

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION )  
OF IDAHO POWER COMPANY FOR ) CASE NO. IPC-E-23-11  
AUTHORITY TO INCREASE ITS RATES )  
AND CHARGES FOR ELECTRIC SERVICE )  
IN THE STATE OF IDAHO AND FOR )  
ASSOCIATED REGULATORY ACCOUNTING )  
TREATMENT. )  
\_\_\_\_\_ )

IDAHO POWER COMPANY

DIRECT TESTIMONY

OF

LINDSAY BARRETTO

1 Q. Please state your name, business address, and  
2 present position with Idaho Power Company ("Idaho Power" or  
3 "Company").

4 A. My name is Lindsay Barretto. My business  
5 address is 1221 West Idaho Street, Boise, Idaho 83702.

6 Q. Please describe your educational background.

7 A. I received a Bachelor of Science degree in  
8 Civil Engineering from Purdue University, West Lafayette,  
9 Indiana in 2005. In 2007, I earned a Master of Science  
10 degree in Civil Engineering from Purdue University. I am a  
11 registered professional engineer in the state of Idaho.

12 Q. Please describe your work experience with  
13 Idaho Power.

14 A. I began my employment with Idaho Power in 2010  
15 as an engineer in Power Production's Civil Engineering  
16 department. As an engineer I worked on hydroelectric and  
17 hatchery projects and regulatory compliance. In 2015, I  
18 moved to Transmission and Distribution Engineering and  
19 Construction as a project manager leading power line and  
20 substation projects. In 2018, I became an Engineering  
21 Leader, responsible for the Stations Engineering and Design  
22 department. In 2020, I was promoted to my current  
23 position, Senior Manager of 500kV and Joint Projects, where  
24 my responsibilities include supervision over Idaho Power's  
25 500kV and Joint Projects.

1 Q. What is the purpose of your testimony in this  
2 matter?

3 A. My testimony discusses the prudent nature of  
4 investments made at the North Valmy Power Plant ("Valmy")  
5 and the Jim Bridger Power Plant ("Bridger") since the  
6 Company's last prudence determinations before the Idaho  
7 Public Utilities Commission ("Commission"), including a  
8 discussion of Idaho Power's compliance with Order No.  
9 34349, issued in Case No. IPC-E-22-05, as modified with  
10 Order No. 35774.

11 Q. What exhibits are you sponsoring?

12 A. I am sponsoring Exhibit Nos. 1, 2 and 3.

13 **I. BACKGROUND**

14 Q. Please describe the Bridger and Valmy plants.

15 A. Valmy is a coal-fired power plant that  
16 consists of two units and is located near Winnemucca,  
17 Nevada. Unit 1 went into service in 1981 and Unit 2  
18 followed in 1985. Idaho Power owns 50 percent of Valmy. NV  
19 Energy is the co-owner of the plant with the remaining 50  
20 percent ownership and operates the Valmy facility. Idaho  
21 Power and NV Energy (collectively, the "Valmy Co-Owners")  
22 work jointly to make decisions regarding Valmy. The Company  
23 exited coal-fired operations of Unit 1 December 31, 2019,  
24 as accepted by the Commission in Order No. 33983 as part of  
25 Idaho Power's 2017 Integrated Resource Plan. The Preferred

1 Portfolio identified in the 2021 IRP, filed in Case No.  
2 IPC-E-21-43, concluded an exit from Valmy Unit 2 in 2025  
3 provides a more favorable economic outcome when compared to  
4 an earlier exit.

5 The Bridger plant, located near Rock Springs,  
6 Wyoming, consists of four generating units. PacifiCorp has  
7 two-thirds ownership and is the operator of the facility  
8 and Idaho Power owns one-third of Bridger. Unit 1 began  
9 commercial operation in 1974, Unit 2 in 1975, Unit 3 in  
10 1976 and Unit 4 in 1979. The Company and PacifiCorp  
11 (collectively, the "Bridger Co-Owners") work jointly to  
12 make decisions regarding the plant, including required  
13 investments and the retirement of the plant. Idaho Power's  
14 Second Amended 2019 IRP acknowledged in Case No. IPC-E-19-  
15 19 identified a preferred portfolio that included early  
16 Bridger unit exits in 2022, 2026, 2028, and 2030.  
17 Subsequently, the 2021 IRP Preferred Portfolio, filed in  
18 Case No. IPC-E-21-43, includes the conversion of Units 1  
19 and 2 from coal to natural gas by the summer of 2024, and  
20 the exit of coal-fired operations in Units 3 and 4 by year-  
21 end 2025 and 2028, respectively.

22 Q. What are the current agreements under which  
23 the Valmy Co-Owners own and operate the plant?

24 A. The ownership and operation of Valmy is  
25 governed by three agreements: the Agreement for the

1 Ownership of the North Valmy Power Plant Project and the  
2 Agreement for the Operation of the North Valmy Power Plant  
3 Project, both of which are dated December 12, 1978, and the  
4 North Valmy Station Operating Procedures Criteria, dated as  
5 of February 11, 1993, between Idaho Power Company and  
6 Sierra Pacific Power Company,<sup>1</sup> as amended by Amendment No. 1  
7 to the Operating Procedure Criteria for Valmy Coal  
8 Diversion Procedures and Usage, dated as of January 1,  
9 2012. Additionally, the Valmy Co-Owners entered into the  
10 North Valmy Project Framework Agreement between NV Energy  
11 and Idaho Power dated as of February 22, 2019,  
12 memorializing the terms and conditions under which either  
13 partner may elect exit of participation of Valmy.

14 Q. What agreements govern the ownership and  
15 operation of the Bridger plant?

16 A. Currently, the ownership and operation of  
17 Bridger is dictated by three agreements: the Agreement for  
18 the Ownership of the Jim Bridger Project between Idaho  
19 Power Company and Pacific Power & Light Company, the  
20 Agreement for the Construction of the Jim Bridger Project  
21 between Idaho Power Company and Pacific Power & Light  
22 Company, and the Agreement for the Operation of the Jim  
23 Bridger Project between Idaho Power Company and Pacific

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<sup>1</sup> Sierra Pacific Power Company has conducted business as NV Energy since 2008.

1 Power & Light Company, all of which are dated September 22,  
2 1969, as amended by Amendments 1 through 9 (collectively,  
3 "Bridger Agreements"). The Bridger Agreements set forth the  
4 respective obligations of the Bridger Co-Owners with  
5 respect to the ownership, construction and operation of  
6 Bridger.

7 **II. RATEMAKING TREATMENT OF VALMY AND BRIDGER**

8 Q. Has the Company requested from the Commission  
9 any ratemaking treatment associated with the coal  
10 investments in Valmy and Bridger based on the early exit of  
11 coal-fired operations?

12 A. Yes. In Case No. IPC-E-16-24 and updated in  
13 Case No. IPC-E-19-08, Idaho Power requested approval of a  
14 balancing account mechanism designed to smooth revenue  
15 requirement impacts associated with the shutdown of Valmy  
16 and allow for full recovery of Valmy-related costs near the  
17 plant's end-of-life. In addition, this mechanism more  
18 closely aligns the cost recovery period with the remaining  
19 operating life of the plant, resulting in a better matching  
20 of cost recovery from customers who benefit from the  
21 plant's operations while mitigating the risk of future  
22 customers bearing the costs of a plant that will no longer  
23 be providing service. The Commission approved the Company's  
24 request with Order Nos. 33771 and 34349, respectively.  
25 Similarly, in Case No. IPC-E-21-17, Idaho Power requested

1 approval of a balancing account mechanism for the Bridger  
2 coal-related investments, which was approved by the  
3 Commission with Order No. 35423.

4 Q. Did approval of the balancing account  
5 mechanisms for both plants include a prudence determination  
6 of the investments at the time?

