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October 2, 2020

**VIA ELECTRONIC FILING**

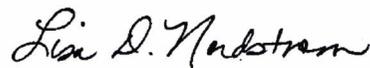
Jan Noriyuki, Secretary  
Idaho Public Utilities Commission  
11331 W. Chinden Boulevard  
Building 8, Suite 201-A  
Boise, Idaho 83714

Re: Case No. IPC-E-19-19  
2019 Integrated Resource Plan

Dear Ms. Noriyuki:

Attached for electronic filing, pursuant to Order No. 34602, in the above matter is Idaho Power Company's *Second Amended 2019 Integrated Resource Plan* as set forth in its procedural schedule letter dated July 31, 2020. Idaho Power will hand deliver an original and seven (7) printed copies of Idaho Power Company's *Second Amended 2019 IRP* and Appendices C and D, as well as redlined printed versions of those documents. Please contact me at (208) 388-5825 if you have any questions.

Very truly yours,



Lisa D. Nordstrom

LDN:slb  
Attachments

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UTILITIES COMMISSION

Attorney for Idaho Power Company

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF IDAHO POWER )  
COMPANY'S 2019 INTEGRATED ) CASE NO. IPC-E-19-19  
RESOURCE PLAN. )  
) AMENDED APPLICATION  
)

COMES NOW, Idaho Power Company ("Idaho Power" or "Company"), which respectfully submits the Company's *Second Amended 2019 Integrated Resource Plan* ("*Second Amended 2019 IRP*")<sup>1</sup> and requests that the Idaho Public Utilities Commission ("Commission") accept it for filing in accordance with Commission Order No. 22299. In support of this request, Idaho Power states as follows:

<sup>1</sup> The complete *Second Amended 2019 IRP* consists of five separate documents: (1) the *Second Amended 2019 Integrated Resource Plan*; (2) Appendix A: Sales and Load Forecast; (3) Appendix B: DSM Annual Report; (4) Appendix C: Technical Report; and (5) Appendix D: B2H Supplement. A copy of the complete *Second Amended 2019 IRP* is provided as Attachment 1 and can also be found on the Company's website at [www.idahopower.com](http://www.idahopower.com). As a courtesy to our readers, Idaho Power has provided a redline version of the documents where changes were made -- the Plan, Appendix C, and Appendix D -- in Attachment 2. The Company also submits its 2019 IRP Review Report documenting its review of the entire IRP development process as Attachment 3. Interested persons may request a printed copy of these documents by contacting [irp@idahopower.com](mailto:irp@idahopower.com).

## I. INTRODUCTION

Idaho Power greatly appreciates the Commission and other parties' patience as the Company conducted a thorough review and end-to-end re-run of its IRP in this proceeding. Idaho Power believes that this careful, comprehensive review process will ensure that future IRPs proceed more smoothly and continue to yield resource portfolios that balance cost, risk, and the Company's commitment to clean energy.

This *Second Amended 2019 IRP* results in only one change to the Company's near-term Action Plan—the exit year for the Valmy Unit 2 coal-fired power plant. Idaho Power initially identified a Unit 2 exit by year-end 2025, but analysis as part of the *Second Amended 2019 IRP* revealed the potential for additional savings from an exit as early as year-end 2022. In the coming months, the Company will conduct further analysis to identify optimal unit exit timing that carefully weighs customer economics and reliability concerns and ensures adequate capacity.

The Company's updated IRP continues to demonstrate a clear trajectory toward Idaho Power's clean energy future, as reflected in the key resource decisions in the Company's Preferred Portfolio: (1) 400 megawatts (MW) of new solar generation; (2) development of the Boardman-to-Hemingway ("B2H") transmission line; and (3) complete exit from coal resources by 2030. The development of B2H, in particular, provides a crucial carbon-free, supply-side resource that supports renewables and enables the Company's transition away from coal.

Idaho Power's *Second Amended 2019 IRP* provides a robust analysis of the long-term planning and resource decisions needed to affordably and reliably serve customers. Idaho Power therefore respectfully requests that the Commission accept this *Second Amended 2019 IRP* for filing.

