Application No. 18-04-002
Exhibit PAC/1700
Witness: Dana M. Ralston

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

PACIFICORP

REDACTED

Rebuttal Testimony of Dana M. Ralston

Coal Costs at Jim Bridger

November 2018

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ATTACHED EXHIBITS

Confidential Exhibit No. PAC/1701 – Comparison of Long-term Fueling Plans 2013 SCR Analysis versus 2015 IRP

Confidential Exhibit No. PAC/1702 – Jim Bridger Plant Fueling Costs used in 2013 SCR Analysis versus 2015 IRP

Confidential Exhibit No. PAC/1703 – Long-term Fuel Plan used in SCR Analysis Compared with October 2013 Mine Plan and External Fuel–Two Unit Comparison

Q. Please state your name, business address, and present position with PacifiCorp.

A. My name is Dana M. Ralston. My business address is 1407 West North Temple, Suite 210, Salt Lake City, Utah 84116. I am employed as the Senior Vice President of Thermal Generation and Mining. I am testifying on behalf of PacifiCorp, d/b/a Pacific Power (PacifiCorp).

I. QUALIFICATIONS

Q. Briefly describe your education and professional experience.

A. I have a Bachelor of Science Degree in Electrical Engineering from South Dakota State University. I was previously the Vice President of Coal Generation and Mining from March 2015 to November 2017, and Vice President of Thermal Generation from January 2010 to March 2015. Before that, I held a number of positions of increasing responsibility within Berkshire Hathaway Energy's generation organization, including the plant manager position at the Neal Energy Center, a 1,600 megawatt generating complex. In my current role, I am responsible for operation and maintenance of PacifiCorp's coal-fueled generation fleet, coal fuel supply, and mining.

Q. Have you testified in previous regulatory proceedings?

A. Yes. I have filed testimony in proceedings before the public utility commissions in Washington, Oregon, Utah, and Wyoming.

II. PURPOSE OF TESTIMONY

Q. What is the purpose of your rebuttal testimony in this case?

A. My rebuttal testimony responds to the direct testimony filed by Sierra Club challenging the prudence of the company's decision to install selective catalytic reduction systems (SCRs) on Units 3 and 4 of the Jim Bridger plant. I rebut Sierra Club's contention that as a result of mine plan changes at Bridger Coal Company (BCC), coal costs in the SCR analysis increased substantially, and refute Sierra Club's contention that the company willfully ignored changes at BCC that moved the Jim Bridger SCR project economics beyond a cost-effective threshold.

III. SUMMARY OF TESTIMONY

Q. Please provide a summary of your testimony.

A. Sierra Club's adjustments to the company's SCR analysis are completely unsubstantiated. Sierra Club apparently relies on the original analysis it previously filed at the Washington Utilities and Transportation Commission (Washington Commission) but did not file in this case. Even if that analysis were before this Commission, it contains significant errors, omissions, and inappropriate comparisons which render it invalid. Indeed, Sierra Club filed supplemental analysis at the Washington Commission correcting some of these errors and reducing its coal-cost adjustment—a fact that Sierra Club fails to mention in its testimony in this case.

The cost of coal in the company's economic analysis for the Jim Bridger SCRs was based on the January 2013 long-term fueling plan (also known as the long-term fueling forecast) for the Jim Bridger plant. The Company's 2013 long-term fueling plan for the Jim Bridger plant is not directly comparable to the BCC October 2013 mine plan to which Sierra Club's testimony refers, because a mine plan is only a subset of a fueling plan. The October 2013 mine plan did not suggest that coal costs were rapidly increasing, as Sierra Club asserts. In fact, even over the two-year period between the January 2013 long-term fueling plan and the long-term fueling plan used in the 2015 Integrated Resource Plan (IRP), the present value revenue requirement (PVRR) differential (PVRR(d)), for coal costs only increased by $31 million, only 1.2 percent of the total $2.5 billion PVRR, instead of $143 million as Sierra Club claims. This minor increase would not have materially impacted the SCR analysis even if it had been known in fall 2013.

IV. LONG-TERM FUELING FORECASTS AND MINE PLANS

Q. Please explain the purpose of a long-term fueling forecast for PacifiCorp's power plants and how does it differ from a mine plan?