7 A. Yes. With the issuance of Order No. 34349, it  
8 was determined that all Valmy investments through December  
9 31, 2018, had been prudently incurred. Further, in Case No.  
10 IPC-E-22-05, the Company requested the Commission find that  
11 all actual Valmy investments made during the January 1,  
12 2019, through December 31, 2021, time period were prudently  
13 incurred. However, Order No. 34349, issued in Case No. IPC-  
14 E-22-05 delayed a prudence determination of Valmy  
15 investments. With respect to Bridger, Order No. 35423 found  
16 that all Bridger coal-related investments through December  
17 31, 2020, were prudently incurred.

18 Q. Why did the Commission delay a prudence  
19 determination on the Valmy investments made during the  
20 January 1, 2019, through December 31, 2021, time period?

21 A. In their review of Idaho Power's request,  
22 Commission Staff ("Staff") analyzed two types of prudence,  
23 decisional prudence, which is based on need, and  
24 operational prudence, which is based on whether or not the  
25 Company implemented the investment in the least-cost

1 manner. Commission Staff concluded that the investments  
2 were needed to continue safe and reliable operation of the  
3 facility, or decisional prudence, but indicated they could  
4 not "recommend that the investments were operationally  
5 prudent due to lack of sufficient evidence documenting that  
6 the projects were done in a least-cost way."<sup>2</sup> As such,  
7 Staff recommended Idaho Power work with them to develop the  
8 documentation necessary for Commission Staff's audit and  
9 prudence review and provide Commission Staff with the  
10 additional information via a compliance filing within six  
11 months of the Commission's order to determine prudence.<sup>3</sup>  
12 With Order No. 35494, the Commission indicated it was "fair  
13 just and reasonable for the Company to file additional  
14 documentation to support a prudence determination as part  
15 of the 2022 Annual Review" after working with Commission  
16 Staff to expand the documentation process.<sup>4</sup>

17 Q. Did Idaho Power file additional documentation  
18 to support a prudence determination as part of the Valmy  
19 2022 Annual Review?

20 A. No. On March 31, 2023, after discussing with  
21 Staff, Idaho Power filed a Motion for an Extension of Time  
22 to Comply with Order No. 35494 because Commission Staff and  
23 the Company were still working to memorialize and finalize

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<sup>2</sup>Case No. IPC-E-22-05, Staff Comments, p. 4.

<sup>3</sup>*Id.* At 8.

<sup>4</sup>Order No. 34594 at 6.



1 the information and documentation necessary for Commission  
2 Staff's prudence review. As part of this Motion, Idaho  
3 Power proposed to include the request for a prudence  
4 determination and the associated documentation, as part of  
5 this general rate case proceeding. The Motion requested the  
6 Commission acknowledge the Company will include its 2022  
7 Annual Review, as required by Order No. 34349, as part of  
8 the general rate case filing as well. The Commission issued  
9 Order No. 35774 on May 8, 2023, granting the Motion.

10 Q. Have Idaho Power and Staff come to an  
11 agreement regarding an expanded documentation process for  
12 investments made at the Company's jointly-owned generating  
13 facilities?

14 A. Yes, in principle. However, Staff and Idaho  
15 Power are still working to finalize a Memorandum of  
16 Understanding ("MOU") that will govern Idaho Power's  
17 demonstration of oversight of its jointly-owned generating  
18 facilities, and will represent a mutual agreement on the  
19 types of information the Company will file to support its  
20 request for a prudence determination of expenditures made  
21 at the Valmy and Bridger plants. Staff and Idaho Power are  
22 finalizing a Major Projects Checklist that is intended to  
23 detail the review timing and documentation to accompany  
24 capital project expenditures over a certain dollar  
25 threshold, and an Oversight Meeting Checklist that will

1 document Idaho Power's ongoing and continual participation  
2 in the capital budget reviews of each plant throughout the  
3 year, encompassing the entirety of the capital budget  
4 regardless of the dollar amount of individual projects. A  
5 summary of the key provisions envisioned to be contained in  
6 an MOU is provided as Exhibit No. 1 to my testimony.

7 Q. Based on the Company's request for a prudence  
8 determination of the Valmy and Bridger investments in this  
9 proceeding, has the Company prepared the documentation  
10 necessary to support the investments?

11 A. Yes, Idaho Power has the documentation  
12 necessary to support a prudence determination of the Valmy  
13 and Bridger investments. However, the Company cannot  
14 retroactively complete checklists for meetings that have  
15 already occurred, but Idaho Power stands ready to provide  
16 all available information for the Valmy and Bridger capital  
17 projects in support of a prudence determination.

18 **III. VALMY INVESTMENTS SINCE 2018**

19 Q. As a 50-percent owner in the plant, is Idaho  
20 Power involved in the decision-making process related to  
21 capital investments at Valmy?

22 A. Yes. As the plant operator, NV Energy manages  
23 the capital budget for Valmy. However, Idaho Power has  
24 established guidelines at Valmy to allow NV Energy to  
25 manage the capital budget as needed and directed by the

1 plant manager, without exceeding the yearly budget, or  
2 adding large projects without authorization by the Valmy  
3 Co-Owners. These guidelines provide the appropriate level  
4 of oversight while allowing the plant operator to  
5 practically manage the plant and any variances that may  
6 occur throughout the budget year.

7 Q. What guidelines are in place to monitor  
8 capital expenditures at Valmy?

9 A. First, if Idaho Power's share of the capital  
10 forecast is greater than the capital budget by more than  
11 \$100,000, the Company will review and may authorize the  
12 budget change. In addition, all new or unbudgeted Unit 2  
13 or common facility capital projects larger than \$1 million,  
14 at the plant level, require a review and authorization in  
15 writing by each Valmy Co-Owner prior to starting the  
16 project. Finally, any time an individual Unit 2 or common  
17 facility capital project with a value greater than \$1  
18 million, at the plant level, is forecast to exceed the  
19 current year original budget by 20 percent, each Valmy Co-  
20 Owner must review and authorize it in writing prior to  
21 starting or continuing the project.

22 Q. Aside from the guidelines, are there any other  
23 ways the Company participates in the capital budget  
24 process?

1           A.       Yes. Individual capital project variances are  
2 discussed during Ownership Meetings and other meetings as  
3 directed by the Valmy Co-Owners. In addition, NV Energy  
4 produces an Authorization for Expenditures ("AFE") request  
5 for all capital projects. AFEs include the project title,  
6 date, project manager, description and purpose of the  
7 expenditure, cost and budget information, along with  
8 various other information to provide support for the  
9 project. If the project is expected to exceed the AFE  
10 amount by either 10 percent, for variances greater than  
11 \$10,000, or \$100,000, a supplemental AFE is required.

12           Currently, Idaho Power provides authorization to NV  
13 Energy of all AFEs and supplemental AFEs for each project.  
14 The Company has requested that no projects begin, and the  
15 total annual budget may not be exceeded, unless the AFE is  
16 approved by both NV Energy and Idaho Power. Lastly, in  
17 addition to the plant-specific guidelines detailed above,  
18 Idaho Power performs holistic budget reviews on a monthly  
19 and quarterly basis. This includes capital expenditures at  
20 all of the Company's facilities, including Valmy, and  
21 therefore provides an additional review process through  
22 which the Company monitors its capital spend at Valmy.

23           Q.       What is the time period for which Idaho Power  
24 is requesting a prudence determination of Valmy  
25 investments?

1           A.       Because Order No. 34349 delayed a prudence  
2 determination on the Valmy investments made during the  
3 January 1, 2019, through December 31, 2021, time period,  
4 the Company is requesting a prudence determination of Valmy  
5 investments made during the January 1, 2019, through  
6 December 31, 2022, time period. There have been a number of  
7 investments required to operate the plant in a safe,  
8 efficient, and reliable manner, including investments  
9 required to ensure environmental compliance as well as a  
10 number of investments for routine asset replacement.