## II. DISCUSSION

Idaho Power filed its original IRP on June 28, 2019, and its Amended 2019 IRP on January 31, 2020.<sup>2</sup> In June of 2020, the Company identified necessary changes in the Amended 2019 IRP, which prompted Idaho Power to initiate a comprehensive review of its modeling and analysis. To allow time for the Company to complete this review, on July 1, 2020, Idaho Power filed a Motion to Suspend the Procedural Schedule. The Commission issued a Notice of Vacated Comment Deadlines on July 16, 2020, until the Company had concluded its review and submitted a revised proposed schedule.<sup>3</sup>

### **A. Idaho Power Comprehensively Reviewed the IRP Cycle.**

During July of 2020, Idaho Power convened a team of subject matter experts (“IRP Review Team”) to perform a comprehensive four-step review to deconstruct and examine all aspects of the IRP analysis, from model inputs to model outputs. The IRP Review Team included members of the Planning, Engineering & Construction, Power Supply, and Finance departments, with additional support and consultation from members of the Internal Audit and Regulatory Affairs departments to ensure a consistent and methodical review. The IRP Review Team conducted its analysis in four steps:

- **First**, the IRP Review Team examined input data related to the IRP process.

This process involved 11 sub-teams to examine categories of AURORA model data and cross-verifying this data against source materials. This step

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<sup>2</sup> On May 29, 2020, Idaho Power provided a correction to the IRP related to the costs associated with the Jim Bridger Power Plant (Bridger). This correction required the replacement of seven pages in the Company’s Amended IRP but did not impact the Company’s recommendation of the Preferred Portfolio, which remained the least-cost, least-risk solution to serve customers.

<sup>3</sup> Order No. 34723.

also included reviewing regulatory decisions and orders that direct specific AURORA input treatment.

- **Second**, the IRP Review Team evaluated how data were modified or converted as part of incorporating it into the AURORA model, to ensure that any transformations or conversions were conducted properly.
- **Third**, the IRP Review Team examined the modeling logic that AURORA used to analyze the data, to verify and validate that the model itself was functioning in a logical manner and consistent with Idaho Power's knowledge of its own system and resources.
- **Fourth**, the IRP Review Team analyzed results to ensure that the outputs were consistent, logical, and accurate.

On July 31, 2020, Idaho Power updated the Commission and parties that the Company had concluded the detailed internal review and intended to perform a new end-to-end portfolio analysis. The Company committed to conduct this final IRP analysis and present a finalized Preferred Portfolio and near-term action plan by October 2, 2020.

**B. Idaho Power's Updated IRP Portfolio Modeling Strengthened the Company's Analysis.**

Idaho Power's *Second Amended 2019 IRP* applied an updated portfolio analysis process compared to that used in the previous Amended 2019 IRP. The process of conducting *the Second Amended 2019 IRP* was bolstered by the findings of the IRP Review, which resulted in adjustments to model inputs and model operations. Further, the updated portfolio selection and adjustment process in the *Second Amended 2019 IRP* included a number of methodological and modeling adjustments, including an

expanded array of resource options (such as pumped hydro storage, geothermal, and accelerated North Valmy Unit 2 exit), a wider range of Western Electricity Coordinating Council (“WECC”)-optimized resource mixes that were used as a starting point for manual optimization, and a strengthened manual adjustment process. The Company’s portfolio modeling proceeded in the following steps:

- Idaho Power formed the IRP Review Team to provide clarity around the entire IRP development process. The team’s objectives were to verify the modeling of key inputs, validate model outputs, ensure consistency and accuracy in each step of the IRP modeling process, and identify appropriate and efficient resolutions for any identified adjustments. The resulting 2019 IRP Review Report, filed as Attachment 3 to this Amended Application, provides lessons learned that were not only applied to Idaho Power’s final 2019 IRP but can be used in the development of future IRPs to ensure the process is more efficient, transparent, and accurate.
- Following the input and modeling adjustments identified in the review process, Idaho Power used AURORA’s Long-Term Capacity Expansion (“LTCE”) model to produce 24 different portfolios, based on a combination of three natural gas price forecasts and four carbon cost forecasts. Each of these forecast combinations were examined both with and without B2H. These portfolios were optimized for the WECC region, not necessarily for Idaho Power’s service area.
- From the 24 WECC-optimized portfolios, Idaho Power identified six starting points for manual adjustment with the objective of further reducing Idaho

Power-specific portfolio costs while maintaining reliability. These six portfolios reflect a broader selection of resource types, amounts, and timing compared to the four portfolios selected for manual adjustment in the Amended 2019 IRP.