A. A long-term fueling forecast is an evaluation and analysis of the available fueling options at a coal plant to determine the least-cost fuel supply adjusted for uncertainty and risk on a multi-year basis. The company begins with an estimate of the annual generation requirements throughout the remaining operating life of the plant. The company then develops fuel volume, pricing and sourcing assumptions, transportation costs, and if necessary, operating and capital costs for the plant. If one of the fuel supply sources is a company-owned mine, the company also develops a mine plan to support the long-term fueling forecast. The costs from all sources are combined and evaluated to create the least-cost, least-risk fueling plan. Any new third-party coal and transportation contracts are subsequently executed when required. The company seeks a balance between term, price, volume, and coal quality when negotiating third-party coal supply agreements.[1]

[1] PacifiCorp's third party fuel contracts are negotiated to meet the overall goals of the company's fuel plan. The company process in developing and negotiating long term contracts considers and evaluates factors like plant location/coal region, coal supply options, coal transportation options, coal quality constraints, and other market alternatives. The company does not enter into a fuel-supply contract with a term beyond the useful life of the plant.

Q. How frequently does the company prepare long-term fueling plans for the Jim Bridger plant?

A. Generally, the company prepares long-term fueling plans approximately every two years as part of its IRP process or when needed. Preparing a long-term fueling plan typically takes several months and can involve many models and iterations. Between January 2013 and November 2014, the Company did not prepare a new long-term fueling forecast for the Jim Bridger plant because no significant cost events occurred that would lead it to believe a material change would result.

Q. Please describe the January 2013 long-term fueling forecast used in the analysis of the Jim Bridger plant SCRs.

A. The January 2013 long-term fueling plan for all four units consisted of a BCC mine plan finalized in January 2013 with the surface and underground mines operating together through 2037, the operating life of the plant. Third-party coal was also incorporated from the Black Butte mine located nearby. Fueling plans for Jim Bridger have historically included approximately two-thirds of the coal coming from BCC and one-third from Black Butte. The January 2013 long-term fueling plan costs were the basis for the original SCR economic analysis performed during 2013. The January 2013 fueling plan was also used for the SCR analysis in the Certificate of Public Convenience and Necessity (CPCN) filings in Utah and Wyoming, the SCR analysis in the 2015 Washington general rate case, and the IRP filed in 2013.

Q. Please describe the BCC October 2013 mine plan.

A. The October 2013 mine plan is the budget that BCC developed in the summer and fall of 2013 for PacifiCorp's 10-year business plan beginning in 2014. PacifiCorp prepares a 10-year plan each year, which is generally finalized and approved in December.

Q. Has the company ever relied on the October 2013 mine plan as a long-term fueling forecast for the Jim Bridger plant?

A. No.

Q. Was there evidence of a major increase in coal costs in fall 2013 as alleged by Sierra Club?

A. No. Without including it in the record here, Sierra Club points to testimony and analysis it filed in a 2015 Washington case to claim that coal costs for the Jim Bridger plant increased substantially before the company issued its final notice to proceed (FNTP) for the SCRs.[2] In its Washington testimony, Sierra Club calculated its alleged increase in coal costs using the 2015 long-term fuel plan developed by the company in 2014 (after issuance of the FNTP) and also used in the 2015 IRP.[3]

Contrary to Sierra Club's claims, however, Exhibit No. PAC/1701 demonstrates that there was only a [redacted] increase in coal costs in the two-year period between the long-term fueling plans used in the SCR analysis in January 2013 and used in the 2015 IRP. This minor fluctuation in long-term coal costs during the relevant periods was not material enough to have caused the company to modify its decision to move forward with the SCR system installations.

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[2] Fisher Direct at 26.
[3] Order 12 at 116.

Q. Do you agree with Sierra Club's contention that the BCC October 2013 mine plan represented a change in fueling strategy for the Jim Bridger plant due to the changing relationship between the surface and underground operations at BCC?[4]

A. Yes. There is no doubt that the October 2013 mine plan reflects changes in the relationship between the surface and underground mining operations at BCC. Both the October 2013 mine plan and the July 2014 mine plan are similar in that they assume surface operations continue through the plant's life and that the underground mine is projected to shutter upon depletion of existing permitted reserves. The July 2014 mine plan was used to develop the long-term fueling forecast used in the 2015 IRP. But, as noted, that change did not translate into materially different long-term coal costs for the Jim Bridger plant.

