remaining plants served by a utility-owned coal mine, the Bridger coal mine. Because PacifiCorp customers absorb the full cost of the mine, and the Company claims that the mine is inextricably linked to the plant, the Company's election to continue burning coal at Jim Bridger impacts costs incurred at the Bridger mine. As detailed

[29] Staff/2300 at Soldavini/28:5-8
[30] *Id.*

below, before moving forward with the SCR project in August 2012, PacifiCorp evaluated two different futures for the Bridger mine: one in which the mine fuels all four Jim Bridger units (the "four unit scenario") and another in which units 3 and 4 are converted to gas and the mine only fuels two Jim Bridger units (the "two unit scenario"). Each scenario was premised on key assumptions about the disposition of the Bridger mine's surface and underground operations. In August 2012, when PacifiCorp decided to move forward with the four-unit/SCR mine plan, the Company assumed that both the surface and underground Bridger mines would continue supplying coal until 2037 if all four units continued operating. Critically, the Company assumed that if only two units continued on coal, the surface mine would close right away, imposing accelerated remediation costs on ratepayers. But just six months later, in the spring of 2013, PacifiCorp became aware that this mining plan would no longer be viable, as drilling samples showed that the underground mine had poor coal quality and would not be a cost-effective source of coal through 2037.[31] By October 2013, the Company determined that the underground mine would cease operation by 2022.[32] As a result of this dramatic change, most of Jim Bridger's coal would no longer come from Bridger mine, and the Company's assumption about an expedient surface closure if the SCRs were not pursued was obviated. Despite this fundamental change to the Bridger mining plan, PacifiCorp took no action to evaluate how the change could impact the economics of the SCR project overall.

In order to appreciate the magnitude of PacifiCorp's error, it is necessary to understand the basic assumptions made in the four-unit/SCR and two-unit/No-SCR scenarios and how those assumptions were proven incorrect in the spring of 2013.

[31] Sierra Club/110.
[32] Sierra Club/102, PAC Response to Sierra Club Data Request 1.8(b).

1. PacifiCorp's Original SCR Analysis: the Four-Unit/SCR and Two-Unit/No-SCR Scenarios

In order to assess the costs of the Bridger SCRs, PacifiCorp developed two fuel forecasts. The first of these scenarios assessed how coal would be procured if all four Jim Bridger units were to run until 2037 burning coal (with SCRs installed on units 3 and 4)—the "four-unit scenario." The second scenario assessed the cost of coal if only two units burned coal through 2037 and units 3 and 4 were converted to gas–the "two unit scenario."

Under the four-unit scenario, PacifiCorp assumed that it would continue operating both the surface and underground mines through 2037. In order to fund eventual closure and remediation of the mines in 2037, the Company assumed that it would need to contribute approximately [redacted] per year to a remediation fund,[33] also known as the Company's so-called "sinking fund."

Under the two unit scenario, PacifiCorp assumed that it would close the surface mine in 2017, relying instead on the [redacted] underground mine for the remainder of the plant's life.

The Company's two-unit scenario also assumed that closing the surface mine in 2017 would accelerate the mine reclamation costs for that mine. Rather than contributing approximately [redacted] per year through 2037 towards future reclamation costs,[34] PacifiCorp would need to contribute [redacted] per year through 2018.[35] Holding all else equal, the ratepayers would pay an extra $28.3 million (in present value 2014 dollars) to expedite the remediation of the Bridger surface mine under the Company's original two-unit scenario,[36] a cost the Company attributed to a decision to convert Bridger units 3 and 4 to gas, rather than operate

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[33] PAC/706.
[34] *Id.*
[35] *Id.*
[36] Sierra Club/100 at Fisher/43:12-15.

on coal. In other words, the Company's assessment of the value of retrofitting Bridger with SCR was bolstered by the assumption that not doing so would cost an extra $28.3 million in accelerated mine clean-up costs.

When the Company's mine plan changed in mid-2013, discussed below, this differential should have been re-assessed. In fact, the entire cost of fueling Bridger should have been re-assessed. Instead, the Company did nothing, insisting that "nothing in the October 2013 mine plan raised concerns,"[37] and that the change in mine plan was "minor."[38]

As noted above, the initial mine assumptions–all of which were later proven incorrect–were presented to the Utah and Wyoming Commissions, which each provided PacifiCorp with pre-approval to move forward with the four-unit/SCR scenario.

