

Application No. 18-04-002
Exhibit PAC/1600
Witness: Chad A. Teply

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFICORP

REDACTED

Rebuttal Testimony of Chad A. Teply

Operational Necessity

Installation of Selective Catalytic Reduction Systems

November 2018

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ATTACHED EXHIBITS

- Exhibit No. PAC/1601—Synapse Comments on PacifiCorp’s IRP Process
- Exhibit No. PAC/1602—Testimony Excerpt of Jeremy Fisher in Oklahoma Cause No. PUD 201400229
- Confidential Exhibit No. PAC/1603—FNTP Decision Memo Dated December 5, 2013
- Exhibit No. PAC/1604—Jim Bridger Units 3 and 4 Natural Gas Conversion Schedule
- Exhibit No. PAC/1605—BART Appeal Settlement Agreement
- Confidential Exhibit No. PAC/1606—Excerpts from Hayden Participation Agreement
- Confidential Exhibit No. PAC/1607—Excerpts from Craig Participation Agreement

1 **Q. Are you the same Chad A. Teply who submitted direct testimony in this case on**
2 **behalf of PacifiCorp, d/b/a Pacific Power (PacifiCorp)?**

3 A. Yes.

4 **I. PURPOSE OF TESTIMONY**

5 **Q. What is the purpose of your rebuttal testimony?**

6 A. My rebuttal testimony responds to Sierra Club's testimony challenging the prudence
7 of the company's investments in selective catalytic reduction systems (SCRs) and
8 other necessary capital additions at the company's coal plants. Sierra Club's
9 testimony was submitted by Dr. Jeremy I. Fisher.

10 **Q. Please identify the specific issues you address and the related issues addressed by**
11 **other PacifiCorp witnesses.**

12 A. In my role at PacifiCorp, I was directly responsible for the development, evaluation,
13 and implementation of the SCRs at Jim Bridger Units 3 and 4 (Jim Bridger SCRs). I
14 also oversaw the environmental compliance investments at Naughton, Craig, and
15 Hayden that are challenged by Sierra Club. I summarize the reasons why Sierra Club
16 is wrong in claiming that the company acted imprudently with respect to any of these
17 investments.

18 In particular, I address criticism of the company's process for evaluation,
19 review, and approval of the Jim Bridger SCRs, and Sierra Club's challenges on the
20 timing and legal basis of the company's compliance requirements underlying the
21 company's investment in the Jim Bridger SCRs. I respond to Sierra Club's claim that
22 the Naughton Unit 1 flue gas desulfurization (FGD) and low-NO_x burners, which
23 have been in rates since 2012, are imprudent. Finally, I address Sierra Club's claim

1 that the company was imprudent for not suing its co-owners, as plant operators, over
2 the installation of SCRs at the Hayden and Craig plants, even though the ownership
3 agreements leave it highly unlikely that PacifiCorp could have stopped the projects
4 and avoided paying for its share of those investments.

5 Mr. Rick T. Link responds to the specific adjustments Sierra Club proposed to
6 the company's analysis supporting the Jim Bridger SCRs. These adjustments are
7 based on updates for alleged material decreases in natural gas prices and increases in
8 coal costs. Mr. Link demonstrates the significant errors in each of these adjustments
9 and shows that none of the adjustments, when properly calculated, fundamentally
10 change the company's supporting analysis. Mr. Dana M. Ralston rebuts testimony of
11 Sierra Club regarding alleged material increases in coal costs in 2013.

12 Mr. Link also responds to Sierra Club's proposal to disallow capital costs in
13 certain coal units on a going-forward basis based on allegations relating to the
14 company's resource planning process.

15 II. SUMMARY OF TESTIMONY

16 **Q. Please summarize your rebuttal testimony.**

17 A. In my rebuttal testimony, I make the following key points:

- 18 • PacifiCorp's capital investments in its coal fleet are supported by a reasonable
19 planning process and comprehensive economic analysis, designed to ensure
20 the prudence of all such investments.
- 21 • Contrary to Sierra Club's assertions, the company prudently and reasonably
22 developed, assessed, and approved the Jim Bridger SCRs through a robust,
23 multi-year process. During the multi-year review period, the company refined

1 and updated its economic analysis. The company diligently studied the costs
2 and benefits of installing the Jim Bridger SCRs for several years before
3 executing and finalizing the engineering, procurement, and construction
4 services (EPC) contract for the projects.

- 5 • The company did not ignore new information available before the company
6 released the Full Notice to Proceed (FNTP) for the Jim Bridger SCRs. In fact,
7 the company's negotiation and use of the EPC contract's Limited Notice to
8 Proceed (LNTP) provision is evidence of the company's prudence. This
9 provision allowed the company to limit outlay of costs while pursuing parallel
10 path regulatory reviews and permitting and allowed assessment of market
11 conditions and the project's economics up to the last feasible point in time,
12 December 2013, while still meeting the company's regional haze compliance
13 deadlines.

- 14 • Sierra Club attempts to support its challenge to the Jim Bridger SCRs by
15 pointing to an analysis it submitted in 2016 to the Washington Utilities and
16 Transportation Commission (Washington commission). Sierra Club has not,
17 however, submitted this analysis or any other in this case. Sierra Club's
18 Washington commission analysis was improperly based on forward price
19 curves and coal costs that post-date the company's execution of the EPC
20 contract and the FNTP. And, as Mr. Link and Mr. Ralston demonstrate, Sierra
21 Club's Washington commission analysis was incomplete and inaccurate.
22 When corrected, Sierra Club's Washington commission analysis supports the
23 company's decision to move forward with the Jim Bridger SCRs. In addition,

1 my testimony demonstrates that Sierra Club’s Washington commission
2 analysis did not take into account significant reductions in project costs that
3 increase the benefits to customers associated with the Jim Bridger SCRs. The
4 evidence in this case demonstrates that—at all points relevant to this prudence
5 review—the Jim Bridger SCRs were the most cost-effective compliance
6 option for customers.

- 7 • The emission control investments at Naughton Unit 1 were required by
8 applicable state and federal environmental regulations and have been included
9 in California rates since August 25, 2012, through Commission approval of
10 the company’s 2012 Post Test-year Adjustment Mechanism (PTAM) advice
11 letter filing.¹ Sierra Club had the opportunity to protest this advice letter filing
12 at the time and did not. The FGD system on Naughton Unit 1 is very similar
13 to that on Naughton Unit 2, and is supported by the same business case. The
14 Naughton Unit 2 FGD system has been in the company’s California rates
15 since the company’s 2011 general rate case.
- 16 • The SCR investments at Hayden Units 1 and 2 were required by applicable
17 state and federal environmental regulations. The company reasonably
18 assessed its legal position and concluded that it was highly unlikely to be
19 successful if it attempted litigation against its plant partner and operator to
20 stop the SCR investment. Based on this assessment, the company concluded
21 that a reasonable utility would not incur the cost, resource deployment, and
22 negative impacts on long-term co-owner relationships to sue an operating

¹ See PacifiCorp AL 476-E.

1 partner when lacking a sound basis for such action.