11           Exhibit No. 2 presents Idaho Power's share of the  
12 investments made at Valmy between January 1, 2019, and  
13 December 31, 2022, detailing 92 different capital projects  
14 totaling \$8.19 million. In addition, for those projects for  
15 which Idaho Power's ownership share is over \$50,000, and  
16 all investments associated with Unit 1, the Company has  
17 included a project description and investment purpose  
18 classification as to whether the investment was for  
19 environmental compliance, safety, and/or reliability. Of  
20 the 44 projects for which a detailed project description  
21 and investment purpose classification was provided, 26 were  
22 for continued reliable plant operations, three were  
23 required for environmental compliance, and 15 were for a  
24 combination of either reliability, environmental  
25 compliance, or safety.

1 Q. Why did the Company include a project  
2 description and investment purpose classification for all  
3 investments associated with Unit 1, even if they were less  
4 than \$50,000?

5 A. Idaho Power included a project description and  
6 investment purpose classification for all investments  
7 associated with Unit 1 to highlight that although the  
8 Company exited operations of Unit 1 on December 31, 2019,  
9 there were investments required to ensure reliable  
10 operations of Unit 1 until the Company's exited  
11 participation in coal-fired operations.

12 Q. Were all the projects comprising the \$8.19  
13 million in investments that occurred between January 1,  
14 2019, and December 31, 2022, necessary for either  
15 environmental compliance, the safe and economic operation  
16 of the plant, or for reliability purposes?

17 A. Yes.

18 ***Plant Reliability Investments***

19 Q. You indicated there were 26 investments  
20 greater than \$50,000 or associated with Unit 1 that were  
21 required for the reliable operation of the plant. What was  
22 the largest investment made to maintain reliability?

23 A. While not the largest investment made during  
24 the January 1, 2019, through December 31, 2022, time  
25 period, the largest investment made solely for reliability

1 purposes was for approximately \$630,000 for an update to  
2 the Distributed Control System ("DCS") of Unit 2.

3 Q. Why was an update to the DCS required?

4 A. The existing DCS was installed in 2015 and was  
5 operating both servers and human machine interfaces of Unit  
6 2. A typical life-cycle of the DCS is 10 years, with a  
7 five-year mid-cycle human machine interface and operating  
8 system update required. The existing DCS was operating  
9 beyond the original equipment manufacturer ("OEM") support  
10 and security patches were no longer being created for the  
11 systems. In addition, the control servers were operating on  
12 Windows Server 2008, which Microsoft ceased supporting as  
13 of January 1, 2020, and the human machine interfaces were  
14 operating on Windows 7, which Microsoft stopped supporting  
15 as of January 14, 2020. Operating without the OEM supported  
16 cybersecurity patches put these servers and human machine  
17 interfaces at an elevated security risk.

18 Q. What did the upgrade entail?

19 A. The upgrade replaced the human machine  
20 interfaced hardware and upgraded the operating system to  
21 Windows 10. In addition, the following control equipment  
22 was upgraded: (1) new virtualized Windows 2019 control  
23 servers host, (2) Emerson Ovation software, and (3) new  
24 ethernet switches and routers. All of the upgrades enabled  
25 implementation of the latest critical security controls for

1 cyber defense and detection tools.

2 Q. Were there any additional factors that  
3 influenced the decision to update the DCS when the plant  
4 did?

5 A. Yes. An additional concern existed with the  
6 scheduled retirement of Unit 1. Several common plant  
7 systems were controlled by the DCS on Unit 1 and required  
8 code changes to move these controls to the DCS on Unit 2.  
9 Therefore, the decision was made to upgrade Unit 2's DCS  
10 prior to the retirement of Unit 1 and coincident to other  
11 cybersecurity project upgrades.

12 Q. What additional investments were made at Valmy  
13 solely for reliability purposes?

14 A. The majority of the investments made to  
15 maintain reliable operations of Valmy were associated with  
16 normal wear and tear of existing investments which I will  
17 discuss first, including (1) the replacement of the  
18 pulverizer gear box, (2) the purchase of pulverizer spare  
19 parts, (3) the Unit 2 pin mixer replacement, and (4) Unit 2  
20 generator bushing gasket replacements.

21 Q. What is the purpose of a pulverizer?

22 A. Pulverizers are utilized to grind coal to fine  
23 dust via roll wheel assemblies and table grinding segments  
24 before being transported to burner fronts. Each Valmy unit  
25 requires four pulverizers to reach full load status each



1 year in order to perform annual testing and certification  
2 of the cold reheat safety valves in compliance with the  
3 Annual State of Nevada Boiler Operating Permit. The plant  
4 maintains a spare pulverizer for Unit 2 in the event of a  
5 failure of one pulverizer to maintain reliability.

6 Q. What occurred to require the replacement of a  
7 pulverizer gear box?

8 A. One of the pulverizers on Unit 2 tripped,  
9 compromising the reliability of the unit. Plant personnel  
10 opened the gearbox inspection port and discovered the  
11 gearbox had failed. Approximately \$588,000 was invested in  
12 pulverizer repairs to ensure Unit 2 maintained reliability.

13 Q. Why does the plant purchase spare parts for  
14 the pulverizers?

15 A. The grinding of coal to a fine dust wears out  
16 the roll wheel assemblies, table grinding segments, and the  
17 interior of pulverizer equipment. As a result, the normal  
18 operating life cycle of a Unit 2 pulverizer is roughly 18  
19 to 24 months until a major rebuild of the pulverizer is  
20 required. Routine inspections are typically performed at  
21 3,000 hours and maintenance performed to ensure the maximum  
22 life of the pulverizer rebuild. However, with an upcoming  
23 end-of-life of Unit 2 in 2025, upon routine inspection, it  
24 was determined the pulverizers were not in need of a major  
25 overhaul. Rather a more cost-effective approach would be to

1 purchase a full set of grinding table segments and three  
2 roll wheel assemblies, to expedite repair once excessive  
3 wear occurred, while also avoiding long lead times for  
4 replacement equipment. In addition, during routine  
5 maintenance of a pulverizer at a different time, three  
6 refurbished trunnion wheel assemblies were purchased as  
7 capital spares, totaling \$456,000 and \$166,000,  
8 respectively, as opposed to performing a major overhaul.  
9 The capital spares will allow the capital maintenance  
10 outages to be completed on an as needed basis, as opposed  
11 to during the routine inspection, when the pulverizers'  
12 hours of operation and level of wear justifies the  
13 overhauls.

14 Support of the need for spare pulverizer parts  
15 occurred when the Unit 2B pulverizer failed due to a seized  
16 roll wheel assembly, compromising reliability. A spare roll  
17 wheel assembly was installed at the time, for approximately  
18 \$231,000, ensuring Unit 2 was in compliance with the State  
19 of Nevada testing requirements. Further, in 2019, on the  
20 Unit 1D pulverizer, three of the roll wheel assemblies  
21 failed, one in April, and two in September requiring  
22 replacement, for investments totaling approximately  
23 \$160,000 and \$47,000, respectively. The Unit 1D pulverizer  
24 had exceeded 20,000 hours of operation with significant  
25 wear and parts deteriorated beyond the service life

1 expectations. Upon inspection, it was found that one of the  
2 three wheel assemblies in the pulverizer was cracked and  
3 not rotating freely due to a bearing failure.

4 Q. Why was the replacement necessary in 2019 if  
5 the Company was exiting the unit that year?

6 A. The plant was coming up on its annual testing  
7 and certification of the cold reheat safety valves, a  
8 compliance requirement of the annual State of Nevada Boiler  
9 Operating Permit as I mentioned earlier, and needed to  
10 reach full load status, requiring all four pulverizers. Due  
11 to the wear, there were sizing differences of the three  
12 roll wheels' diameters, requiring the replacement of three  
13 of the roll wheel assemblies on the Unit 1D pulverizer.