- Each of the six portfolios were tested under four future natural gas and carbon price conditions (Planning Gas-Planning Carbon, High Gas-Planning Carbon, Planning Gas-High Carbon, and High Gas-High Carbon) for both B2H and non-B2H alternatives.
- The manual adjustment process focused on identifying optimal exit scenarios for the Jim Bridger coal units. Additionally, the Company performed sensitivity analysis of a year-end 2022 exit from Valmy Unit 2, rather than a year-end 2025 exit.
- Upon completion of the manual adjustments, the 24 final portfolios were evaluated in each of the four natural gas and carbon price conditions using the AURORA model to determine their net present value.
- Idaho Power applied a stochastic risk analysis to understand each portfolio's sensitivity to changes in natural gas prices, customer load, and hydroelectric variability. This step remained similar to that performed in the previous Amended IRP.

In total, the Company's updated portfolio modeling analysis evaluated 48 portfolios, 24 of which were developed by the LTCE model for optimization in the WECC-region, and 24 of which were developed through the manual refinement process.

**C. Idaho Power's Preferred Portfolio and Action Plan Enables Idaho Power's Clean Energy Future.**

The Company's new end-to-end IRP produced a Preferred Portfolio and Action Plan that continues to support the Company's key action items as set forth in the previous Amended IRP. Crucially, the *Second Amended 2019 IRP* continues to show a clear path toward a clean energy future through the procurement of new solar resources, a transition away from coal, and the development of B2H as a least-cost and carbon-free supply-side resource.

Specifically, the *Second Amended 2019 IRP* analysis identified the Company's Preferred Portfolio as the Planning Gas/Planning Carbon scenario with B2H; exit dates for the Jim Bridger units in 2022, 2026, 2028, and 2030; and potential exit from Valmy Unit 2 in 2022.<sup>4</sup> The updated Action Plan continues to support the same three core resource actions in the Preferred Portfolio of the Amended IRP, including (1) adding 120 MW of solar capacity by 2022; (2) exiting from four coal-fired generating units by year-end 2022, and from a total of five of the Company's seven coal-fired units by year-end 2026; and (3) the completion and operation of B2H in 2026.

Below is a summary of the Company's updated Action Plan.<sup>5</sup> The updated Preferred Portfolio results in only one potential change to Idaho Power's near-term 2020-2026 Action Plan—the exit timing of Valmy Unit 2. The Valmy Unit 2 exit is currently reflected as year-end 2022, but the exit window is subject to ongoing analysis to identify an optimal date between year-end 2022 and year-end 2025.

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<sup>4</sup> The specific exit date for Valmy Unit 2 remains subject to further analysis of economic and reliability concerns.

<sup>5</sup> The Jackpot Solar Power Purchase Agreement and the Company's exit from Valmy Unit 1 are not listed in the Action Plan, as these items were completed in 2019.

Year	Action
2020–2022	Plan and coordinate with PacifiCorp and regulators for early exits from Jim Bridger units. Target dates for early exits are one unit during 2022 and a second unit during 2026. Timing of exit from second unit coincides with the need for a resource addition.
2020-2022	Incorporate solar hosting capacity into the customer-owned generation forecasts for the 2021 IRP.
2020–2021	Conduct ongoing B2H permitting activities. Negotiate and execute B2H partner construction agreement(s).
2020–2026	Conduct preliminary construction activities, acquire long-lead materials, and construct the B2H project.
2020	Monitor VER variability and system reliability needs, and study projected effects of additions of 120 MW of PV solar (Jackpot Solar) and early exit of Bridger units.
2020	Exit Boardman December 31, 2020.
2020	Bridger Unit 1 and Unit 2 Regional Haze Reassessment finalized.
2020	Conduct a VER Integration Study.
2020-2021	Conduct focused economic and system reliability analysis on timing of exit from Valmy Unit 2.
2021–2022	Continue to evaluate and coordinate with PacifiCorp for timing of exit/closure of remaining Jim Bridger units.
2022	Subject to coordination with PacifiCorp, exit Jim Bridger unit (as yet undesignated) by December 31, 2022.
2022	Jackpot Solar 120 MW on-line December 2022.
2022	Exit Valmy Unit 2 by December 31, 2022. <sup>6</sup>
2026	Subject to coordination with PacifiCorp, exit Jim Bridger unit (as yet undesignated) by December 31, 2026. Timing of the exit from the second Jim Bridger unit is tied to the need for a resource addition (B2H).