- 2 • The SCR investment at Craig Unit 2 was also required by applicable federal
3 and state environmental regulations. Similar to the SCRs at the Hayden plant,
4 according to the terms of its ownership agreement with the plant's co-owners,
5 PacifiCorp alone could not stop the installation of SCRs without successfully
6 suing its co-owners. The company reasonably assessed the low likelihood of
7 success in such a lawsuit and concluded that there was little chance it could
8 stop the SCR investment. Thus, the company concluded that a reasonable
9 utility would not unnecessarily sue its plant partners.

10 **III. POLICY RESPONSE TO SIERRA CLUB'S OVERALL**
11 **RECOMMENDATIONS**

12 **Q. Sierra Club proposes disallowing all capital costs associated with the plants over**
13 **the last five years, as well as capital costs for the 2019 test year.² How do you**
14 **respond to this recommendation?**

15 A. First, Sierra Club's overall recommendation lacks evidentiary support in the record.
16 As described by Mr. Link and Mr. Ralston, Sierra Club has not demonstrated that any
17 of the company's specific emission control investments were imprudent or that the
18 company's resource planning has any systemic flaws related to the ongoing
19 assessment of the company's coal resources.

20 Second, PacifiCorp's ongoing capital investments in its coal plants have been
21 and continue to be reasonable and prudent because they allow the resources to
22 continue to operate and provide customer benefits by, for example, lowering overall

² Direct Testimony of Jeremy Fisher, PhD on Behalf of Sierra Club at 4-5 (hereinafter Fisher Direct).

1 net power costs for PacifiCorp's customers. Contrary to Sierra Club's claims, the
2 company has not blindly invested in its coal fleet without regard to the benefits of the
3 resources. For example, during the same time period that Sierra Club claims the
4 company failed to assess the economics of its coal fleet, the company agreed to and
5 followed through with the shutdown of one coal plant (Carbon Units 1 and 2), agreed
6 to a firm end of life on another (Dave Johnston Unit 3), and negotiated the ability to
7 convert yet another to natural gas (Naughton Unit 3).

8 **Q. Does PacifiCorp have a strategy for assessing the ongoing economic viability of**
9 **its coal fleet?**

10 A. Yes. The company is committed to assessing the economic viability of its coal fleet,
11 and all other resources required to reliably and cost-effectively serve its customers,
12 through its resource planning process. As described in more detail by Mr. Link, the
13 biennial resource planning process includes robust public participation and is
14 designed to address the big picture, long-term economic questions Sierra Club poses
15 in this case. A rate case, on the other hand, is ill-suited to address such resource
16 planning concerns.

17 **Q. Sierra Club claims that the company has ignored national trends that favor**
18 **early closure of coal-fired resources.³ Do you agree?**

19 A. No. On the contrary, the company's most recent Integrated Resource Plan (IRP)
20 shows that by the end of the planning horizon, PacifiCorp assumes 3,650 MW of
21 existing coal capacity will be retired. The 2017 IRP specifically calls for the early
22 retirement or removal from coal-fueled service of Naughton Unit 3, Cholla Unit 4,

³ Fisher Direct at 6-7.

1 Craig Unit 1, and Jim Bridger Units 1 and 2 as the assessed least-cost, least-risk
2 planning outcome for those resources. In addition, the company already retired its
3 Carbon Units 1 and 2 in 2015 after assessing the economics and viability of
4 environmental compliance options for those facilities. The company does not
5 currently anticipate extending the lives of any of its existing coal units and, in
6 anticipation of the potential for additional early retirements, the company's case here
7 includes accelerated depreciation of coal units to mitigate the rate impact of early
8 closures. The company is committed to rigorous economic analysis of its existing
9 coal resources, consistent with its prior practice and consistent with the current
10 regulatory and economic environment.

11 **Q. Is it prudent to simply stop investing any capital in existing coal resources, as**
12 **Sierra Club recommends?**

13 A. No. Unless and until a particular unit is deemed uneconomic and scheduled for shut
14 down, it will continue to operate and provide customer benefits. The ongoing capital
15 investments Sierra Club opposes are required to allow that ongoing operation until the
16 unit is retired. Sierra Club's recommended blanket disallowance ignores the reality
17 of operating a coal fleet and incorrectly assumes that many of the company's coal
18 units were uneconomic years ago—despite the fact they continue to economically and
19 reliably dispatch to lower customers' net power costs.

20 Sierra Club's approach to analyzing the company's coal fleet is unreasonably
21 outcome driven. Sierra Club has made no secret of its desire to shut down coal units,
22 regardless of whether a shutdown is economic. Indeed, in this case, Sierra Club
23 recommends that the company commit today to retiring certain units by 2023, without

1 acknowledging that both economic and regulatory circumstances could change a great
2 deal between today and 2023 and without having assessed system reliability impacts
3 that could be realized with such an aggregated retirements approach. Sierra Club’s
4 objective is to shutdown coal plants, regardless of the impact to customers or the
5 company’s ability to reliably serve customer load needs. Such a position is
6 fundamentally at odds with prudent utility management.

7 **Q. Setting aside Sierra Club’s recommendation that the company commit to**
8 **shutdowns today without regard for future circumstances, is there any basis for**
9 **Sierra Club’s claim that certain units are economic to retire in 2023 based on**
10 **what is known today?**

11 A. No. As described in more detail in Mr. Link’s testimony, Sierra Club relies on flawed
12 and incomplete studies to claim that several coal units should be retired in 2023.
13 Most importantly, Sierra Club’s studies make stand-alone unit economic assumptions
14 and then recommend that multiple units be retired in parallel without having assessed
15 the aggregated system impacts of such a recommendation. Sierra Club fails to
16 produce *any evidence* that retiring multiple units in 2023 is economic.

17 **Q. Sierra Club is also critical of the company’s overall integrated resource**
18 **planning, and particularly faults the company for quoting from a June 2013**
19 **report from the Regulatory Assistance Project (RAP) stating that PacifiCorp’s**
20 **resource planning was “superior.”⁴ How do you respond?**

21 A. Sierra Club’s attempt to discredit this statement from the RAP report is unpersuasive,
22 particularly considering that, during that same time frame, Dr. Fisher himself has

⁴ Fisher Direct at 9–10.

1 referenced PacifiCorp's IRP as a model to be followed by utilities in other
2 jurisdictions.⁵ For example, in 2014, Dr. Fisher pointed to PacifiCorp's carbon
3 modeling when testifying how an Oklahoma utility should model future costs
4 associated with environmental regulation.⁶

5 **IV. RESPONSE TO SIERRA CLUB'S CHALLENGE TO JIM BRIDGER SCR**
6 **INVESTMENTS**

7 **Company Process for Review of SCR Investments**

8 **Q. Please summarize the evidence supporting the prudence of the Jim Bridger**
9 **SCRs.**

10 A. In assessing the prudence of the Jim Bridger SCRs, the Commission must review
11 whether the company made a reasonable business decision in light of the facts and
12 circumstances known or reasonably knowable to the company in May 2013, subject
13 to reassessment for major changes through December 1, 2013. Viewed objectively
14 and holistically, the evidence shows that the company acted reasonably. In fact, it
15 would have been difficult for the company to justify the prudence of any decision
16 other than installing the Jim Bridger SCRs, because the economic analysis *at all times*
17 favored this investment over other options.