2. Major Changes to the Bridger Mine Plan Undermined PacifiCorp's Original SCR Assessment, Devaluing the SCR Project

In March/April of 2013, the existing Bridger mine plan—and key assumptions made for the two-unit and four-unit scenarios discussed above—was thrown into disarray. The Bridger Coal Company had just conducted drilling showing that the next segments of the underground mine had excessive ash content,[39] meaning that the expected expansion of the underground mine would significantly increase costs. As a result of this mid-2013 drilling, PacifiCorp made the prompt decision to cease the expansion of the underground mine, and elected to close the underground mine by 2022. The discovery also had other impacts, increasing PacifiCorp's rate request before the Utah Public Service Commission in January 2014. In that rate case, PacifiCorp provided new costs resulting from the drilling discovery, and based on a mine plan developed in October 2013–two months before the December 1, 2013 FNTP for the SCRs.

[37] PAC/2600 at Ralston/12:3.
[38] *Id*, at Ralston/10:14.
[39] Sierra Club/110; PAC/2600 at Ralston/13:1-6.

The October 2013 four-unit mine plan revealed that the Company had substantially altered its mine plan from just six months previously. Rather than assuming that both the surface and underground mines would be utilized through 2037,[40] the October 2013 plan called for the underground mine to cease operations by 2022—*14 years ahead of schedule*—with only the surface mine operating through 2037.[41] While the Company develops mine plans on an annual basis, this particular change was dramatic and lasting: the underground mine is still currently scheduled to close by 2022 and perhaps as early as 2021.[42]

The change in mining plans in October 2013 was monumental, in at least three significant ways. First, as noted above, the surface mine is [redacted]. As a result, a four-unit scenario, relying primarily on the surface mine, would result in significantly higher all-in fuel costs, decreasing the benefit of retrofitting Jim Bridger with SCRs. While PacifiCorp failed to calculate the exact cost increases before issuing the FNTP in December 2013, the Company has since admitted that coal costs from the surface mine greatly increased costs. For instance, in a 2016 Washington Utilities and Transportation Commission proceeding, Mr. Ralston testified that the new mine plan increased the cost of coal received at Bridger by [redacted][43] (present value, 2014-2030, 2014 dollars), subsequently devaluing the SCR decision by $31 million.[44] Importantly, the Company did not conduct this assessment until after it had already committed to the SCR project and, further, the assessment was only done to rebut Sierra Club's testimony. Mr. Ralston now asserts that had the Company calculated coal

[40] PAC/2600 at Ralston/7:14-16, 19-20 ("The January 2013 long-term fueling plan for all four units included a BCC mine plan finalized in January 2013, with the surface and underground mines operating together through 2037 . . . The January 2013 long-term fueling plan costs were the basis for the SCR economic analysis performed during 2013.")
[41] Sierra Club/102, PacifiCorp Response to Sierra Club Data request 1.8.
[42] Sierra Club/113, Andrew Graham, *Life beneath the earth in Wyo's only underground coal mine*, WyoFile (Sept. 3 2019),
available at https://www.wyofile.com/life-beneath-the-earth-in-wyos-only-underground-coal-mine/).
[43] Sierra Club/401.
[44] Sierra Club/108, UTC Ralston Rebuttal Testimony at Fisher/10; Sierra Club/400 at Fisher/14:7.

cost impacts between October and December 2013, its calculation would have shown a $16.7 million reduction in the SCR value (present value, 2014-2023, 2014 dollars).[45] Not only were neither of these costs calculated before the Company issued the FNTP on December 1, 2013, but Mr. Ralston's newest calculation only accounts for costs through 2023, thereby largely ignoring cost impacts associated with closure of the underground mine in 2022.

Second, the loss of the underground mine meant that nearly two-thirds of the coal supply for Jim Bridger would come from third-party mines, which PacifiCorp [redacted] from the Bridger mine.[46] From 2008-2013, Bridger has received about two-thirds of its coal from the Bridger mine, the majority of which is extracted from the underground mine.[47] The closure of the underground mine in 2022 will require PacifiCorp to obtain the bulk of the coal consumed at Jim Bridger from a third-party provider. Both in January 2013 and continuing through October 2013, PacifiCorp projected [redacted].[48] But PacifiCorp did not develop a long-term assessment of third-party fuel prices for Jim Bridger in October 2013. PacifiCorp has testified that the October 2013 mine plan was both the best source of information it had available contemporaneous to the SCR decision,[49] and that it did not change the fuel supply plan from third-party provider, Black Butte.[50] But PacifiCorp also testified that the October 2013 "mine plan is only a subset of a fueling plan and does not include third-party coal costs,"[51] and acknowledged that it projected that third-party coal costs would be

[45] PAC/2600 at Ralston/11:3-7.
[46] PAC/2603.
[47] Sierra Club/100 at Fisher/32:1-33:2.
[48] PAC/2300.
[49] PAC/2600 at Ralston/8:14-22.
[50] *Id* at Ralston/8:22.
[51] *Id.* at Ralston/3:15-16.

higher than the costs received from its own mine.[52] In October 2013, the Company did not try to assess how a shift to third-party coal would impact costs at Jim Bridger, or the cost effectiveness of the SCR projects.