Q. Does the change between the long-term fuel plan used in the 2013 SCR analysis and the long-term fuel plan used for the 2015 IRP significantly impact Jim Bridger plant costs?

A. No. Contrary to the Sierra Club's assertion that Jim Bridger plant fueling costs increased by $143 million,[5] plant fueling costs only increased by $31 million, or 1.2 percent of the SCR analysis PVRR, as shown in Exhibit No. PAC/1702. Sierra Club's Washington analysis omitted the capital savings associated with shuttering the underground mine earlier in the 2015 IRP than assumed in the SCR analysis. The net present value reduction associated with BCC reduced capital expenditures is [redacted], which is a reduction of [redacted] relative to the SCR analysis. By

[4] Fisher Direct at 27–29.
[5] Fisher Direct at 26.

excluding future reductions in capital costs from its WUTC analysis, Sierra Club distorted its analysis to significantly overstate the impact of the mine plan change at BCC.

Q. Does Sierra Club cite to your Washington testimony to support its contention that the October 2013 mine plan changed operations of BCC's underground and surface mines?

A. Yes. In footnote 56 of Dr. Fisher's testimony in this case, Sierra Club cites to my Washington testimony on this point, but omits the key fact that the changes in mining operations did not result in material changes in coal costs.[6] While Sierra Club included some of my Washington testimony in the record here, it did not include any of its own Washington testimony or analysis even though it directly relies upon it in this case.

Q. Did Sierra Club concede in the Washington Commission proceeding that its $143 million coal cost adjustment did not take into account changes in capital spending?

A. Yes. In supplemental testimony filed with the Washington Commission, Dr. Fisher admitted that the company "correctly identified that my response testimony analysis [which produced the $143 million adjustment] did not take into account changes in anticipated capital spending that, to some extent, mitigate the higher variable cost of

[6] Fisher Direct at 29, n. 56.

coal from BCC."[7] It is not clear why Dr. Fisher points to his original Washington analysis in this case, instead of his corrected (but still overstated) Washington analysis.

Q. Is it appropriate for Sierra Club to compare the 2015 IRP to the SCR analysis developed in 2013, as it did in its Washington analysis?

A. No. First and foremost, Sierra Club's reliance on the 2015 IRP in its Washington analysis constituted hindsight review. The Jim Bridger fueling forecast included in the 2015 IRP was finalized in November 2014 and used the July 2014 BCC mine plan. Contrary to Sierra Club's assumption, the information contained in the 2015 IRP was not available to the Company before December 1, 2013, when the FNTP was issued to the SCR contractor. Therefore, a comparison of the two fueling plans is inappropriate.

Q. Did the October 2013 Mine Plan indicate an increase in coal costs relative to the January 2013 long-term fueling plan?

A. No. The overall coal costs for the Jim Bridger plant increased by only [redacted] during the 10-year budget horizon covered by the October 2013 mine plan, relative to the four-unit January 2013 long-term fuel plan used in the SCR analysis as shown in in Exhibit No. PAC/1703. This amount is materially the same as the [redacted] increase reflected in the company's long-term fueling plan for the Jim Bridger plant used for the 2015 IRP for the 2016-2030 period.

[7] *In the Matter of Pacific Power and Light Co. Petition for a Rate Increase Based on a Modified Commission Basis Report, Two-Year Rate Plan, and Decoupling Mechanism,* Docket No. UE-152253, Supplemental Cross-Answering Testimony of Jeremy I. Fisher, PhD (Redacted) at 5–6 (May 13, 2016).

Q. Were there any other changes in coal costs in fall 2013 that would have affected the SCR analysis?

A. Yes. Based on what the company knew in fall 2013, during the 10-year budget horizon, third-party coal costs, inclusive of coal inventory changes, actually *decreased* by [redacted] relative to the third-party costs assumed in the SCR analysis. This decrease further offsets the modest increase in BCC costs reported in the October 2013 mine plan's 10-year budget horizon.

Q. Why did the company continue to rely on the January 2013 long-term fueling plan even after the October 2013 mine plan was developed?

A. During the budgeting process in fall 2013, the company recognized that increases in BCC cash costs would be substantially offset by reduced BCC capital spending and third-party fuel costs. Nothing in the October 2013 mine plan signaled that the January 2013 long-term fueling plan overall costs had significantly changed.