18 In 2012, the company was facing fast-approaching regional haze compliance
19 deadlines for Jim Bridger Units 3 and 4. These units are critical to providing reliable
20 and affordable electric services to California customers. The analysis showed that
21 early retirement of these units was never a viable economic option. The company had
22 two regional haze compliance options: invest in the Jim Bridger SCRs, or propose

⁵ Exhibit No. PAC/1601 at 2–3 (2013 comments from Dr. Fisher in another utility's IRP points to PacifiCorp's robust scenario modeling).

⁶ Exhibit No. PAC/1602.

1 conversion of the units to natural gas.

2 Using its System Optimizer model, the company developed economic analysis
3 to compare these options under a range of scenarios using different natural gas curves
4 and carbon prices. The analysis showed that the SCRs investment was the most cost-
5 effective compliance option for customers by several hundred million dollars. Based
6 on this analysis, in August 2012, the company filed for a certificate of public
7 convenience and necessity (CPCN) in Wyoming and for voluntary SCR investment
8 pre-approval in Utah. In February 2013, the company comprehensively updated and
9 refined its SCR analysis in these cases using its September 2012 official forward
10 price curve (OFPC) and its January 2013 long-term fueling plan for the Jim Bridger
11 plant. The results again decisively favored the Jim Bridger SCRs, this time by
12 approximately \$183 million.

13 The company incorporated its updated SCR analysis from February 2013 into
14 its 2013 IRP, filed in March 2013, with minor updates that increased the benefits of
15 the Jim Bridger SCRs.

16 The company's SCR analysis was fully litigated by the Utah and Wyoming
17 commissions. In May 2013, both commissions concluded that the SCR investment
18 was the least-cost, least-risk compliance option available to the company. Sierra Club
19 participated in both cases, unsuccessfully raising many issues similar to issues it has
20 raised in this case.

21 After the Utah and Wyoming commissions approved the Jim Bridger SCRs,
22 the company conducted another review to support its decision to execute the EPC
23 contract. In late May 2013, the company's President and Chief Executive Officer

1 authorized the Jim Bridger SCRs based on this analysis, in accordance with the
2 company's governance policies.

3 To minimize the risks of the Jim Bridger SCRs for customers, the company
4 negotiated an innovative EPC contract that allowed the company to delay significant
5 investment in the Jim Bridger SCRs to the last possible date, December 1, 2013,
6 while still ensuring that the company could cost-effectively meet its compliance
7 deadlines. The EPC contract allowed the company to withdraw if material changes
8 before December 1, 2013, impacted the economics or the company's ability to
9 implement the SCR projects.

10 Before issuing the FNTP, the company reviewed all key decision factors,
11 including: (1) its most recent OFPC (dated September 2013), which remained well
12 above the SCR's break-even point; (2) 10-year budget projections that showed that
13 Jim Bridger coal costs were not projected to increase significantly; and (3) a
14 [REDACTED] cost reduction the company negotiated in the EPC contract. The
15 company also verified that none of its third-party forecast providers had projected
16 increases in carbon costs in response to President Obama's June 2013 Presidential
17 Memorandum regarding carbon emissions.

18 I personally conducted this review of the Jim Bridger SCR investment and
19 recommended issuance of the FNTP. I would not have recommended issuance of the
20 FNTP without considering all material factors and determining that the SCR
21 investment remained the best compliance choice for customers. During the same
22 timeframe, the company elected to close other coal plants or pursue conversion to
23 natural gas. In each case, the company's decision was based on the economics of the

1 compliance option for customers, not a predetermined preference or investment
2 agenda.

3 The company carefully managed the Jim Bridger SCR EPC contract and
4 ensured that the Jim Bridger Unit 3 SCR was completed on time and under budget.
5 The SCR at Jim Bridger Unit 4 was also completed on time and under budget.
6 Neither unit would currently be serving customers but for the SCR investment in
7 compliance with the Environmental Protection Agency's (EPA) approved Wyoming
8 Regional Haze State Implementation Plan.

9 **Q. Throughout this process, did the company use the models and analytical
10 approaches developed and applied in its IRP to evaluate the Jim Bridger SCRs?**

11 A. Yes. Mr. Link's direct testimony describes the sophisticated modeling the company
12 used in its economic analysis.

13 **Q. Does the company agree that December 1, 2013, is the correct time for
14 evaluating the prudence of the Jim Bridger SCRs?**

15 A. No, not in isolation. The normal timing for evaluating the prudence of utility
16 decision-making is when the project is approved to proceed and contracts are
17 executed. For the Jim Bridger SCRs, this was May 2013. In this case, however, the
18 company prudently and effectively negotiated an additional commercial structure to
19 the EPC contract that provided risk mitigation and facilitated timely decision-making
20 on a number of fronts that could have impacted the projects both positively and
21 negatively through the December 2013 timeframe. While it is relevant to consider
22 how the company managed the first stage of the EPC contract from the LNTP in May
23 2013 to the FNTP in December 2013, this consideration should not be blind to the

1 company's significant review process in May 2013, nor to the fact that the structure
2 of the EPC contract itself is evidence of the company's prudence.

3 **Q. Did the company consider additional information before providing the FNTP to**
4 **the EPC contractor in December 2013?**

5 A. Yes. As noted in my direct testimony, the company considered all key decision
6 factors, including the most recent OFPC, projected coal costs, and updated EPC costs.
7 The company's assessment of the economic merits of the Jim Bridger SCRs before
8 release of the FNTP to the EPC contractor continued to support the projects. A
9 detailed overview of other information considered by the company before releasing
10 the FNTP is provided in Confidential Exhibit No. PAC/1603, dated December 5,
11 2013.

12 **Q. Sierra Club argues that, by December 2013, the Jim Bridger SCRs had become**
13 **uneconomic as compared to natural gas conversion, so the company should not**
14 **have released the FNTP.⁷ Please respond.**

15 A. Without evidentiary support, Sierra Club paints an inaccurate and incomplete picture
16 of the relative economics of the Jim Bridger SCRs at the FNTP stage. First, as Mr.
17 Link and Mr. Ralston explain in their rebuttal testimonies, the updated forward
18 market price curves and coal cost information available to the company when
19 releasing the FNTP continued to support the SCRs as the least expensive option for
20 customers. To argue otherwise, Sierra Club relies on an aggressive position that
21 cannot withstand analytic scrutiny.

22 Second, as noted in my direct testimony, at the time the company evaluated

⁷ Fisher Direct at 26.

1 the FNTTP, the company was aware of a significant reduction in the final negotiated
2 and executed EPC contract costs, as compared to the EPC contract cost estimates
3 used in the company's base-case analyses. The EPC cost was approximately [REDACTED]
4 [REDACTED] less for PacifiCorp's share as joint owner than originally estimated. This
5 tangible adjustment supported execution of the FNTTP.

6 Third, if the company changed course in December 2013 with less than two
7 years before the initial compliance deadline at Jim Bridger Unit 3, the costs and risks
8 of natural gas conversion would have been higher than was projected in the SCR
9 analysis, which assumed normal permitting and construction timelines. I address
10 these changes below.

11 Cancelling a major environmental compliance project mid-stream is much
12 more than just a paper exercise, as Sierra Club would lead the Commission to believe.
13 Prudent management of a complex multi-year, multi-jurisdictional project like the
14 Jim Bridger SCRs included parallel path environmental agency permitting, regulatory
15 reviews, and major commercial negotiations. For these reasons, cancelling the SCRs
16 in December 2013 would have been imprudent absent an undisputable reversal of
17 project economics, new or changed environmental compliance requirements, changes
18 to legislative policies impacting the resource for all customers, or similar major
19 events. None of those things occurred.