Third, closing the underground mine and relying on the surface mine dramatically changed the clean-up calculus for the surface mine. With the continued use of the surface mine, the Company would no longer have to accelerate the closure of that mine, avoiding the acceleration of clean up or reclamation costs. As a result, that cost was substantially reduced, or eliminated, when the Company decided that the surface mine would have to continue operating so that the underground mine could be shuttered. As Dr. Fisher testified, the avoidance of $28.3 million in accelerated remediation costs suddenly increased the advantage of converting Bridger 3 and 4 to gas under the two-unit/no SCR scenario by that amount.

3. PacifiCorp Failed to Evaluate this Enormous Shift in the Mining Plan in October 2013 or at any Point Before Issuing the FNTP on December 1, 2013

Despite the fundamental change to the Company's mining plan, PacifiCorp failed to do *any* analysis on how the new mining plan impacted the SCR project between October 2013, when it issued the new mining plan, and December 1, when it issued the FNTP. Rather, PacifiCorp has maintained that the new mining plan had only minimal impacts upon the SCR analysis, because the "decreased capital costs in the underground mine . . . approximately offset the increase in operating costs for the surface mine."[53] PacifiCorp's position is both unsupported and incorrect. The Company's revised mining plan had a substantial impact on the cost of coal obtained at Jim Bridger, and a substantial detrimental effect on the cost of the SCRs. Moreover, the Company's post-hoc assessments fail to account for the reduced near-term remediation costs

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[52] *Id.* at Ralston/13:7.
[53] *Id.* at Ralston/9:5-7; *See also id.* at Ralston/7:9-11.

for the two-unit scenario under the October 2013 mining plan. And while PacifiCorp was well aware that the election to close the underground mine would result in a shift to third-party coal, it failed to create a comprehensive fueling projection in light of the new mine plan, and failed to assess long-term implications of a shift to third-party coal. Finally, PacifiCorp has consistently failed to conduct a robust two-unit scenario analysis accounting for both increased coal costs and reduced remediation costs.

As Dr. Fisher demonstrated in his opening testimony, the new mining plan increased coal costs and decreased remediation costs—collectively devaluing the SCR decision by approximately $59.3 million. This reduction is significant both in its own right, and when appropriately considered in conjunction with reduced gas prices, which had degraded the value of the SCRs to only $36.7 million, as PacifiCorp acknowledges.

PacifiCorp's claim that the new mining plan had only minimal impacts on the SCR analysis is incorrect. Dr. Fisher testified that PacifiCorp's own assessment showed that the new mining plan raised the cost of coal provided to Jim Bridger by [redacted] on a present value basis through 2030.[54] PacifiCorp admits that over just the shorter period to 2023, the October 2013 mine plan raised the cost of coal by more than [redacted] on a present value basis.[55] PacifiCorp acknowledged that *according to its own analysis*, increased coal costs resulted in a $31 million reduction in SCR benefits, when comparing side by side the Company's January 2013 and November 2014 long-term fueling plans.[56] The Company claims that the $31 million adjustment to mine costs, provided by PacifiCorp and employed by Sierra Club, cannot be relied upon because it is based on a fueling plan that was only developed after the FNTP.[57] And yet the

[54] Sierra Club/400 at Fisher/14:7.
[55] PAC/2603.
[56] PAC/4100 at Ralston/4:4-7.
[57] PAC/2600 at Ralston/4:3-5.

Company itself relied on this value when defending its decision to install the SCRs.[58] Moreover, PacifiCorp ignores the fact that the prudence standard is not simply what the Company knew at the time of its decision but what it *should have known* in December 2013. Nothing stopped PacifiCorp from preparing a long-term fueling plan between October and December 2013, prior to signing the FNTP. Willful indifference is not a reasonable basis to support recovery.

In place of the $31 million cost increase, Mr. Ralston now claims that increased coal costs only negatively impacted the SCR decision by $16.7 million, and he repeatedly stressed that this figure is not significant enough to have caused the Company any concern.[59] However, Mr. Ralston is clear that his calculation is based on comparison between the January 2013 long-term fueling plan and the *10-year* October 2013 mining plan, *i.e.,* a plan that only extends through 2023: one year after the underground mine is scheduled to close[60] and far shorter than the expected life of Jim Bridger. As a result, Mr. Ralston's calculation largely ignores the very mining plan change that results in increased costs: the closure of the underground mine. [redacted][61] yet, these costs are not captured by Mr. Ralston's $16.7 million differential.