14 Q. What was the purpose of the last two projects  
15 resulting from the normal wear and tear of existing  
16 investments, the Unit 2 pin mixer replacement and the Unit  
17 2 generator bushing gasket replacements?

18 A. The Unit 2 pin mixer, which unloads the wet  
19 fly ash, required replacement and was rebuilt prior to the  
20 summer run to avoid the potential of a serious failure due  
21 to the lack of non-redundant equipment. This project  
22 totaled approximately \$225,000. In addition, approximately  
23 \$107,000 was spent to replace bushing gaskets and for the  
24 regasketing of the bushing terminal plant.

25 Q. Why must bushing gaskets be replaced?

1           A.       The terminal plate gaskets for the high  
2 voltage bushings of the generator were worn out and there  
3 was indication of bushing gaskets leaking as the viscasil  
4 lubricant was seeping through the bushing gaskets,  
5 indicating possible failure of the bushing. Bushing gasket  
6 leakage could lead to catastrophic failure of the  
7 generator.

8           Q.       When was this issue first identified?

9           A.       The issue was first identified in 2010 and  
10 temporary repairs were made. In 2017, it was noticed that  
11 the leak had become significant and one more temporary  
12 repair was made and annual inspections conducted. However,  
13 the 2018 annual inspection discovered more leakage so the  
14 replacement of the bushings and regasketing of the bushing  
15 terminal plate was performed.

16          Q.       What additional investments were made at  
17 Valmy to maintain reliability?

18          A.       The following investments greater than  
19 \$50,000 or associated with Unit 1 that were required for  
20 the reliable operation of the plant include the (1)  
21 installation of freeze protection heaters, (2) repair of  
22 the generator exciter power supply system, (3) replacement  
23 of the underground equipment wash piping, and (4) recoating  
24 of the condenser inlet tube sheet.

25          Q.       What necessitated installation of freeze

1 protection heaters?

2 A. In 2018, because the Valmy operating schedule  
3 shifted to running the units in only the summer months and  
4 to be in long-term layup during the remaining months of the  
5 year, it was determined that with both units offline there  
6 was no auxiliary steam to provide heat to the turbines,  
7 boilers and buildings to keep them dry and above the dew  
8 point, per the long-term layup plan.

9 Q. How was Valmy heated at the time?

10 A. The plant was renting portable electric space  
11 heaters to sufficiently heat the plant buildings and  
12 equipment during the layup period. However, it was  
13 determined that the purchase of the heaters for  
14 approximately \$541,000 was more cost-effective than  
15 renting. In addition, the purchase and installation  
16 included four water-to-air dry finned coolers which cool  
17 the component cooling system on each unit and exhaust warm  
18 dry air into the lower level of the turbine building,  
19 reducing the number of electric heaters required to be  
20 purchased. Heating of the turbines and buildings helps  
21 ensure the units can be operational when needed.

22 Q. What occurred that required the replacement of  
23 the generator current transformers?

24 A. The Unit 2 exciter power supply transformers  
25 had failed, preventing the unit from returning to service.

1 One of the three saturable current transformers that supply  
2 power to the generator exciter, one linear reactor  
3 transformer, and the exciter control card module were  
4 damaged. This project, which totaled approximately  
5 \$468,000, replaced two saturable current transformers that  
6 had compromised integrity due to oil and heat damage as  
7 well as one of the remaining linear reactor transformers  
8 that had degraded while running at an elevated temperature.

9 Q. What was the replacement of the underground  
10 equipment wash piping necessary to maintain reliability of  
11 Valmy?

12 A. A section of the boiler equipment wash piping,  
13 which is used to fill both circulating water systems prior  
14 to start-up, failed. The underground piping was the  
15 original piping put in during construction in 1979. Using  
16 alternative means to fill the circulating water systems is  
17 very time consuming and results in start-up delays, thus  
18 requiring the replacement of the underground equipment wash  
19 piping. The replacement of the boiler equipment wash piping  
20 in 2021 was approximately \$151,000.

21 Q. Why was recoating of the condenser inlet tube  
22 sheet necessary to maintain reliability at Valmy?

23 A. In 2019, the recoating of the condenser inlet  
24 tube sheet was required contributing to approximately  
25 \$108,000 of the Valmy investments. The condenser inlet

1 tube sheet of a unit is exposed to erosion from particles  
2 and turbulence in the circulating water. It is coated with  
3 a wear resistant coating to protect the metal tube sheet  
4 and condenser tube ends. The coating on Unit 2 had worn to  
5 the point that significant portions of bare tube and tube  
6 ends were exposed.

7 Q. What happens if the metal tube sheet and  
8 condenser tube ends are left exposed?

9 A. When exposed, the tube ends will erode and can  
10 result in tube failure and leakage of circulated water into  
11 the steam side of the condenser, contaminating the boiler  
12 water. Recoating of the tube sheet was required. However,  
13 when the recoating began, the plant was able to repair some  
14 of the existing waterbox coating resulting in project costs  
15 lower than initially estimated.

16 Q. What additional investments were made solely  
17 for reliability purposes?

18 A. The remaining 13 projects associated with  
19 investments for reliable operations of Valmy made between  
20 the January 1, 2019, through December 31, 2022, time period  
21 that I have not discussed yet were all between \$50,000 and  
22 \$100,000. They included: (1) the refurbishment of the Unit  
23 2 boiler feed pump, (2) the replacement of the coal  
24 handling conveyor following sustained run time failure, (3)  
25 the replacement of the pumps on production wells 13 and 14,

1 (4) the purchase and installation of two redundant 1000  
2 kilovolt-amp transformers that power the coal handling  
3 system following failure beyond economic repair, (5 and 6)  
4 two projects associated with the motor of the Unit 1  
5 circulating water pump that failed following a ground  
6 fault, one investment associated with the replacement of  
7 the motor and the second with the rewind of the failed  
8 motor for use as a capital spare, (7) the use of a capital  
9 spare to replace the failed Unit 2A pulverizer, (8) the  
10 replacement of three generator current transformers  
11 following failure, (9) the installation of the spare Unit  
12 1A primary air fan motor due to damage, (10) a new fly ash  
13 blower to convey ash in order to prevent the baghouse  
14 hoppers from overflowing due to internal wear and damage,  
15 (11) an upgrade of the revenue meter required when Idaho  
16 Power exited participation in operations of Unit 1, (12)  
17 refurbishment of the block valve that supplies extraction  
18 steam to the Unit 1 first point feedwater heater, and (13)  
19 the Unit 1B pulverizer rebuild. Exhibit No. 2 provides  
20 additional information for each project including the total  
21 investment amount and a detailed project description and  
22 justification.

23 Q. How have these 26 investments required for the  
24 continued reliable operations of Valmy contributed to the  
25 additions at the plant since January 1, 2019?



1           A.       At \$4.50 million, the investments for  
2 reliability purposes are the largest expenditures made at  
3 Valmy since 2018, making up 55 percent of the total  
4 projects.

5           Q.       You mentioned some of the investments over  
6 \$50,000 or associated with Unit 1 were made for a  
7 combination of either reliability, environmental  
8 compliance, or safety purposes. Were there any additional  
9 investments for which the purpose included a reliability  
10 component?

11          A.       Yes. There were eight projects required for a  
12 combination of reliability and safety purposes.

13       ***Plant Reliability and Safety Investments***

14          Q.       Please describe those projects greater than  
15 \$50,000 or associated with Unit 1 that have been identified  
16 as required for reliability and safety purposes.

17          A.       The largest investment made at Valmy during  
18 the January 1, 2019, through December 31, 2022, time period  
19 was for a combination of reliability and safety purposes.  
20 In 2021, \$1.24 million was spent to fix the Unit 2 turbine  
21 high pressure/intermediate pressure ("HP/IP") section shell  
22 steam leaks.