20 To summarize, the company's analysis showed over [REDACTED] in benefits
21 as of December 1, 2013, based on September 2013 OFPC and EPC contract savings.
22 Reducing this by [REDACTED] to account for changes in coal costs based on the

1 October 2013 mine plan decreases the SCR benefits to [REDACTED].⁸ Even reducing
2 these benefits again based on the after-the-fact December OFPC, as Sierra Club
3 improperly recommends, still results in [REDACTED] in favor of the SCRs.⁹ Based on
4 [REDACTED] in PVRR(d) benefits favoring SCRs, coupled with the
5 company's additional risk and scenario analysis, a reasonable utility would not have
6 terminated the EPC contract for the SCRs and switched to natural gas conversion.

7 **Q. Please explain why the costs of natural gas conversion would have been higher**
8 **than assumed in the company's SCR analysis if the company cancelled the EPC**
9 **contract on December 1, 2013.**

10 A. The natural gas conversion costs included in the SCR analysis assumed normal
11 project permitting, review, and construction schedules, which would have begun in
12 2012 and would have resulted in in-service dates for the natural gas conversions
13 shortly after the prescribed compliance deadlines for the units and before the 2016
14 and 2017 peak capacity seasons, respectively. But if the company chose to pursue
15 natural gas conversion on December 1, 2013, as Sierra Club suggests, the permitting,
16 procurement, and construction schedules for the natural gas conversion projects
17 would have required significant compression to attempt completion of the projects
18 before the 2016 and 2017 summer peak capacity seasons, if that were possible at all.
19 Before beginning construction, the company would have needed to secure necessary

⁸ As discussed in Mr. Ralston's testimony, this [REDACTED] million figure assumes a conservative [REDACTED] overall increase in coal costs, which is a rough approximation based on the October 2013 Mine Plan and 2015 IRP analysis Sierra Club used in its analysis in front of the Washington commission.

⁹ Mr. Link's testimony describes the impact of using the December OFPC. To summarize, Sierra Club claims that the December OFPC decreased the February 2013 benefits from \$183 million to \$37 million. Fisher Direct at 26. And the February benefits were \$53 million higher than the September benefits.

1 permits and environmental agency approvals, rescind and resubmit necessary
2 regulatory filings including those affecting a CPCN from the Wyoming commission,
3 and procure and execute a new EPC contract. Based on the company's experience
4 with regional haze permit and state implementation plan amendments in the state of
5 Wyoming, this process could have conservatively taken 24 months to complete for
6 conversion of Jim Bridger Units 3 and 4. Applying this timeframe to a decision in
7 December 2013, the company would have been approved to proceed by the
8 environmental agencies by year-end 2015, leaving an impracticable six months to
9 receive regulatory approvals and implement the Jim Bridger Unit 3 project before the
10 2016 summer peak season. Such a timeline would necessarily increase the analyzed
11 costs of the gas conversion scenario, either because the project would need to be
12 expedited or because the unit would need to be shuttered for noncompliance pending
13 completion of the retrofit, or both. See Exhibit No. PAC/1604 for a representative
14 timeline of the activities required to convert Jim Bridger Units 3 and 4 to natural gas
15 under this hypothetical. As indicated on that timeline, had the company switched
16 course in December 2013, Unit 3 would be off-line from January 1, 2016, through
17 mid-year 2017, and Unit 4 would be off-line from January 1, 2017, through mid-year
18 2017. Losing Unit 3 for 18 months and losing Unit 4 for six months would cause the
19 company to incur significant replacement power costs and reduce its system
20 reliability, increasing both the costs and risks of natural gas conversion.

21 In addition, by December 2013, based on information from the competitive
22 market bids for the Naughton Unit 3 natural gas conversion EPC contract, the
23 company knew that implementation costs for that project were significantly higher—

1 on an order of magnitude of [REDACTED]—than originally anticipated. Correlating that
2 information to an assessment of natural gas conversion for Jim Bridger Units 3 and 4
3 in December 2013, the company would have understood that its original cost
4 projections for this alternative were understated. This would have negatively
5 impacted the competitiveness of the natural gas conversion alternative in the
6 company’s assessment and associated decision-making.

7 **Q. Has the company effectively and prudently managed the risks associated with**
8 **the Jim Bridger SCRs?**

9 A. Yes. As described above and in my direct testimony, the company engaged on
10 several fronts to effectively and prudently manage the risks associated with the Jim
11 Bridger SCRs. On the regulatory front, the company engaged its stakeholders and
12 regulators in rigorous reviews of the projects before committing to the major
13 expenditures that the projects entailed. In parallel to those regulatory reviews, the
14 company negotiated the LNTP concept into the EPC contract for the projects to allow
15 as much time as possible for reviews in other regulatory dockets to proceed, federal
16 action on the state of Wyoming’s regional haze compliance requirements to progress,
17 the company’s joint owner to get regulatory approval of a CPCN for its share of the
18 project, and potential scope and schedule changes that could have resulted from those
19 processes to be considered and integrated into project plans before releasing FNTP to
20 the EPC contractor. At the same time, the company committed to deliver the projects
21 within the cost structures agreed to in the regulatory proceedings in Utah and
22 Wyoming, while knowing that it would be held accountable in subsequent prudence
23 reviews of the company’s management of the projects.

1 **Project Timing and Legal Basis**

2 **Q. Does Sierra Club mischaracterize the flexibility of regional haze compliance**
3 **deadlines for the Jim Bridger SCR?**

4 A. Yes. Sierra Club asserts that the company had no legal obligation to begin planning
5 for the SCR systems until January 2014, when EPA issued its final decision.¹⁰ This
6 statement is patently untrue and unsupportable.

7 **Q Is Sierra Club aware the company was under a legally enforceable obligation to**
8 **the state of Wyoming to meet compliance deadlines despite any lack of ruling by**
9 **the EPA?**

10 A. Yes. Sierra Club's witness in this proceeding, Dr. Fisher, has also been a witness for
11 Sierra Club in several dockets where this issue was previously litigated, so he is well
12 aware that the company was under a legally enforceable obligation to complete the
13 Jim Bridger SCRs or otherwise meet the associated unit-specific emission limits on
14 Jim Bridger Units 3 and 4 if the company was going to lawfully continue to operate
15 these units, with or without an EPA ruling. These legal obligations were established
16 in the Wyoming Best Available Retrofit Technology (BART) assessment and permit,
17 the Wyoming State Implementation Plan (SIP), and the regional haze appeal
18 settlement agreement¹¹ between the state of Wyoming and the company.

19 **Q. Have Wyoming regulators confirmed that the company had a legal obligation to**
20 **install SCRs on Jim Bridger Units 3 and 4?**

21 A. Yes. Wyoming has been clear—its SCR requirement at Units 3 and 4 in 2015 and
22 2016 were independent of any action taken by EPA. In early 2013, the company

¹⁰ Fisher Direct at 20, 22.

¹¹ See Exhibit No. PAC/1605.