The Company claims that no assessment other than the October 2013 mine plan existed that could have demonstrated the impact of the changed mine plan on the SCR decision. But the Company admits that "a mine plan is only a subset of a fueling plan"[62] and "[b]etween January 2013 and November 2014, the Company did not prepare a new long-term fueling plan."[63] It was

[58] Sierra Club/108 at Fisher/10:15 (line numbering is absent).
[59] PAC/2600 at Ralston/10:17-19; PAC/4100 at Ralston/8:15-19.
[60] PAC/4100 at Ralston/6:8-12; 7:18-8:1.
[61] Confidential Workpapers to the Reply Testimony of Dana Ralston on Behalf of PacifiCorp PacifCorp "CONF Exhibit_PAC_2603_CONF and WPs" at tab "October 2013 Mine Plan", lines 34-35.
[62] PAC/2600 at Ralston/3:15-16.
[63] PAC/2600 at Ralston/7:9-10.

PacifiCorp's responsibility, as a utility bound to act prudently and in the best interests of it ratepayers, to timely assess how the October 2013 mine plan would impact the value proposition of the SCRs by doing a proper assessment. The Company failed to produce such a timely assessment, and has failed to demonstrate that a fueling plan, properly prepared prior to the FNTP, could have shown anything other than a substantial decrease in the value of the SCRs. As staff witness Soldavini testified, "a reasonable utility would have sought to quantify the effects of this change on an expenditure as significant as the Jim Bridger SCRs."[64]

Next, in addition to the $31 million loss to the SCR project, PacifiCorp just eliminated the accelerated remediation costs for the surface mine under a two-unit scenario in the October 2013 mine plan, thereby reducing costs of the two-unit scenario by $28.3 million. Mr. Ralston acknowledged that "Sierra Club is correct that an updated two unit/no-SCR scenario based on the October 2013 mine plan would not include accelerated reclamation costs for the surface mine"[65] and that Sierra Club did not "double count" remediation costs as Mr. Ralston previously claimed in his reply testimony. However, Mr. Ralston still fails to account for this change in remediation costs.

Mr. Ralston incorrectly maintains that his $16.7 million differential calculation accounted for the $28.3 million by removing it from the two-unit analysis under the October 2013 mine plan.[66] But Mr. Ralston removed no such costs from the two-unit scenario: "the $16.7 million calculation is based on (1) calculating the overall coal cost changes between the January 2013 long-term fuel plan and the October 2013 mine plan, which amounts to a 2.8 percent overall increase; and (2) applying that percentage increase to both the four-unit/SCR scenario and the

[64] Staff/2300 at Soldavini/36:9-11.
[65] PAC/4100 at Ralston/9:5-7.
[66] *Id.* at Ralston/8:11-14.

two-unit/no SCR scenario."[67] By Mr. Ralston's own logic, the Company did not adjust any underlying costs associated with the two-unit/no SCR scenario. Instead, he simply inflated the historic cost of the two-unit scenario—including the costs of accelerated remediation—by 2.8 percent, a fact confirmed by Confidential Exhibit PAC/2603, wherein Mr. Ralston shows that he [redacted][68] In doing so, Mr. Ralston maintains the expectation that if two units of Jim Bridger were to cease coal operations, the Company would still need to accelerate surface remediation, an assumption clearly obviated by the October 2013 mine plan.

Alternatively, Mr. Ralston thinks the Commission should discount or ignore this $28.3 million cost because Sierra Club "does not account for the $51.5 million reduction in capital spend from the January 2013 long-term fueling plan to the October 2013 mine plan."[69] This novel, unsupported, and incorrect assertion is an example of the Company's myriad attempts to muddy the record. Dr. Fisher clearly accounted for changes in the capital requirements of the mine when evaluating Mr. Ralston's own post-hoc assessment of the change in coal costs. Indeed, Dr. Fisher's adjustment of $31 million is pulled directly from Mr. Ralston's own testimony in a prior rate case,[70] and in which he explicitly adjusted for mine capital expenditures.[71] In that testimony, Mr. Ralston stated that "[t]he Company has properly adjusted Sierra Club's costs to include the capital differential . . . [t]his results in an overall increase of only $31 million . . . "[72] Mr. Ralston's attempt to disparage his own prior assessment is a red herring. Dr. Fisher clearly incorporated changes in the mine capital into his assessment. In stark

[67] *Id.* at Ralston/6:8-12.
[68] *See* Confidential Exhibit PAC/2603 [redacted].
[69] PAC/4100 at Ralston/9:8-10.
[70] Sierra Club/108 at Fisher/15.
[71] *Id.* at Fisher/14:19-15:1.
[72] *Id.*

contrast, Mr. Ralston failed to properly assess the change in coal remediation costs in calculating this $16.7 million differential.