23          Q.       What caused the HP/IP section shell steam  
24 leaks on the Unit 2 turbine?

25          A.       Beginning in 2015, the Unit 2 steam turbine

1 HP/IP shell experienced five steam leaks from the mating  
2 surfaces of the steam turbine HP/IP upper and lower shells.  
3 Each steam leak damaged the two turbine shells by eroding  
4 the mating surfaces material and providing further paths  
5 for the superheated steam to escape from the turbine HP/IP  
6 shells. At the time, previous repairs did not fix the  
7 eroded mating surfaces or the compromised connection  
8 hardware that compresses the two shell halves together to  
9 form the mating surfaces seal.

10 Q. What happens when the mating surfaces and  
11 connection hardware is not repaired?

12 A. Connecting hardware eventually wears out, only  
13 enduring a limited number of tightening and loosening  
14 cycles before the connecting hardware loses its strength  
15 and the ability to provide the compressive forces necessary  
16 to form the mating surfaces seal of the two shell halves.  
17 This loss of connecting hardware strength is also  
18 compounded by the high temperature during operations  
19 causing the plastic deformation of the steel. This process  
20 is known as creep.

21 Q. How did the creeping compound the issues with  
22 the HP/IP shells?

23 A. The plastic deformation, in conjunction with  
24 applied stresses, can also warp and distort both the  
25 connecting hardware and the HP/IP shells themselves. A

1 'tapped stud' threads into the lower shell half and a large  
2 nut is installed on the upper portion of the tapped stud  
3 and tightened to apply the compressive force to the two  
4 shell mating surfaces.

5 Q. Were the tapped studs of the HP/IP shells  
6 affected?

7 A. Yes. A minimum of six tapped connecting studs  
8 are known to have been compromised in some fashion, mostly  
9 warpage.

10 Q. What was the extent of the investments  
11 necessary to repair and prevent future HP/IP section shell  
12 steam leaks?

13 A. This project replaced the connecting hardware,  
14 which was no longer providing sufficient consistent  
15 compressive force, with new hardware and refurbished the  
16 mating surfaces of the two HP/IP shells. The two turbine  
17 HP/IP turbine shells were separated, and the mating  
18 surfaces were refurbished with a combination of welding and  
19 machining. In addition, ten tapped connecting studs and  
20 nuts on each side of the HP/IP turbine section in the areas  
21 of the five steam leaks were replaced with new tapped  
22 connecting studs and nuts. The tapped stud threads in the  
23 lower half shell were also repaired as necessary. The  
24 tapped studs replacement, lower half thread repairs and  
25 HP/IP shell mating surfaces refurbishment were made after

1 the two HP/IP shells were separated. These repairs  
2 corrected the known root causes and corrected for the  
3 turbine HP/IP section shell steam leaks.

4 Q. What additional investments required for both  
5 safety and reliability purposes were made?

6 A. In November 2017 an evaluation of the fire  
7 protection systems was performed that determined the  
8 refurbishment or replacement of the systems was required  
9 due to degradation of the existing system, through a  
10 combination of worn out and/or outdated components and  
11 systems. As a result, the refurbishment of the Early  
12 Warning Smoke Detection system was performed, the Unit 1  
13 and Unit 2 stand-pipe booster pipes were replaced, the fire  
14 alarm control panels and associated controls and alarms  
15 were replaced, the deluge valves were replaced, and the  
16 required flow testing of the electric fire pump and the  
17 diesel fuel tank system was performed. Total project costs  
18 were approximately \$263,000.

19 In addition, Unit 2 was experiencing erratic control  
20 valve movement that resulted in unit trips due to the  
21 resulting load and drum level swings. The primary cause of  
22 the erratic valve movement was leakage in the upper and  
23 lower positioners. To operate as reliably as possible and  
24 limit the erratic valve movements, the control valves were  
25 kept wide open. Replacement of the upper and lower turbine

1 control valve hydraulic cylinder positioners, for  
2 approximately \$119,000, was necessary to restore stable  
3 operation of the turbine and improve plant reliability.

4 Q. Please describe the additional investments  
5 made between January 1, 2019, and December 31, 2022,  
6 classified as required for reliability and safety purposes.

7 A. The next set of investments over \$50,000 or  
8 associated with Unit 1 made for reliable and safe operation  
9 of the plant were required because of the age of the  
10 existing investment and the associated wear and tear,  
11 including the replacement of the Unit 2 stack elevator and  
12 transportation fleet at the plant. The stack elevator was  
13 installed with Unit 2 in 1984 and replacement parts had  
14 become obsolete. On several occasions the elevator stopped  
15 operating properly during the installation of environmental  
16 compliance equipment and prior to scheduled emission  
17 testing, causing delayed installation timelines. A total  
18 of approximately \$107,000 was invested to complete the  
19 elevator replacement including the car, brake assembly,  
20 drive motor and gearbox, electrical system replacement and  
21 call system replacement.

22 In 2020 and 2022, approximately \$88,000 and \$78,000,  
23 respectively, was spent to replace some of the van  
24 transportation fleet due to concern with safety and  
25 reliability. The Valmy fleet was aging and reaching high

1 mileage, traveling approximately 1,750 miles for  
2 maintenance and 5,200 miles for operations/fuels per month  
3 by 2022. The vans transport employees to and from the  
4 remote plant site, 24 hours a day, seven days a week, which  
5 is a standard in northern Nevada set by local mining  
6 companies. Three of the existing nine vans were replaced  
7 in both 2020 and again in 2022 as each van was over ten  
8 years old with between 190,000 to 256,000 miles.

9 Q. What were the two remaining investments made  
10 for reliability and safety purposes between January 1,  
11 2019, and December 31, 2022?

12 A. The remaining investments identified as  
13 necessary for reliable and safe operations of Valmy include  
14 the (1) refurbishment of the trisector air heater expansion  
15 joint following damage from thermal expansion, rust, acid  
16 condensation and erosion, and (2) refurbishment of the  
17 first point feedwater inlet valve on Unit 1.

18 Q. How have these projects, necessary for the  
19 continued reliable and safe operations of Valmy,  
20 contributed to the additions at the plant since January 1,  
21 2019?

22 A. The investments made at Valmy for reliability  
23 and safety purposes during the January 1, 2019, through  
24 December 31, 2022, time period total \$1.97 million, or 24  
25 percent of the total projects.

1           Q.       Were there any additional investments made at  
2 Valmy between January 1, 2019, and December 31, 2022, that  
3 included a purpose classification for continued reliable  
4 operations of the plant?

5           A.       Yes. There were five projects associated with  
6 continued reliable operations of Valmy as well as required  
7 for environmental compliance.

8       ***Plant Reliability and Environmental Compliance Investments***

9           Q.       What were the Valmy investments required for  
10 continued reliable operations and environmental compliance  
11 purposes?

12          A.       Four of the investments made at Valmy between  
13 January 1, 2019, and December 31, 2022, and identified as  
14 required for both continued reliable operations and  
15 environmental compliance were associated with the scrubber  
16 atomizer wheels on Unit 2, while the largest investment  
17 made was associated with the scrubber spray machine gearbox  
18 that drives the atomizer wheels. The dry scrubber on Unit 2  
19 utilizes nine atomizing spray machines, three atomizers per  
20 scrubber vessel, to atomize a lime/recycled fly ash mixed  
21 slurry that reacts with the sulfur dioxide in the flue gas  
22 to produce calcium sulfate. The solid calcium sulfate  
23 particles are then collected along with fly ash in the  
24 baghouse.