1 specifically sought an extension of the compliance obligation based on EPA’s delay
2 in issuing its final order.¹² Wyoming reaffirmed the company’s compliance
3 obligation and denied the extension.¹³

4 Moreover, in response to Sierra Club’s argument that the company had no
5 compliance obligation until January 2014, the Public Service Commission of
6 Wyoming (Wyoming commission) made an explicit finding that the company “ha[d]
7 a legal obligation under the BART Settlement Agreement with [Wyoming
8 Department of Environmental Quality (DEQ)] to complete the work on Jim Bridger
9 Units 3 and 4 by December 31, 2015, and December 31, 2016, respectively.”¹⁴ The
10 Wyoming commission continued: “This obligation is independent of EPA actions.”¹⁵
11 The Public Service Commission of Utah (Utah commission) and the Washington
12 commission have also both rejected Sierra Club’s argument that the company had no
13 legal obligation to act until January 2014.¹⁶

14 A reasonable utility would not have delayed action pending EPA’s approval
15 because delay would have harmed customers. The Wyoming and Utah commissions
16 made this finding explicitly, and the Washington commission found that the company
17 was prudent to execute the EPC contract in May 2013.¹⁷

¹² Exhibit No. PAC/402.

¹³ Exhibit No. PAC/403.

¹⁴ *In the Matter of the Application of Rocky Mountain Power for Approval of 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*, WPSC Docket No. 20000-418-EA-12 (Record No. 13314), Order Denying Motion for a Stay or Continuance Pending Final EPA Action, ¶ 14 (Feb. 4, 2013) (Wyoming Stay Order).

¹⁵ Wyoming Stay Order ¶ 14.

¹⁶ *Voluntary Request of Rocky Mountain Power for Approval of Resource Decision to Construct SCRs on Jim Bridger Units 3 and 4*, Docket 12-035-92, Report and Order at 9 (May 10, 2013) (“Utah Pre-Approval Order”); *Wash. Utils. and Transp. Comm’n v. PacifiCorp*, Docket No. UE-152253, Order 12 ¶¶ 96 (Sept. 1, 2016). Order 12 is included in the record here as Exhibit JIF-13.

¹⁷ Wyoming Stay Order ¶ 14; Utah Pre-Approval Order at 9; Order 12 ¶ 97.

1 Dr. Fisher's credibility on this point is undermined not only by the fact it has
2 been rejected by every commission that has heard it, but his predictions regarding
3 EPA's actions also turned out to be wrong. During the Wyoming commission CPCN
4 proceeding, in support of his claim that the company should delay action on the
5 SCRs, Dr. Fisher testified that the 2015 and 2016 compliance deadlines would
6 "certainly not materialize."¹⁸ This, of course, turned out to be wrong.

7 **Q. Is Dr. Fisher's assertion regarding timelines for the Jim Bridger SCRs also**
8 **contrary to positions that Sierra Club has taken in comments filed with the EPA**
9 **in the Wyoming regional haze docket?**

10 A. Yes. Dr. Fisher's position that the company could have deferred the start of planning
11 for the SCRs until after the EPA's final action in January 2014 is contrary to the
12 position taken previously by Sierra Club in comments filed with the EPA on the
13 Wyoming SIP regarding the Jim Bridger SCRs 2015 and 2016 compliance deadlines.
14 Sierra Club's comments state in pertinent part:

15 EPA's proposal would require installation of SCR plus low-NOx
16 burners/SOFA by 2015 at Unit 3 and 2016 at Unit 4. 77 Fed. Reg. at
17 33035. However, EPA also is seeking comment on an alternative that
18 would allow PacifiCorp to install SCR at Jim Bridger Units 3 and 4
19 within 5 years from the date of EPA's final action. *Id.* at 33053.
20 EPA's reasoning is that this alternative would allow PacifiCorp the
21 flexibility to determine the implementation schedule for BART
22 controls on all four Jim Bridger units. Because EPA's initial proposal

¹⁸ Washington Rate Case Tr. 787:7-789:11.

1 to require BART installation by 2016 best complies with the statutory
2 requirement that BART be installed and operated —as expeditiously
3 as practicable, 42 U.S.C. § 7491(b)(2)(A), we support EPA’s proposal
4 over the alternative for Jim Bridger Units 3 and 4.¹⁹

5 In other words, in the EPA docket to review the Wyoming SIP, Sierra Club
6 filed comments on August 2012 advocating that the company be held to the 2015 and
7 2016 compliance deadlines for the Jim Bridger units. Sierra Club’s position in this
8 case and in the EPA proceeding are not reconcilable—it would be impossible to meet
9 the 2015 and 2016 deadlines if PacifiCorp had waited to act until after issuance of the
10 EPA’s decision in January 2014. Sierra Club’s testimony here does not acknowledge
11 its shifting positions on this issue, which appear to be driven by competing desired
12 outcomes in related regulatory processes.

13 **Q. To be clear, has EPA approved the state of Wyoming’s Regional Haze**
14 **compliance requirements for Jim Bridger Units 3 and 4?**

15 A. Yes. EPA approved these requirements in its final Regional Haze Federal
16 Implementation Plan (FIP) for Wyoming published in the *Federal Register* on June 4,
17 2012. EPA reiterated its approval of these requirements in its updated Regional Haze
18 FIP for Wyoming published in the *Federal Register* on January 30, 2014. EPA’s
19 final approval makes these emissions reduction compliance requirements at Jim
20 Bridger Units 3 and 4 federally enforceable, in addition to being enforceable under
21 state law.

¹⁹ See comments at: <http://www.regulations.gov/#!documentDetail;D=EPA-R08-OAR-2012-0026-0056> at pages 23–24.

1 **Sierra Club’s Improper Reliance on Washington commission Order**

2 **Q. Please respond to Sierra Club’s reliance on the order from the company’s 2015**
3 **Washington rate case to support its proposed Jim Bridger SCR adjustment.**

4 A. Instead of producing evidence in this case to support its allegation that the company’s
5 economic analysis overstated the benefits of the Jim Bridger SCRs, Sierra Club points
6 to the Washington commission’s high-level summary of Sierra Club’s evidence in the
7 Washington commission order. But neither Sierra Club’s testimony here nor the
8 Washington commission order provide sufficient detail to substantiate or even explain
9 Sierra Club’s proposed adjustment in this case. Sierra Club’s approach has left the
10 company in the untenable position of trying to respond to analytical evidence that is
11 not even in this record.

12 **Q. Did the Washington commission rely on Sierra Club’s evidence in support of its**
13 **decision?**

14 A. Not according to the language of the order. The Washington commission specifically
15 gave “no weight” to evidence based on facts after December 1, 2013.²⁰ Both Sierra
16 Club’s natural gas and coal adjustment explicitly rely on post-December 1, 2013,
17 evidence, meaning that the Washington commission gave it “no weight.”²¹ The
18 Washington commission also rejected Sierra Club’s proposed disallowance because
19 Sierra Club’s analysis was “problematic” hindsight review.²² Tellingly, Sierra Club
20 does not rely on the Washington commission’s findings, and instead cites to the

²⁰ Order 12 n. 158.

²¹ Order 12 n. 116 (stating Sierra Club’s coal analysis relied on 2015 IRP data); Order 12 ¶ 80 (Sierra Club gas adjustment based on December 2013 OFPC).

²² Order 12 ¶ 111.

1 sections of the Washington commission order where that commission simply
2 describes Sierra Club’s evidence.