Mr. Ralston's $16.7 million differential further does not account for increased third-party coal supply for the Jim Bridger plant, even though PacifiCorp was clearly aware that the changed mining plan would result in a substantial shift to third party coal after the closure of the underground mine in 2022. This shift is shown in the [redacted], an assessment which is attenuated at 2023. The Company admits that it continued to project that external third-party coal would be higher cost than coal from its own mine,[73] a fact supported by PAC/2603, showing [redacted]. This large-scale shift from Bridger coal to more expensive third party coal was omitted from the Company's downward revision in the coal adjustment, and further refutes the Company's assertion that there were no material changes imposed by the October 2013 mine plan that would have warranted an updated fueling plan.

Finally, for all the reasons above—increased coal costs at the Bridger mine, elimination of accelerated remediation costs for the surface mine, and increased reliance on third-party coal supply—the Company should have been aware that its October 2013 mine plan would have a substantial impact on the alternative two-unit scenario. Mr. Ralston admitted that the Company did not update its two-unit scenario in October 2013,[74] offering only as a defense that "nothing in the October 2013 mine plan raised concerns that the January 2013 long-term fueling plan overall costs had significantly changed," and that "updating the two-unit scenario was unnecessary."[75] Even in Mr. Ralston's post hoc analysis, the best that he can offer in lieu of analytical rigor is to

[73] PAC/2600 at Ralston/13:6-8.
[74] *Id.* at Ralston/12:1-2.
[75] *Id.* at Ralston/12:3-7.

apply a pro-rata increase to the cost of coal incurred at two-units.[76] In doing so, Mr. Ralston failed to account for the reduced surface mine reclamation costs and the reduced need for third party coal, in the event that only two units would continue to be powered with coal. The Company's failure to prepare a rigorous two-unit scenario in light of the October 2013 plan blinded it to the impact of that plan, and hobbles this Commission's ability to properly assess the impact of the change. As Staff witness Soldavini testified, "the Company did not properly assess the impact that its October 2013 mining plan would have on the value of the Bridger SCR decision."[77]

D. PacifiCorp's SCR Construction Contract Allowed it Time to Consider Alternatives

Prior to issuing the full notice to proceed, the Company had the option under its EPC contract [redacted].[78] In fact, the Company had already determined that a two-month delay would have increased costs by approximately [redacted].[79] Waiting those two months would have been enough time for EPA to issue its final BART determination for Wyoming and still meet the expected compliance deadline of 2015, albeit with somewhat higher costs *if* the project economics were strong. In the alternative, had the Company delayed issuing the full notice to proceed for two months and then terminated the contract for the SCRs, it would have been liable for at most [redacted].[80] Finally, even if the Company had issued the full notice to proceed, but then terminated the contract by January 31, 2014, it would have been liable for a maximum of [redacted].[81] In short, the Company had the ability to buy itself time, if it had wanted to do so. The cost for this time would have been

[76] *Id.* at Ralston/11:3-7.
[77] Staff/2300 at Soldavini/35:16-18.
[78] Sierra Club/118 at Fisher/3.
[79] *Id.* at Fisher 4, ¶ 8.
[80] *Id.* at Fisher/5.
[81] *Id.* at Fisher/5.

approximately [redacted] of the total project costs.[82] This is a small price for an opportunity that could have avoided a [redacted] capital expense altogether. The benefit is amplified when considering that the SCRs could also have been avoided for units 1 and 2, which as it stands now are required in 2021 and 2022.

E. PacifiCorp failed to Adequately Assess Alternative Options for Regional Haze Compliance

Mr. Owen's rebuttal testimony was correct that EPA may not make a BART determination that directly requires a source to retire a coal unit. However, EPA repeatedly demonstrated a willingness to consider alternative compliance scenarios that were "Better than BART." If a source, like a coal plant, proposed a firm date to retire or convert a coal unit to burn gas, then EPA would approve a plan for the unit to operate uncontrolled or with less costly controls for a period of time, as long as the overall benefits to visibility meet or exceed that which would have been required under a BART determination. The source would then choose its preferred compliance path by either installing the controls and meeting the emission limits required under the BART determination, or by committing to a "Better than BART" alternative. The Commission is by now familiar with the Boardman solution nearly a decade ago when PGE invoked this option. The Company also reached a similar deal concerning Naughton 3.

PacifiCorp itself acknowledged that a "Better than BART" alternative was a possibility for Jim Bridger 3 and 4. In an April 24, 2013 memo discussing the SCRs, PacifiCorp alluded to further IRP planning to look at precisely this scenario:

[redacted]

[82] Assuming a total project cost of [redacted].

[redacted][83]

Despite acknowledging that alternatives were readily available, there is no evidence that the Company ever followed up on evaluating this scenario in the fall of 2013 or by January 2014 when the EPA's final rule came out. The Company's failure to consider this option in the face of falling gas prices and increasing coal costs is inexplicable.