25               To accomplish this, the atomizer wheel rotates via

1 the gearbox at approximately 13,000 revolutions per minute  
2 and centrifugal force shears the lime/recycled ash slurry  
3 into very small droplets for intimate liquid/gas contact.  
4 The force of the shearing slurry slowly erodes the atomizer  
5 wheels which require routine replacement. An atomizer wheel  
6 can be expected to last for 10,000 to 12,000 hours in  
7 service. In 2019 the procurement of six new atomizer  
8 wheels was required. Five of the atomizer wheels that were  
9 at the end of their service life were replaced in 2020 and  
10 2021, and eight were replaced in 2022. In addition, the  
11 gearbox, which requires precision balancing and tight  
12 tolerance on gear clearances could not be repaired and  
13 required replacement. The five projects totaling  
14 approximately \$683,000 were required to ensure the  
15 continued reliable operations of Valmy.

16 ***Environmental Compliance Investments***

17 Q. What investments were made at Valmy solely for  
18 environmental compliance?

19 A. There were three investments over \$50,000 or  
20 associated with Unit 1 made at Valmy between January 1,  
21 2019, and December 31, 2022, for which the purpose was  
22 environmental compliance. The first, for approximately  
23 \$220,000, included the installation of nine new ground  
24 water monitoring wells.

25 Q. Why were the new ground water monitoring wells



1 required?

2 A. Ground water elevation at Valmy had risen  
3 noticeably over the last six to eight years, presumably due  
4 to cessation of dewatering activities at the nearby Lone  
5 Tree Mine. As a result, the screened interval intake of  
6 several wells was nearly fully submerged.

7 Q. Are there guidelines in place for appropriate  
8 groundwater levels?

9 A. Yes. According to Nevada Division of  
10 Environmental Protection ("NDEP") monitoring well  
11 guidelines, the groundwater level should be within the  
12 screened interval level to obtain an accurate water level  
13 reading. Any reported ground water levels above the top  
14 screen level are considered invalid. At the time, of the  
15 Valmy plant's 14 ground water monitoring wells, five were  
16 reading above the top screen level and four were close.

17 Q. What would happen if the groundwater levels  
18 were not addressed?

19 A. If the wells were not redrilled, plugged,  
20 abandoned or replaced, the existing wells may have become  
21 non-compliant with the regulatory intent of monitoring the  
22 potential impacts of operating the facilities' landfill and  
23 evaporation ponds. In addition, if not in compliance, the  
24 NDEP can order similar action. As a result, the plant  
25 installed nine new ground water monitoring wells.

1 Q. Please describe the remaining investments made  
2 at Valmy for environmental compliance.

3 A. Approximately \$13,000 was associated with the  
4 replacement of the low nitrogen-oxide burner nozzles of  
5 Unit 1 to remain compliant with the Mercury and Air Toxics  
6 Standards, and finally \$1,000 of costs were associated with  
7 the replacement of the existing sorbent trap mercury  
8 monitoring equipment closed in 2019.

9 Q. Were there any additional investments made at  
10 Valmy between January 1, 2019, and December 31, 2022, that  
11 included a purpose classification for environmental  
12 compliance?

13 A. Yes. There were two projects over \$50,000 or  
14 associated with Unit 1 that were required for both  
15 environmental compliance and the continued safe operations  
16 of Valmy.

17 ***Environmental Compliance and Safety Investments***

18 Q. Please describe the first required investment  
19 for environmental compliance and safety.

20 A. The three dry scrubber vessels on Unit 2 often  
21 suffer severe scaling and/or debris material buildup as  
22 scale is dislodged from the scrubber vessel walls. The  
23 scale and buildup can be severe enough that several times  
24 per year the unit is curtailed by 70 MWs while the scale  
25 and buildup are removed from the vessel walls and the

1 outlet duct via the existing debris chute and from the  
2 outlet duct door. The debris material is then collected and  
3 transported to the ash landfill. The removal of the debris  
4 is required under the Mercury and Air Toxic Standards  
5 regulations.

6 In 2020, approximately \$127,000 in project costs  
7 were incurred to enlarge the existing Unit 2 scrubber  
8 vessel debris chute and install three 24-inch diameter  
9 hydraulically actuated knife gate valves. The purpose was  
10 to allow for the faster and safer removal and collection of  
11 the scale, sludge and debris for disposal in the ash  
12 landfill. The investment reduced the duration of forced  
13 outages by 50 percent. In addition, automation of the  
14 valves to open the scrubber vessel, which previously  
15 required personnel to perform via a ladder, rectified a  
16 safety concern.

17 Q. What additional investment was made for  
18 environmental compliance and safety of Valmy?

19 A. The primary and backup scrubber computer room  
20 air conditioning units were aging equipment and required  
21 frequent maintenance. Operating failures of the system had  
22 resulted in unit trips due to overheating of the baghouse  
23 pollution control device that is located in the scrubber  
24 computer room. Baghouse pollution control device components  
25 and the HVAC units were repaired and returned to service,

1 but overheating was a recurring problem. Replacement of  
2 both the primary and backup scrubber computer room air  
3 conditioning units totaling approximately \$65,000 was  
4 necessary to ensure reliable operation of Unit 2 while also  
5 maintaining safety of the plant personnel.

6 Q. Please summarize the investments that were  
7 made at Valmy over \$50,000 or were specific to Unit 1 that  
8 make up the \$8.19 million for which Idaho Power is  
9 requesting a prudence determination.

10 A. Of the 44 projects for which a detailed  
11 project description and investment purpose classification  
12 was provided, 26 were for the continued reliable plant  
13 operations totaling \$4.50 million, another \$234,000 was  
14 associated with the three projects required for  
15 environmental compliance, and the remaining 15, which were  
16 for the combination of either reliability, environmental  
17 compliance, or safety, contributed to \$2.85 million of the  
18 total investments made at Valmy between January 1, 2019,  
19 through December 31, 2022.

20 **IV. BRIDGER INVESTMENTS SINCE 2020**

21 Q. As a one-third owner in the plant, is Idaho  
22 Power involved in the decision-making process related to  
23 capital investments at Bridger?

24 A. Yes. As the plant operator, PacifiCorp  
25 manages the capital budget for Bridger. However, the

1 Company is and always has been actively involved in the  
2 decision-making process in all matters associated with  
3 Bridger capital investments as a co-owner. While  
4 PacifiCorp, as the operator, vets and analyzes the need for  
5 specific capital replacements as they arise to continue  
6 reliable and safe operation of the plant, Idaho Power  
7 regularly participates in discussions of the capital  
8 investment forecast prepared by PacifiCorp, influencing the  
9 investments ultimately made.

10 Q. What documentation does the Company review  
11 as the one-third owner and non-operating partner?

12 A. Idaho Power receives from PacifiCorp a  
13 monthly billing invoice, invoice support documentation, and  
14 monthly invoice reconciliation. Appropriation Requests are  
15 available for every project, which include a project  
16 description, investment reason, project number, and  
17 projected expenditures for the project, by year. During the  
18 quarterly Ownership Meetings, Idaho Power reviews the  
19 current year operations and maintenance ("O&M") expense and  
20 capital budgets and forecasts. As noted in the Exhibit No.  
21 1, Idaho Power plans to implement an Oversight Meeting  
22 Checklist to document its participation in these quarterly  
23 meetings at Bridger, including the budget overview document  
24 provided at and discussed during these meetings.

1 Q. Does Idaho Power have any contractual rights  
2 to approve items such as capital spend?

3 A. Yes. Under Section 5.4 of the Operation  
4 Agreement, each October PacifiCorp will submit a forecast  
5 of its estimate of operating expenses for the following  
6 calendar year, including capital projects, to Idaho Power.  
7 The budget will include items of expenditures for  
8 replacement and repair of facilities and will include a  
9 contingency for emergency repairs and replacements. The  
10 forecast is subject to approval by the Company. Under the  
11 agreement, if the forecast for projects changes by 10  
12 percent or more during the calendar year, PacifiCorp will  
13 notify Idaho Power. In addition, under compliance with the  
14 Sarbanes-Oxley Act, forecasts for projects over \$1 million  
15 that change by 10 percent or more during the calendar year  
16 must be approved by both Bridger Co-Owners.