3 **Q. How do you respond to Sierra Club’s claim that the Washington commission**
4 **found that “PacifiCorp acted imprudently?”**²³

5 A. To be clear, the Washington commission found that PacifiCorp “failed to meet its
6 burden of demonstrating that its final decision to continue with the SCR installations
7 on Units 3 and 4 was prudent.”²⁴ It is my understanding, based on the language of the
8 Washington commission order, that finding that the company failed to meet its
9 evidentiary burden is not the same as finding that the company was imprudent.²⁵ A
10 further reading of the Washington commission order indicates that the company’s
11 failure to meet its evidentiary burden was tied largely to the lack of
12 “contemporaneous *documentation*” of the company’s decision-making.²⁶ This
13 finding appears to have been particularly important to the Washington commission
14 because certain *documentation* is required by the Washington commission’s prudence
15 standard, as that standard is described in the order.²⁷ Indeed, the Washington
16 commission noted that my explanation of the continuous re-assessment of the SCR
17 economics before issuing the FNPT was “helpful,” but it was not sufficient to meet
18 the *documentation* element of prudence standard because there were insufficient
19 written materials describing what had occurred.²⁸ Notably, neither the Utah nor the

²³ Fisher Direct at 32.

²⁴ Order 12 ¶ 108.

²⁵ See, e.g., Order 12 ¶ 110 (distinguishing between “cases of imprudence or failure to meet the prudence burden”).

²⁶ See, e.g., Order 12 ¶¶ 98, 100, 102, 103.

²⁷ Order 12 ¶ 107.

²⁸ Order 12 ¶ 107.

1 Wyoming commissions imposed this heightened requirement for documentation,
2 relying instead on the company’s testimony regarding its review process.

3 **Q. Did the Washington commission disallow recovery of the SCRs in Washington**
4 **rates?**

5 A. No. The Washington commission found that “it is reasonable to allow Pacific Power
6 recovery of the SCR capital expenditures.”²⁹ The Washington commission found that
7 PacifiCorp faced a “regulatory obligation with both the Wyoming DEQ and federal
8 EPA to reduce emissions and meet the regional haze requirements, and that the
9 installation of SCRs on Units 3 and 4 was one means to achieve this goal.”³⁰ Based
10 on the FNTF documentation issue, the Commission disallowed the return on the
11 Bridger SCRs, but also accelerated the depreciation of the Jim Bridger plant to 2025,
12 minimizing the overall impact of that disallowance.³¹

13 **Q. Does Sierra Club’s testimony acknowledge the numerous other regulatory**
14 **commissions that approved the Jim Bridger SCRs?**

15 A. No. As I previously testified, in May 2013, both the Wyoming and Utah
16 commissions approved the Jim Bridger SCRs—over Sierra Club’s objections in both
17 cases. The Wyoming commission found that SCRs were the “most preferable option,”
18 “in the public interest,” and that “it is inescapable that the company’s course of
19 action, taken in the context of increased ratepayer costs associated with delay, is
20 reasonable.”³² The Utah commission found that the company’s economic analysis

²⁹ Order 12 ¶ 116.

³⁰ Order 12 ¶ 114.

³¹ Order 12 ¶ 57.

³² *Application of Rocky Mountain Power*, Docket 20000-418-EA-12 (Record No. 13314), Memorandum Opinion ¶¶55, 62, 85 (May 29, 2013).

1 “not only demonstrates the Project is favored in six of nine cases, but substantially
2 so;” and, in rejecting Sierra Club’s claims, concluded that there was “no compelling
3 evidence, arguments, or analysis shifting the economics to favor an alternative
4 strategy to comply with the Wyoming SIP requirements.”³³

5 In addition, the Idaho Public Utilities Commission (Idaho commission)
6 approved the Jim Bridger SCRs based on an application submitted by the plant’s co-
7 owner, Idaho Power Company. In December 2013, the Idaho commission found that
8 the “the future public convenience and necessity requires” the SCRs because Jim
9 Bridger “is a source of low-cost and dispatchable baseload energy that provides
10 reliable capacity during peak customer demand.”³⁴ The Idaho commission rejected
11 the claim that “renewable resources and energy efficiency could somehow replace
12 Jim Bridger’s ability to reliably provide energy and capacity” because that claim was
13 “simply not realistic in the near term.”³⁵ In finding that the Jim Bridger SCRs were in
14 the public interest, the Idaho commission also concluded that the plant was “critical to
15 the reliable operation of the high voltage transmission system in that [it] provide[s]
16 voltage and frequency support.”³⁶

17 Sierra Club argues that this Commission should defer to the only commission
18 that has disallowed return on the Jim Bridger SCR investment, without
19 acknowledging that every other commission that has looked at the issue found that
20 the investment was prudent and in the public interest.

³³ Utah Pre-Approval Order at 32.

³⁴ *In the Matter of Idaho Power Company's Application for a Certificate of Public Convenience and Necessity for the Investment in Selective Catalytic Reduction Controls on Jim Bridger Units 3 and 4*, IPUC Case No. IPC-E-13-16, Order No. 32929 at 10 (Dec. 2, 2013).

³⁵ *Id.*

³⁶ *Id.*

1 **V. RESPONSE TO SIERRA CLUB’S CHALLENGE TO NAUGHTON**
2 **EMISSION CONTROL INVESTMENTS**

3 **Q. Sierra Club also claims that the regional haze compliance investments at**
4 **Naughton Unit 1 were imprudent.³⁷ How do you respond?**

5 A. I understand that the emissions control equipment at Naughton Unit 1 has been in
6 California rates since 2012.³⁸ Similar investments made at Naughton Unit 2 were
7 found prudent and included in California rates through the company’s last general
8 rate case in 2011. Both investments were required by the same environmental
9 regulations, and the company relied on the same analysis to support the emission
10 control investments at both Naughton Units 1 and 2. Sierra Club did not challenge
11 the prudence of the Naughton emissions control equipment in either of the
12 aforementioned California cases, but is now pursuing a retroactive ratemaking
13 adjustment to investments that have been in rates for many years.

14 **Q. Did Sierra Club provide any evidence that the Naughton Unit 1 investment was**
15 **imprudent?**

16 A. No. Sierra Club relies instead on a decision by the Public Utility Commission of
17 Oregon (Oregon commission) to support its claim that the emission control
18 investments at Naughton Unit 1 were imprudent,³⁹ but that decision is at odds with
19 this Commission’s inclusion of the Naughton Unit 2 investments in California rates.

20 Sierra Club also misrepresents the Oregon commission decision when it
21 testified that the “Naughton retrofits were not allowed into Oregon rates.”⁴⁰ In fact,

³⁷ Fisher Direct page 12.

³⁸ See PacifiCorp AL 476-E.

³⁹ Fisher Direct page 17.

⁴⁰ Fisher Direct page 16.

1 the Oregon commission allowed 90 percent of the retrofit costs in Oregon rates. The
2 Oregon commission explicitly rejected the total disallowance Sierra Club
3 recommends here because of the “difficulty of excluding from rate base investments
4 that enable the affected plants to continue to operate and provide service to
5 customers.”⁴¹ The Oregon commission also recognized that “significant investments
6 in [PacifiCorp’s] coal fleet were necessary.”⁴² Again, this finding is at odds with
7 Sierra Club’s position in this case.