F. Continued Operations at Jim Bridger Have Imposed Substantial and Continuing Harm on PacifiCorp's Ratepayers

PacifiCorp's single-minded focus on installing SCRs at Jim Bridger was fundamentally flawed from its earliest stages. As discussed above, Sierra Club will prove at hearing that PacifiCorp artificially constructed a compliance deadline in order to increase its base rate, and after having made that decision, buried its head in the sand at every turn. Neither falling gas prices, dramatically altered mining plans, availability of contract termination provisions, nor alternative compliance options signaled to the Company the need to slow down and reassess before spending hundreds of millions of dollars of ratepayer funds. As Dr. Fisher calculated in his opening testimony, using the Company's own "breakeven" assessment, adjusting for coal and SCR costs, retiring Jim Bridger 3 and 4 in 2015 and 2016 would have benefited ratepayers to the tune of $353 million.[84] This figure is supported by the Company's own assessment, presented in its 2019 IRP, which showed that retirement of the units, even accepting the SCRs as a sunk cost, would provide a ratepayer benefit of $141 million.[85]

[83] Exhibit CAT-21C to the Rebuttal Testimony of Chat Teply in UE-152253 (Wash. U.T.C) (provided as Confidential Cross Examination Exhibit Sierra Club700).
[84] Sierra Club/100 at Fisher/62:8-11.
[85] *Id.* at Fisher/62:15-17.

These imprudent business practices will now, predictably, result in real harm to Oregon ratepayers without Commission intervention. Some of the estimated harm are the costs already incurred as a result of the Company's installation of the SCRs. Still, more harm has been, and will continue to be, incurred should PacifiCorp continue operating Jim Bridger 3 and 4 through 2037 with the SCRs in place. When a utility acts imprudently, this Commission has found that "a disallowance should equal the amount of the unreasonable investment."[86] Sierra Club will show that, directly as a result of PacifiCorp's imprudent behavior, the Commission should disallow the full costs of the SCRs.

G. PacifiCorp's Election to Allow Environmental Retrofits at Hayden was Inconsistent with its Own Assessments and Therefore Imprudent

While PacifiCorp was actively pushing through uneconomic and imprudent SCRs at Jim Bridger under the guise of legal obligation, the Company passively allowed Hayden's majority owner and operator, Public Service Company of Colorado ("PSCo"), to do the same at Hayden. Despite learning on November 18, 2012—shortly before PSCo signed the construction contract—that the SCR project would result in ratepayer losses anywhere from [redacted] to [redacted] for Hayden unit 1 alone, PacifiCorp took no action to oppose the project and, in fact, [redacted]. In an internal memo, PacifiCorp justified this posture for two reasons: [redacted].[87] Sierra Club will show that PacifiCorp was wrong on both fronts.

[86] Order No. 12-493 at 31.
[87] Sierra Club/123.

[redacted]

Armed with this information, PacifiCorp could have challenged the SCR project under the Hayden participation agreement's arbitration provision, but the Company did not do so. Rather, PacifiCorp incorrectly concluded that because the project was supposedly legally required by the Colorado Clean Air Clean Jobs Act and/or EPA's Regional Haze Rule, the Company did not have a valid basis to challenge the project under the participation agreement.

As a threshold matter, when PacifiCorp [redacted], in November 2012, there was no legally binding obligation to install the SCRs. In April 2010, Colorado passed the Clean Air Clean Jobs Act ("CACJA"), which required utilities within the state to reduce emissions across generation fleets, through a combination of environmental retrofits and retirements. The CACJA did not require any specific pollution controls at specific units but directed PSCo and other utilities to submit plans to the Colorado Public Utilities Commission ("PUC") proposing emission reductions. In August 2010, PSCo submitted a plan to the Colorado PUC, proposing installation of SCRs at both Hayden units 1 and 2. The Colorado PUC approved

[88] Sierra Club/100 at Fisher/77:2-78:2.
[89] Sierra Club 100 at Fisher/79:19-80:1-2.

PSCo's emissions reduction plan, including the Hayden SCR Project, in December 2010. While Mr. Ralston asserts that PSCo was bound by the CACJA to install the SCRs,[90] the Colorado PUC approval did not establish or mandate an enforceable deadline to install the SCRs but merely guaranteed cost recovery for PSCo—but not minority owners such as PacifiCorp—should the utility install the SCRs.

Approximately one year later, in November 2011, PSCo applied for a CPCN in Colorado, which the Colorado PUC approved in July 2012. Once again, the CPCN did not impose any enforceable requirement that PSCo or its co-owners move forward with installing SCRs at Hayden; rather, the CPCN merely provided PSCo approval to do so.