17 Q. Please describe the Company's participation  
18 in the Bridger capital investment discussions that meet the  
19 contractual rights described above.

20 A. Mid-year, the Co-Owners hold a capital  
21 budget review where the forecasted capital projects  
22 expected to occur over the next three calendar years over  
23 \$50,000 are discussed in detail. In addition, large capital  
24 projects expected over the next decade are reviewed, unit

1 overhauls, and the scope and need of projects are  
2 discussed. Following the meeting, plant personnel  
3 consolidates and finalizes the list of all projects,  
4 including the scope, need and consequence for each.

5           Following the quarterly Ownership Meeting that  
6 occurs in September, the plant personnel present a formal  
7 capital and O&M expense budget for the following year as  
8 well as a high level 10-year forecast. The intent of the  
9 meeting is for the Bridger Co-Owners to ask questions of  
10 the plant personnel, most often the subject matter experts,  
11 about any details surrounding the forecasted capital  
12 investments and O&M expense.

13           Q.       How does the Company monitor the budget?

14           A.       During each quarterly Ownership Meeting, a  
15 standing agenda item is to review the current year capital  
16 and O&M expense budget, routinely providing Idaho Power the  
17 opportunity to raise any questions necessary about upcoming  
18 projects. Additionally, on a monthly basis, forecasts for  
19 capital and O&M expense are provided for review by the  
20 Company.

21           Q.       What is the time period for which Idaho Power  
22 is requesting a prudence determination of Bridger  
23 investments?

24           A.       Order No. 35423 found that investments made at

1 Bridger through December 31, 2020, had been prudently  
2 incurred therefore the Company is requesting a prudence  
3 determination on the Bridger investments made during the  
4 January 1, 2021, through December 31, 2022, time period.  
5 There have been a number of investments required to operate  
6 the plant in a safe, efficient, and reliable manner,  
7 including investments required to ensure environmental  
8 compliance as well as a number of investments for routine  
9 asset replacement.

10           Exhibit No. 3 presents Idaho Power's share of the  
11 investments made at Bridger between January 1, 2021, and  
12 December 31, 2022, detailing 216 different projects  
13 totaling \$19.33 million. In addition, for those projects  
14 for which Idaho Power's ownership share is over \$100,000,  
15 the Company has included a project description and  
16 investment purpose classification as to whether the  
17 investment was for environmental compliance, safety, and/or  
18 reliability. Of the 61 projects for which a detailed  
19 project description and investment purpose classification  
20 was provided, 31 were for continued reliable plant  
21 operations, 17 were required for environmental compliance,  
22 one was for safety, and 12 were for a combination of either  
23 reliability, environmental compliance, or safety.

24           Q.       Were all the projects comprising the \$19.33  
25 million in investments that occurred between January 1,



1 2021, and December 31, 2022, necessary for either  
2 environmental compliance, the safe and economic operation  
3 of the plant, or for reliability purposes?

4 A. Yes.

5 ***Plant Reliability Investments***

6 Q. You indicated there were 31 investments  
7 greater than \$100,000 that were required for the reliable  
8 operation of the plant. What was the largest investment  
9 made to maintain reliability?

10 A. The largest investments in both 2021 and 2022  
11 required for continued reliable operations of Bridger, as  
12 well as 12 others, were associated with the normal wear and  
13 tear of existing plant equipment. The two largest projects  
14 as well as two other projects, were the result of the  
15 accumulation of failures of either pumps, valves or  
16 gearboxes during the year, for a total of \$1.34 million.  
17 These failures and subsequent replacements were unplanned  
18 and not budgeted but resulted in capital improvements  
19 required to maintain reliability of the plant.

20 In addition, \$2.04 million in investments were made  
21 (1) for the overhaul of two pulverizers per year, (2) the  
22 repair of the primary air ducts that had developed leaks  
23 over the years of operation, (3) the replacement of the hot  
24 end and cold end seals in both air pre-heaters during an  
25 overhaul of Units 2 and 4, (4) the replacement of warped

1 sector plates on both Units 2 and 4, (5) new boiler side  
2 wall tubes required due to increased ash erosion on Units 2  
3 and 4, (6) restoration of turning vanes that had been worn  
4 through by fly ash on both Units 2 and 4, (7) replacement  
5 of high pressure turbine packing on Unit 2, and (8)  
6 installation of new mill discharge valves on the units to  
7 isolate the supply of fuel to the boiler.

8 Q. How would you categorize the next set of  
9 Bridger investments made for continued reliable operations  
10 of the plant?

11 A. There were 7 projects totaling approximately  
12 \$1.38 million associated with the replacement of obsolete  
13 equipment that was no longer supported and the repair or  
14 replacement parts were costly. This included the upgrade of  
15 the electro-hydraulic pumps on Unit 2 and Unit 4, a new  
16 continuous vibration monitoring system for the Green River  
17 pump station, a digital front end excitation system  
18 retrofit, the replacement of both Unit 2 and Unit 4's DCS,  
19 and the replacement of flame scanners on Unit 4.

20 Q. What were the remaining investments required  
21 for the reliable operation of Bridger?

22 A. Neural network combustion controls and a soot  
23 blowing optimizer were installed on Unit 4 to lower  
24 emissions and improve heat rates for a total of  
25 approximately \$218,000. To assure proper alignment with

1 both the rotating element and the pump to the turbine, the  
2 boiler feed pump was rebuilt, and the casing replaced for  
3 \$199,000. Approximately \$184,000 was associated with the  
4 re-build of a failed boiler circulating pump for future re-  
5 use. Pulverizer journals were replaced as it was more cost-  
6 effective than repairing, totaling approximately \$160,000.  
7 Radio communications were upgraded increasing bandwidth in  
8 and around the plant for \$131,000. On Unit 4, retracts and  
9 water injection penetration equipment was installed for  
10 \$122,000 to help burn the existing coal. The existing  
11 feedwater heaters were replaced to drain the system more  
12 efficiently and return the water to the condensate system  
13 for reuse as opposed to dumping, for a total investment of  
14 \$245,000. Finally, a new acoustic leak detection was  
15 installed in the boiler of Unit 4 for approximately  
16 \$177,000.

17 Q. Please summarize the investments made at  
18 Bridger during the January 1, 2021, through December 31,  
19 2022, time period that were necessary for continued  
20 reliable operations of the plant.

21 A. In summary, there were 31 projects greater  
22 than \$100,000 that were required for the reliable operation  
23 of the plant in 2021 and 2022 for a total of \$6.19 million,  
24 or 32 percent of the total investments.

25 Q. You mentioned some of the investments over

1 \$100,000 were made for a combination of either reliability,  
2 environmental compliance, or safety purposes. Were there  
3 any additional investments for which the purpose included a  
4 reliability component?

5 A. Yes. There were eight projects for a  
6 combination of reliability and safety purposes and three  
7 projects for a combination of reliability and environmental  
8 compliance.

9 ***Plant Reliability and Safety Investments***

10 Q. Please describe those projects greater than  
11 \$100,000 that have been identified as required for  
12 reliability and safety purposes.

13 A. The largest investment required for  
14 reliability and safety purposes, totaling \$308,000,  
15 replaced the electromechanical trip system and eliminated  
16 the mechanical over speed bolt on the boiler feed pump  
17 turbines because the existing system was over 30 years old  
18 and maintenance issues had been increasing. Two projects  
19 involved the installation parts on Unit 4: new wear plates  
20 for the submerged drag chain conveyor and an automatic  
21 sprinkler system, for approximately \$287,000. The remaining  
22 five projects were associated with the replacement of  
23 existing investments.