Q. Sierra Club further claims that the changes in the October 2013 Mine Plan would have made the two-unit scenario used in the SCR analysis even lower cost.[8] Do you agree?

A. No. Sierra Club fails to examine all the variables of the assumed October 2013 two-unit fueling scenario. Sierra Club only focuses on one element of total coal costs thereby drawing a conclusion from an inaccurate and incomplete analysis. The difference Sierra Club focuses on between the January 2013 two-unit scenario and a two-unit scenario based on the October 2013 mine plan is that surface mine closure occurs in 2018 in the January 2013 two-unit scenario and the surface mine continues

[8] Fisher Direct at 29.

to operate in the October 2013 mine plan. However, while the BCC surface mine cash costs were lower in the October mine plan, the external coal purchase prices increased. When viewed in its entirety, the two-unit scenario costs would actually increase, contrary to Sierra Club's claims.

Q. For the two-unit scenarios, please explain why the surface mine closure occurred in 2018 in the January 2013 mine plan versus 2037 in the October 2013 mine plan?

A. The January 2013 mine plan for the two-unit operating scenario assumed the underground mine would operate through 2037 and have the capacity to provide the entire fuel supply to the Jim Bridger plant. The October 2013 mine plan assumed that underground mine reserves would be depleted by 2023 and the surface mine would continue to operate through 2037. The change in the underground mine's operating life to 2023 or earlier was based on an evaluation of drilling information relative to the D4 seam in early 2013. The company concluded the projected new underground area northeast of Ramp 5 did not provide a suitable underground coal reserve base and that existing underground coal reserves would be depleted by 2023. In order to meet the projected consumed fuel requirements in the two-unit scenario, higher cost external third-party coal purchases were required to supplement BCC surface mine coal deliveries.

Q. Relative to the two-unit scenario assuming surface mine closure in 2018, would the company continue to operate the surface mine to fund remediation costs that may ultimately not benefit customers?

A. No. Dr. Fisher referred to the advanced surface remediation costs as a "two-unit penalty". In fact, Sierra Club argued that "[t]he Company would be operating a generating station just so that it could pay off the remediation costs of a mining interest."[9] These statements by Sierra Club fail to recognize that the company completes extensive analyses to achieve least-cost, least-risk fueling plans that benefit customers. In all mine plan scenarios, the company must fund surface mine reclamation costs as legally mandated by federal and state oversight agencies. In scenarios where surface mine closure is accelerated, reclamation contributions are required to be funded earlier in order to comply with remediation obligations. As discussed earlier in my testimony, the surface mine closure change to 2037 in the October 2013 mine plan versus 2018 in the January 2013 mine plan was necessitated by new data obtained by the company as it evaluated mine plans. This change was not made to operate an uneconomic mine but to ensure reclamation costs were adequately funded.

Q. Why didn't the company update its two-unit scenario coal costs in fall 2013?

A. As I discuss above, nothing in the October 2013 mine plan raised concerns that the January 2013 long-term fueling plan overall costs had significantly changed or that costs in the two-unit scenario were decreasing relative to costs in the four-unit scenario. Under these circumstances, updating the two-unit scenario was unnecessary.

Q. Please summarize Sierra Club's proposed net adjustment relative to Jim Bridger plant coal fueling costs.

A. Sierra Club asserts that coal costs would have increased by $143 million relative to

[9] Fisher Direct at 28

the SCR analysis if the company had the same knowledge in 2013 as in November 2014 when it finalized the fueling portion figures contained in the 2015 IRP.[10] This conclusion is incorrect because the basis for the 2015 IRP costs was not known or capable of being known in fall 2013. Even if the 2015 IRP analysis fuel cost is substituted for the SCR analysis, the resulting fuel cost does not materially change—installation of the Bridger SCRs remains economic. The all-in or all-sources coal cost from the 2015 IRP is only $31 million, or 1.2 percent higher than the coal cost from the January 2013 long-term fueling forecast. This modest increase associated with a net present value total of $2.5 billion in cash costs would not have changed the substantial customer benefit of the Jim Bridger SCRs. Exhibit No. PAC/1702 demonstrates that there was no dramatic spike in coal costs in fall 2013 that would have caused the company to modify its decision to move forward with the Jim Bridger SCRs.

Q. Does this conclude your rebuttal testimony?

A. Yes.

[10] Fisher Direct at 26.