8 **VI. RESPONSE TO SIERRA CLUB’S CHALLENGE TO HAYDEN SCR**
9 **INVESTMENTS**

10 **Q. Sierra Club argues that the company was imprudent for supporting the decision**
11 **of its co-owner and plant operator, Public Service Company of Colorado (PSCo),**
12 **to install SCRs at Hayden Units 1 and 2.⁴³ Did the company appropriately assess**
13 **its options regarding participation in the Hayden SCR projects?**

14 A. Yes. Based on the company’s economic and legal analysis, it was prudent to allow
15 installation of SCRs at the Hayden plant.

16 **Q. What are the primary ownership agreement considerations regarding the**
17 **company’s participation in the Hayden SCR projects?**

18 A. As described in my direct testimony, the Participation Agreement common to both
19 Hayden Units 1 and 2 requires the facilities to be operated in compliance with all
20 applicable laws. The Participation Agreement also places an independent obligation
21 on PSCo, as the Operating Agent, to operate the Hayden units in accordance with all
22 environmental laws. Considerations under the agreement fall into two primary

⁴¹ Fisher Exhibit No. JIF-10 (Order No. 12-493 at 31).

⁴² *Id.*

⁴³ Fisher Direct at 38–43.

1 classes. First, PacifiCorp must consider the applicable law (e.g., the Colorado
2 Regional Haze SIP and the Colorado Clean Air Clean Jobs Act). Second, PacifiCorp
3 must consider its contractual rights and obligations under the Participation Agreement
4 with regard to the applicable law. I have included relevant sections of the
5 Participation Agreement as Confidential Exhibit No. PAC/1606.

6 **Q. Following its assessment of applicable law and its rights and obligations under**
7 **the Participation Agreement for Hayden Units 1 and 2, what position did the**
8 **company take with respect to the SCR additions for the units?**

9 A. Following its assessment of applicable law and its rights and obligations under the
10 Participation Agreement, the company concluded that it was reasonable to support the
11 SCR additions for Hayden Units 1 and 2 because: (1) they were required by
12 applicable law; and (2) Hayden Units 1 and 2 are required to be operated in
13 accordance with applicable law.

14 **Q. Please summarize the law applicable to the Hayden Units 1 and 2 SCRs.**

15 A. The state of Colorado promulgated, and the EPA approved, a Regional Haze SIP for
16 the state of Colorado requiring SCRs for the units. Failure to comply with the
17 requirements of a state and EPA approved SIP would likely result in state and/or
18 federal enforcement action, substantial penalties, and a requirement to cease operation
19 of a unit until it is brought into compliance.

20 Further, the state of Colorado adopted the Clean Air Clean Jobs Act that
21 required PSCo to submit a plan to reduce NO_x emissions by 70 to 80 percent by
22 2017. PSCo's NO_x reduction plan, reviewed and approved by the Colorado Public
23 Utilities Commission (Colorado commission), includes installation of SCR retrofits

1 on Hayden Units 1 and 2. To comply with the Colorado Regional Haze SIP and
2 PSCo's approved Clean Air Clean Jobs Act NO_x reduction plan, PSCo as Operating
3 Agent for the Hayden facility, installed SCRs on Hayden Units 1 and 2.

4 **Q. What would have happened if the company had not agreed to the installation of**
5 **SCRs at Hayden?**

6 A. The Participation Agreement requires the unanimous consent of all owners to proceed
7 with a capital improvement. If the Operating Agent proposes a capital improvement
8 (e.g. the installation of SCR equipment) to meet applicable law, as occurred at
9 Hayden Units 1 and 2, a non-consenting owner has the option to assert that the
10 Operating Agent (and other owners) are in default under the Participation Agreement
11 if it cannot be demonstrated that applicable law requires the addition. In that case,
12 whether or not a default has occurred will be decided by arbitration.

13 **Q. Did the Hayden Operating Agent and joint owner, PSCo, and the state of**
14 **Colorado determine that installation of SCRs on Units 1 and 2 was in the best**
15 **interests of customers?**

16 A. Yes. As I described in my direct testimony, PSCo found the installation of SCR on
17 Units 1 and 2 to be in the best interests of customers and received approval of CPCNs
18 from the Colorado commission for the projects.

19 **Q. Considering the terms and conditions of the Hayden Units 1 and 2 Participation**
20 **Agreement, did the company pursue arbitration of the Hayden Units 1 and 2**
21 **SCRs capital addition decisions?**

22 A. No, because there was no dispute that applicable law required the installation of
23 SCRs. The company concluded that it had no sound basis to challenge PSCo's

1 decision, and therefore the company chose to not pursue litigation against its co-
2 owner. The company does not take litigation against its partners lightly and would
3 not, in the case of Hayden, have pursued litigation at any cost and without sound
4 basis, which is effectively what Sierra Club claims a reasonable utility would have
5 done.

6 **Q. Did the terms and conditions of the Hayden Units 1 and 2 Participation**
7 **Agreement drive the company to take a different approach in responding the**
8 **Hayden SCRs installation when compared to the company's response to the**
9 **Craig Unit 2 SCR installation?**

10 A. Yes. While the Hayden Participation Agreement includes a unanimous approval
11 provision, the company assessed the provisions of the Participation Agreement to
12 allow the Operating Agent to proceed with the SCR projects even over the company's
13 objection, especially with no dispute that applicable law required the installation of
14 SCRs. The agreement also does not grant the company a unilateral right to decide an
15 alternate route, such as retirement or natural gas conversion. The Craig Participation
16 Agreement, on the other hand, provides the company the option of voting against
17 capital project budget items in connection with at least a 50 percent participation
18 share of other owners. The company voted against the Craig Unit 2 SCR project
19 utilizing this available provision, but was unsuccessful in obtaining 50 percent
20 participation share of votes against the SCR project.

1 **Q. Sierra Club claims that the company’s own analysis demonstrated that it was**
2 **uneconomic to install SCRs at Hayden Unit 1.⁴⁴ Do you agree?**

3 A. No. PacifiCorp did not analyze a scenario where “it transferred all its rights and
4 obligations to co-owner” versus “the other in which it withdrew unilaterally and
5 incurred contract termination costs.”⁴⁵ The scenarios that were analyzed were
6 reflective of a “hypothetical” early retirement in 2015 of Hayden Unit 1 versus an
7 SCR retrofit, looking at both with and without take-or-pay coal contract termination
8 costs for each scenario. In the case where coal contract termination costs applies, the
9 installation of the SCR was more beneficial to customers by [REDACTED]. In the case
10 where coal contract termination costs did not apply, the results showed a [REDACTED]
11 dollar benefit if Hayden Unit 1 is assumed to hypothetically retire in 2015 versus
12 making the SCR investment.

13 **Q. Would coal contract termination costs have applied for Hayden Unit 1’s early**
14 **retirement in 2015?**

15 A. Yes, coal contract termination costs would have applied because PacifiCorp would
16 have been trying to avoid the capital investment for the SCR as a joint owner due to
17 economics; the other joint owner had already decided to make the SCR investment
18 and PacifiCorp would not have been able to utilize the “change-in-law termination
19 provisions” in the coal contract to avoid the take-or-pay early termination provision.