24 Q. What investments were replaced and necessary  
25 to ensure reliable and safe operations of Bridger?

1           A.       The feeder breaker relays on Unit 4 were  
2 replaced because the existing relays were obsolete. Also,  
3 Unit 4 required the replacement of the coal pipes from the  
4 pulverizers to the boiler due to high wear from the  
5 abrasiveness of the coal. A dozer with the highest  
6 operating hours and requiring the most maintenance was  
7 rebuilt. A failed epoxy liner and the stator leak monitor  
8 system were both replaced on Unit 2. The remaining five  
9 projects totaled approximately \$971,000.

10       ***Plant Reliability and Environmental Compliance Investments***

11           Q.       What three investments were required for the  
12 combination of reliability and environmental compliance?

13           A.       Both Unit 2 and Unit 4 required the  
14 replacement or repair of the burner components due to  
15 damage or warped hardware for a total of \$406,000 and  
16 \$648,000, respectively. In addition, new secondary air flow  
17 monitors were required on Unit 4 for approximately  
18 \$175,000.

19       ***Environmental Compliance Investments***

20           Q.       What investments were made at Bridger solely  
21 for environmental compliance?

22           A.       There were 17 projects necessary for  
23 environmental compliance. The largest of the investments  
24 made at Bridger since 2020 was for environmental compliance  
25 and required the replacement of two levels of Selective

1 Catalytic Reduction ("SCR") catalyst. The Bridger catalyst  
2 management plan requires the replacement of catalysts on a  
3 set cycle of every four years or coincident with major  
4 outages. The extent of catalyst replacements depends on an  
5 evaluation of the condition of the catalyst which will  
6 determine how many layers must be replaced to ensure a  
7 fully functioning SCR for compliance with environmental  
8 regulations. Two layers of the catalyst on Unit 4 were  
9 replaced totaling approximately \$1.41 million. An  
10 additional 12 more projects necessary for environmental  
11 compliance were associated with investments in Unit 4,  
12 totaling \$3.76 million. These included: (1) the extension  
13 of the pin block liner to the mid-level of the stack, (2)  
14 the replacement of discharge electrode wires in the  
15 precipitator, (3) the repair and recoat of the scrubber  
16 ductwork, (4) installation of online catalyst cleaning  
17 equipment to reduce ash pluggage, (5) installation of a new  
18 large particle ash screen to maintain optimal catalyst  
19 performance, (6) upgrade of the transformer-rectifiers and  
20 current limiting reactors in the precipitator, (7) repair  
21 and recoat of the precipitator ductwork, (8) installation  
22 of turning vanes and flow straightening devices, (9)  
23 replacement of Nuva feeder piping (10) the overhaul of the  
24 mini drag-chains that transport ash from the SCR large  
25 particle ash hopper to the drag chain hopper, (11) the

1 purchase and install of Limitorque drivers on the  
2 precipitator inlet and outlet dampers, and (12) the  
3 replacement of six discharge electrode rappers.

4 Q. What were the remaining four projects  
5 necessary for environmental compliance?

6 A. Similar to Unit 4, the repair and recoat of  
7 the scrubber and precipitator ductwork on Unit 2 was  
8 required as was the replacement of the rapper shaft,  
9 bearings, and hammers of the precipitator rapping systems.  
10 Finally, a redundant soda liquor supply line was installed.  
11 In total, there were 17 projects necessary for  
12 environmental compliance, totaling \$5.73 million, or 30  
13 percent of the total investments.

14 ***Environmental Compliance and Safety Investments***

15 Q. Please describe the investments required for  
16 environmental compliance and safety of Bridger.

17 A. There was just one project necessary for both  
18 environmental compliance and safety of the plant personnel,  
19 totaling \$139,000. The coating in the ducts from the  
20 scrubbers into the stack was worn so it was replaced. This  
21 is a high wear area and if not repaired or replaced will  
22 lead to excessive leaking and ultimately environmental  
23 violations. In addition, the leaking flue gas could be a  
24 hazard to plant employees.

1     **Safety Investments**

2             Q.     Were there any investments at Bridger made  
3 solely for safety purposes?

4             A.     Yes. One investment, for approximately  
5 \$127,000, was made for safety purposes. The existing  
6 outdated station breaker relays were a safety concern due  
7 to arc flash hazards and were upgraded. The plant has been  
8 replacing the old relays with arc flash compliant relays  
9 that will significantly reduce the hazard or arc flash  
10 incidents to plant personnel.

11            Q.     Please summarize the investments that were  
12 made at Bridger over \$100,000 that make up the \$19.33  
13 million for which Idaho Power is requesting a prudence  
14 determination.

15            A.     Of the 61 projects for which a detailed  
16 project description and investment purpose classification  
17 was provided, 31 were for the continued reliable plant  
18 operations totaling \$6.19 million, another \$5.73 million  
19 was associated with the 17 projects required for  
20 environmental compliance, one project at \$127,000 was  
21 required for safety purposes, and the remaining 12, which  
22 were for the combination of either reliability,  
23 environmental compliance, or safety, contributed to \$2.93  
24 million of the total investments made at Bridger between  
25 January 1, 2021, through December 31, 2022.



1 **V. CONCLUSION**

2 Q. Please summarize your testimony.

3 A. The Preferred Portfolio in the 2021 IRP  
4 reflects an early exit of coal-fired operations from both  
5 Valmy and Bridger as a more favorable economic outcome. The  
6 Company has been required to make investments at Valmy and  
7 has been actively involved in the capital spend decision  
8 making process at the plant. Of the 44 projects for which a  
9 detailed project description and investment purpose  
10 classification was provided, 26 were for the continued  
11 reliable plant operations totaling \$4.50 million, another  
12 \$234,000 was associated with the three projects required  
13 for environmental compliance, and the remaining 15, which  
14 were for the combination of either reliability,  
15 environmental compliance, or safety, contributed to \$2.85  
16 million of the total investments made at Valmy between  
17 January 1, 2019, through December 31, 2022.

18 With respect to Bridger, the Company has been  
19 required to make investments and remains actively involved  
20 in the capital spend decision making process at the plant.  
21 Of the 61 projects for which a detailed project description  
22 and investment purpose classification was provided, 31 were  
23 for the continued reliable plant operations totaling \$6.19  
24 million, another \$5.73 million was associated with the 17  
25 projects required for environmental compliance, one project

1 at \$127,000 was required for safety purposes, and the  
2 remaining 12, which were for the combination of either  
3 reliability, environmental compliance, or safety,  
4 contributed to \$2.93 million of the total investments made  
5 at Bridger between January 1, 2021, through December 31,  
6 2022. While Idaho Power is cognizant of the approaching  
7 cessation of coal-fired operations at both Valmy and  
8 Bridger, the investments made were prudent and required to  
9 ensure the plants remain operational in a safe, efficient,  
10 and reliable matter.

11 Q. Does this conclude your direct testimony in  
12 this case?

13 A. Yes, it does.

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**DECLARATION OF LINDSAY BARRETTO**

I, Lindsay Barretto, declare under penalty of perjury under the laws of the state of Idaho:

1. My name is Lindsay Barretto. I am employed by Idaho Power Company as the Senior Manager of 500kV and Joint Projects.

2. On behalf of Idaho Power, I present this pre-filed direct testimony and Exhibit Nos. 1 through 3 in this matter.

3. To the best of my knowledge, my pre-filed direct testimony and exhibits are true and accurate.

I hereby declare that the above statement is true to the best of my knowledge and belief, and that I understand it is made for use as evidence before the Idaho Public Utilities Commission and is subject to penalty for perjury.

SIGNED this 1st day of June 2023, at Boise, Idaho.



Signed: \_\_\_\_\_  
LINDSAY BARRETTO