Over the modeling time horizon, the Preferred Portfolio in the *Second Amended 2019 IRP* includes a number of additional changes from the previous analysis, including reductions in new wind and solar in the latter years of the analysis (reflecting the diminishing contribution of these resources to Idaho Power’s peak load), as well as a 15 MW increase in demand response, bringing the total amount in the Preferred Portfolio to 45 MW. Idaho Power believes that these updates to the Company’s IRP provide a clear and reliable path forward in pursuit of a clean energy future, while ensuring the least-cost, least-risk set of resources to meet customer needs and ensure reliability.

<sup>6</sup> As noted earlier, the specific exit date for Valmy Unit 2 remains subject to further analysis of economic and reliability concerns.

### III. PROPOSED SCHEDULE

The Commission previously vacated the procedural schedule in this matter at Idaho Power's request until the Company had concluded its review and submitted a revised proposed schedule.<sup>7</sup> Having met the October 2<sup>nd</sup> date the Company proposed to make this filing, Idaho Power now proposes to work with Staff and intervening parties to develop a procedural schedule for review of the *Second Amended 2019 IRP*. Idaho Power also commits to supplementing past responses to data requests to align with the changes to the IRP, which will assist the parties in their review.

The Company believes that an expeditious review and conclusion of the 2019 IRP by February 2021 will position us well to engage with stakeholders on the 2021 IRP, with the goal of filing that IRP in the latter part of 2021.<sup>8</sup> Idaho Power appreciates the support and flexibility of other parties and the Commission as the Company has endeavored to strengthen its resource modeling and planning processes in this proceeding.

### IV. CONCLUSION

Idaho Power recognizes that the Company's 2019 IRP has proceeded on an extended timeframe, including both this comprehensive update as well as previous updates and amendments. The Company appreciates the opportunity to ensure that its planning practices are complete and correct and believes that the process will help ensure that future IRP proceedings are more efficient, transparent, and replicable. And

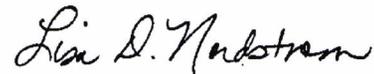
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<sup>7</sup> Order No. 34723 (July 16, 2020).

<sup>8</sup> In Order No. 30281 issued on March 26, 2007, the Commission found that receiving each electric utility's Integrated Resource Plan (IRP) within a narrower time frame would improve the overall planning process and assist in regional planning efforts. The Commission accepted Idaho Power's plan to file its next IRP on or before the last business day of June 2009 in Order No. 30317 (May 23, 2007). Although Idaho Power has endeavored to adhere to the June 30 timeframe in subsequent IRPs, the Company will likely file a Petition after the conclusion of this case requesting to delay filing of the 2021 IRP.

most importantly, the Company believes that the improved processes will support the Commission and stakeholders' confidence in this *Second Amended 2019 IRP*. For these reasons, Idaho Power respectfully requests that the Commission issue its order accepting the Company's *Second Amended 2019 IRP* and finding that the *Second Amended 2019 IRP* meets the requirements of Commission Order No. 22299.

DATED at Boise, Idaho, this 2<sup>nd</sup> day of October 2020.



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LISA D. NORDSTROM  
Attorney for Idaho Power Company

## CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 2<sup>nd</sup> day of October 2020, I served a true and correct copy of IDAHO POWER COMPANY'S AMENDED APPLICATION upon the following named parties by the method indicated below, and addressed to the following:

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Stephanie L. Buckner  
Executive Assistant

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-19-19**

**IDAHO POWER COMPANY**

**ATTACHMENT 1**

**SECOND AMENDED  
2019 INTEGRATED RESOURCE PLAN**

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-19-19**

**IDAHO POWER COMPANY**

**ATTACHMENT 2**

**SECOND AMENDED  
2019 INTEGRATED RESOURCE PLAN  
(REDLINED VERSIONS OF THE PLAN,  
APPENDIX C AND APPENDIX D)**

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION**

**CASE NO. IPC-E-19-19**

**IDAHO POWER COMPANY**

**ATTACHMENT 3**

**2019 IRP REVIEW REPORT**