Not until December 31, 2012—approximately one month after PacifiCorp voted in favor of the SCRs—did the EPA approve Colorado's Regional Haze State Implementation Plan, which included emission reduction requirements at Hayden equivalent to reductions possible through SCR installation. The EPA's approval was not effective until January 30, 2013, and included a five-year installation period. As a result, SCR construction was not mandated by law until January 30, 2018—over six years after PacifiCorp committed to doing so.

Nevertheless, PacifiCorp cursorily concluded that the SCRs were legally mandated and that because the Hayden participation agreement requires that the units be operated in compliance with applicable law, the Company had no valid basis to contest the SCRs pursuant to the agreement's arbitration provision. Under PacifiCorp's interpretation, the participation agreement only allowed for arbitration in the event that a participant violated an explicit provision, but not for disagreements amongst the parties pertaining to whether to invest hundreds of millions of ratepayer dollars into a particular project. PacifiCorp's view of the issues subject to arbitration was and is unduly narrow. As PacifiCorp acknowledged, the participation

[90] PAC/2600 at Ralston/33:16-22.

agreement required unanimous consent to invest in a capital project, as the SCR project undisputedly qualified.[91] [redacted][92] Accordingly, arbitration was not limited to whether a participant violated an explicit agreement provision, but also [redacted] Because PacifiCorp knew or should have known that the SCR project would harm its customers by unnecessarily costing millions of dollars, PacifiCorp had an obligation to oppose their installation by first voting against their installation and second, and if necessary, pursuing arbitration.

IV. Oregon's Exit Orders Should be Accelerated to No Later than December 31, 2025

PacifiCorp's 2020 Multi-State Protocol ("MSP") provided suggested exit dates for the Company's coal units, ranging from 2023 and 2029. Although the Commission adopted the MSP in January 2020, the Commission made clear that it would "require an evidentiary record that makes a strong case for the exit dates [the Commission] ultimately adopt[s]."[93] Additionally, the terms of the MSP permitted signatories, including Sierra Club, to "address changed or unforeseen circumstances."[94]

Dr. Hausman presented a plethora of evidence for why the Commission should adopt exit orders no later than December 31, 2025 for all coal units, particularly in light of two significant changed and unforeseen circumstances: Governor Brown's Executive Order ("EO") 20-04 and the COVID-19 pandemic. As Dr. Hausman testified, EO 20-04 cited the urgent risk posed by

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[91] *Id.* at Ralston/34:3-4.
[92] PAC/2608 [redacted]
[93] *In the Matter of PacifiCorp, dba Pacific Power, Request to Initiate an Investigation of Multi-Jurisdictional Issues and Approve an Inter-Jurisdictional Cost Allocation Protocol*, Docket No. UM 1050, Order No. 20-024 at 7 (Jan. 23, 2020).
[94] 94Stipulating Parties/100, Stipulating Parties' Joint Testimony of Etta Lockey, Steve Storm, Bob Jenks, Bradley G. Mullins, and Ezra Hausman, Docket UM 1050 at Lockey, Storm, Jenks, Mullins, Hausman/7:12-15 (Dec. 2019).

climate change to public health as well as "Oregon's economic vitality, natural resources, and environment."[95] EO 20-04 directs all state agencies, including this Commission, to "exercise any and **all authority and discretion vested in them by law to help facilitate Oregon's achievement of [its greenhouse gas] emission reduction goals**."[96] In addition, the COVID-19 pandemic has fundamentally changed economic and market circumstances by depressing current and projected electricity demand and decreasing wholesale energy market prices, thereby affecting both electricity and gas forward prices. As Dr. Hausman showed, coal-fired units are now far less economic to maintain and operate than in a pre-COVID-19 world.

In light of these changes, Dr. Hausman recommended that the Commission accelerate exit orders listed in the MSP to no later than 2025, regardless of the units' depreciable life. In the alternative, should the Commission decline to issue exit orders in this proceeding, Dr. Hausman recommended that the Commission direct PacifiCorp to prepare an analysis in the Company's 2021 IRP, evaluating whether retaining its coal-fired units beyond December 31, 2025 is in Oregon's interest. This analysis should specifically include current load, electricity price, and gas price expectations; updated renewable and storage resource costs; and incorporate the social cost of carbon.[97] In surrebuttal testimony, Mr. Link committed the Company to just such an analysis in the 2021 IRP. Specifically, Mr. Link testified that "[t]he Company's 2021 IRP, which is currently in development, will address in a holistic and comprehensive manner COVID-19 and recent political and regulatory changes since the 2019 IRP . . . [t]he 2021 IRP will therefore provide the analysis Dr. Hausman recommends if the Commission rejects his 2025 Exit Dates—

[95] Sierra Club/300 at Hausman/6:17-7:8
[96] Sierra Club/302, EO 20-04 at Ordering ¶ 3(A) (emphasis added).
[97] Sierra Club/500 at Hausman/13:7-13.

i.e., an updated IRP analysis based on current load and market prices, along with updated resource costs and the social cost of carbon."[98]

Accordingly, should the Commission not issue exit orders for all coal units with exit dates no later than December 31, 2025, Sierra Club recommends that the Commission issue an order in this proceeding directing PacifiCorp to complete such an analysis in its upcoming 2021 IRP and specifically that such analysis include current load, electricity price, and gas price expectations; updated renewable and storage resource costs; and incorporate the social cost of carbon.