20 **Q. Did the company’s economic assessment provide definitive conclusions in all**
21 **applicable assessment scenarios, as Sierra Club implies?**

22 A. No. Notwithstanding the fact that the company’s analysis of its rights and obligations

⁴⁴ Fisher Direct at 40-41; Confidential Exhibit No. JIF-18 at 8.

⁴⁵ Fisher Direct at 40.

1 under the Hayden Participation Agreement supports the company's participation in
2 the Hayden Units 1 and 2 SCR projects, the company's economic analysis of the
3 Hayden Unit 1 SCR did not provide definitive conclusions in all applicable
4 assessment scenarios, and furthermore could only reasonably be construed to
5 compare an alternate compliance option (i.e. unit shutdown) that is unequivocally
6 available to the company only through divestment.

7 **Q. Did the company pursue the option of selling its interest in Hayden Units 1 and 2**
8 **as an alternative incremental environmental compliance costs?**

9 A. Yes. To ensure that all reasonable alternate compliance approaches were pursued on
10 behalf of PacifiCorp's customers, in March of 2014 the company initiated an open-
11 ended Request for Expressions of Interest in Hayden Units 1 and 2, with a requested
12 response date of April 18, 2014. To date, no expressions of interest have been
13 received.

14 **Q. Could PacifiCorp have transferred its full ownership rights and coal contract**
15 **obligations at zero cost to PSCo as Sierra Club alleges?⁴⁶**

16 A. No.

17 **Q. Sierra Club also claims that the company never considered the economics of the**
18 **SCR installation at Hayden Unit 2.⁴⁷ Is this true?**

19 A. No. The company considered the same factors for SCR installation at both Hayden
20 units. Given the similarity of the Hayden Units 1 and 2 SCR projects and the
21 overarching limitations of the Participation Agreement, a separate economic analysis
22 of the Hayden Unit 2 SCR project was unnecessary.

⁴⁶ Fisher Direct at 42.

⁴⁷ Fisher Direct at 42.

1 **Q. Has any other commission addressed Sierra Club’s arguments related to the**
2 **prudence of the Hayden Unit 1 SCR investment?**

3 A. Yes. Sierra Club raised these same arguments before the Wyoming commission. The
4 Wyoming commission rejected Sierra Club’s argument that the company “should
5 have either immediately divested itself of its share of Hayden Unit 1 rather than
6 participate in the costs, or contested the installation of SCR through arbitration.”⁴⁸
7 The Wyoming commission noted, among other things, that the company “pursued
8 selling its interest in Hayden Unit 1 as an alternative to incurring environmental
9 compliance costs, including an open-ended Request for Expressions of Interest
10 in Hayden Units 1 and 2” but that the company “did not receive any responses to the
11 Request for Expressions of Interest.”⁴⁹ The commission found my testimony in that
12 case, which is substantively the same as here, persuasive and concluded that the
13 Hayden investment was prudent.⁵⁰

14 **Q. What is your conclusion regarding the Hayden Units 1 and 2 SCR projects**
15 **included for review in this docket?**

16 A. The company prudently reviewed and pursued its obligations, rights, and options
17 under the Participation Agreement for this partially owned coal-fueled resource as
18 they pertain to the subject environmental compliance projects. The terms, conditions,
19 and remedies of the Participation Agreement ultimately dictated the company’s

⁴⁸*In the Matter of Rocky Mountain Power Company Request for Approval of a General Rate Increase*, WYPSA Docket No. 20000-446-ER-14 (Record No. 13816), Findings of Fact, Conclusions of Law, Decision, and Order at ¶ 82 (Dec. 30, 2014).

⁴⁹ *Id.* at ¶ 80.

⁵⁰ *Id.* at ¶ 182.

1 participation in the Hayden Units 1 and 2 SCR projects, which were necessary to
2 maintain compliance of these resources with legally enforceable requirements.

3 **VII. RESPONSE TO SIERRA CLUB'S CHALLENGE TO CRAIG SCR**
4 **INVESTMENT**

5 **Q. Sierra Club claims that the company was imprudent for not doing more to stop**
6 **the installation of SCRs at Craig Unit 2.⁵¹ How do you respond?**

7 A. I disagree. As I described in my direct testimony, the company is a minority owner in
8 the plant and therefore could not, on its own, stop installation of the SCRs. Once the
9 decision was made by the majority of the owners, the company's only real option was
10 to litigate. The company does not, however, take lightly the decision to sue its co-
11 owners. Therefore, the company would have resorted to litigation only if there was a
12 reasonable likelihood of success. As I described in my direct testimony, the
13 company's analysis concluded that litigation would not have prevented the
14 installation of the SCRs. The company concluded that a reasonable utility would not
15 unnecessarily sue its plant partners to simply make a statement.

16 **Q. Why was the early retirement scenario for Craig Unit 2 SCR analysis referred to**
17 **as a "hypothetical" analysis in your direct testimony?**

18 A. Based on the Participation Agreement, PacifiCorp cannot unilaterally change any
19 decisions that other joint owners have voted to support if they make up the majority
20 vote. Thus, for the Craig Unit 2 SCR analysis that was performed, the early
21 retirement assumption was for analysis purposes only, and was a "hypothetical"
22 scenario because of the limitations under the Participation Agreement. I have
23 included relevant sections of the Participation Agreement as Confidential Exhibit No.

⁵¹ Fisher Direct at 36.

1 PAC/1607.

2 **Q. Sierra Club claims that the company never assessed Tri-State's economic**
3 **analysis of the SCR project.⁵² Did PacifiCorp have the ability or obligation to**
4 **assess Tri-State's Craig Unit 2 SCR customer benefit analysis?**

5 A. No. Tri-State's analysis is confidential to Tri-State and PacifiCorp has no legal right
6 to receive and review Tri-State or other companies' proprietary analysis.

7 **Q. Does PacifiCorp maintain its responsibility to customers for generation**
8 **resources where PacifiCorp has a minority share?**

9 A. Yes. With respect the Craig Units 1 and 2 in particular, PacifiCorp has maintained
10 and exercised its responsibility by working to ensure that the co-owners fully consider
11 the positions of all co-owners when voting on major capital expenditures under the
12 Participation Agreement. While the company was not able to persuade the co-owners
13 to support its position on the Craig Unit 2 SCR, the 2016 decision by the co-owners
14 to pursue an alternative compliance path for Craig Unit 1 incorporating retirement by
15 December 31, 2025, or conversion to a gas-fueled unit in lieu of SCR installation
16 resulted in a successful outcome for all parties. The Craig Unit 1 settlement was
17 recently approved by the EPA effective August 6, 2018.⁵³

18 **Q. Sierra Club also claims that PacifiCorp could have simply withdrawn from the**
19 **Participation Agreement once the other co-owners chose to install SCRs.⁵⁴ Was**
20 **that a viable option?**

21 A. No. The Participation Agreement for the Craig units does not permit PacifiCorp to

⁵² Fisher Direct at 36. Tri-State is a co-owner and the operating agent of Craig Units 1 and 2.

⁵³ Federal Register July 5, 2015 <https://www.gpo.gov/fdsys/pkg/FR-2018-07-05/pdf/2018-14387.pdf>.

⁵⁴ Fisher Direct at 36.

1 unilaterally withdraw.

2 **Q. Does this conclude your rebuttal testimony?**

3 **A. Yes.**