V. The Commission Should Approve an Equity Ratio of 51.86 Percent and Rate of Return of 9.2 Percent

Sierra Club recommends that the Commission adopt the Alliance for Western Energy Consumers witness Mr. Michel Gorman's proposal that the Commission approve a 51.86 percent common equity ratio with a 9.2 percent return on common equity (7.01 percent overall rate of return). A financial capital structure of approximately 51 percent equity and 48 percent debt would allow for PacifiCorp to maintain its current favorable credit rating without unnecessary expense to ratepayers. Similarly, a 9.2 percent return on equity fairly reflects the Company's current market cost of equity.

PacifiCorp enjoys favorable credit ratings from multiple agencies, including Standard & Poor ("S&P") and Moody's. In fact, PacifiCorp's credit ratings are among the strongest of all the electric and gas utilities followed by *Value Line*, and S&P has recently described PacifiCorp's credit outlook as "stable." While PacifiCorp should be enabled to maintain these credit ratings, it need not do so a greater expense to the ratepayer than absolutely necessary. Taking into account historical data, future projections, PacifiCorp's relative investment risk, and other factors, Mr.

[98] PAC/3800 at Link/28:13-15, 18-21.

Gorman testified that the Company's "stable" credit outlook can be maintained with a capital structure of 48.13 percent long-term debt, 0.01 percent preferred stock, and 51.86 percent common equity.[99] Conversely, PacifiCorp has not demonstrated that it requires a higher equity ratio in order to maintain its current credit rating. As common equity is the most expensive form of capital, the Commission should not authorize higher levels than are necessary, and the burden is on PacifiCorp to justify why increase to 53.52 percent—as requested in this proceeding—is prudent. PacifiCorp has not done so.

The Commission should similarly adopt Mr. Gorman's proposed rate of return of 9.2 percent. As Mr. Gorman explained, a fair rate of return "is based on the expectation that the utility costs reflect efficient and economical management, and the return will support its credit standing and access to capital, but the return will not be in excess of this level."[100] Utilizing a proxy comparison group, Mr. Gorman employed five separate models to estimate PacifiCorp's cost of common equity. Of the five models, a 9.2 percent rate of return is on the high end and is therefore a conservative rate of return, ensuring that PacifiCorp's rate of return "support cash flow metrics, balance sheet strength, and earnings that will support an investment grade bond rating and PacifiCorp's financial integrity."[101]

Moreover, Mr. Gorman demonstrated that PacifiCorp's recommended return on equity—10.20 percent—is excessive and a result of multiple unsubstantiated assumptions and unjustified data adjustments. As just one example, Mr. Gorman showed that in PacifiCorp's "Multi-Stage Growth DCF" model, which relies in part on long-term GDP growth, Ms. Buckley calculated the growth rate based upon "her personal forecast of long-term GDP growth, and thus [it is] not

[99] AWEC/600 at Gorman/5.
[100] AWEC/200 at Gorman/31:8-10.
[101] AWEC/200 at Gorman/61:20-22.

based on data that is likely used by investors to inform investment decisions."[102] PacifiCorp provided no substantive response to Mr. Gorman's critiques, but rather asserted that [u]tility commissions across the nation are looking beyond the results of the traditional ROE estimation models to establish returns."[103]

Mr. Gorman's analysis, which was not meaningfully disputed by PacifiCorp, establishes an appropriate capital structure and rate of return that should be adopted by the Commission.

VI. Conclusion

PacifiCorp's capital expenditures of $218.6 million at the Jim Bridger coal plant and $24.4 million at the Hayden coal plant were not necessary under existing regulations, were not economic for PacifiCorp's customers, and, as a result, were not prudently incurred. The Commission must reject PacifiCorp's request to include those expenses in its rate base. Additionally, the Commission should issue exit orders for all of PacifiCorp's coal units with dates no later than December 31, 2025. Finally, the Commission should award a rate of return of 9.2 percent with a capital structure with a 51.86 percent equity ratio.

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Respectfully submitted,

/s/ Gloria D. Smith

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[102] AWEC/200 at Gorman/68:7-11.
[103] PAC/2200 at Bulkley/5:11-13.

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