Office of the Secretary
Service Date
March 16, 2021

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF IDAHO POWER COMPANY'S 2019 INTEGRATED RESOURCE PLAN	))))	**CASE NO. IPC-E-19-19** **ORDER NO. 34959**

On June 28, 2019, Idaho Power Company ("Idaho Power" or "Company") filed its 2019 Integrated Resource Plan ("IRP"). The IRP outlines and analyzes Idaho Power's strategy for meeting its customers' projected energy needs over the next 20 years. Idaho Power files an IRP every two years and uses it to guide resource acquisitions. On July 19, 2019, Idaho Power filed a letter stating that it would need to perform supplemental analysis to confirm the accuracy of the IRP's conclusions and findings. Idaho Power expected to file its additional analysis by October 31, 2019.

On August 13, 2019, the Commission issued a Notice of Application acknowledging Idaho Power's requested extension of time and stating the Commission would issue a Notice establishing procedure and deadlines after Idaho Power submitted its updated 2019 IRP analysis. Order No. 34410. On October 28, 2019, Idaho Power filed a letter stating it would need until November 8, 2019, before it could provide a new estimated filing date. On November 8, 2019, Idaho Power filed a letter stating it would file its supplemental IRP analysis no later than January 31, 2020. On January 31, 2020, Idaho Power filed its amended 2019 IRP.

On March 4, 2020, the Commission issued a Notice of Amended Integrated Resource Plan and Notice of Intervention Deadline. Order No. 34572. On May 13, 2020, the Commission issued a Notice of Modified Procedure establishing a July 22, 2020 comment deadline and an August 26, 2020 reply comment deadline. Order No. 34665.

On June 1, 2020, Idaho Power submitted replacement pages to its IRP updating costs associated with the Jim Bridger power plant. On July 1, 2020, Idaho Power filed "Idaho Power Company's Motion to Suspend Procedural Schedule and Update Regarding Boardman to Hemingway Transmission Line Project." On July 16, 2020, the Commission vacated the comment deadlines until further notice. Order No. 34723.

On July 31, 2020, Idaho Power submitted an update stating it would file a "final update" on October 2, 2020. On October 2, 2020, Idaho Power submitted an Amended Application and a

Second Amended 2019 Integrated Resource Plan. On November 16, 2020, the Commission issued a Notice of Amended Application and Notice of Revised Comment Deadlines. Order No. 34834.

Idaho Conservation League ("ICL"), Idaho Hydroelectric Power Producers Trust, d/b/a IdaHydro, Industrial Customers of Idaho Power, STOP B2H COALITION ("STOP B2H"), Micron Technology, Inc. ("Micron"), and Sierra Club intervened in this docket. The Commission received extensive written comments from interested members of the public.

Having reviewed the record, we acknowledge Idaho Power's 2019 Second Amended IRP.

THE IRP PROCESS

An IRP is a status report on the utility's ongoing, changing plans to adequately and reliably serve its customers at the lowest system cost and least-risk over the next 20 years. The report informs the Commission and the public about the utility's plans, and is similar to an accounting balance sheet, e.g., it is a "freeze frame" look at the utility's fluid, resource planning process. *See* Order No. 22299. The IRP is meant to demonstrate to the public that Idaho Power has prepared for, and considered, many scenarios through a reasonable planning process. The Commission thus expects a utility to have vigorously tested the IRP's assumptions to ensure the IRP accurately reflects changing markets and customer demand.

Idaho Power must update its IRP every two years and allow the public to participate in its development. *See id.*; Order No. 25260. The final biennial IRP must include the subjects required by the Commission's prior orders, including Order Nos. 22299, 25260. In summary, the IRP should explain Idaho Power's present load/resource position, expected responses to possible future events, and the role of conservation in those responses. It also should discuss:

> any flexibilities and analyses considered during comprehensive resource planning, such as: (1) examination of load forecast uncertainties; (2) effects of known or potential changes to existing resources; (3) consideration of demand- and supply-side resource options; and (4) contingencies for upgrading, optioning and acquiring resources at optimum times (considering cost, availability, lead time, reliability, risk, etc.) as future events unfold.

Order No. 22299. The IRP should separately address Idaho Power's:

- "Existing resource stack," by identifying all existing power supply resources;

- "Load forecast," by discussing expected 20-year load growth scenarios for retail markets and for the federal wholesale market including "requirements" customers, firm sales, and economy (spot) sales. This section should be a synopsis of the utility's present load condition, expectations, and level of confidence; and

- "Additional resource menu," by describing the utility's plan for meeting all potential jurisdictional load over the 20-year planning period, referring to expected costs, reliability, and risks inherent in credible future scenarios.

Id.

If the Commission finds the IRP discusses these required subjects, then it will enter an Order acknowledging that Idaho Power filed the IRP. By acknowledging the IRP, the Commission is acknowledging Idaho Power's ongoing planning process, not the conclusions or results reached through that process.

The 2019 IRP is Idaho Power's 14th resource plan prepared for state regulators. Second Amended 2019 IRP at 8. The 2019 IRP evaluated the planning period from 2019 to 2038. *Id.* Idaho Power described the four primary goals of the IRP as:

1. Identify sufficient resources to reliably serve the growing demand for energy and flexible capacity within Idaho Power's service area throughout the 20-year planning period.

2. Ensure the selected resource portfolio balances cost, risk, and environmental concerns.

3. Give equal and balanced treatment to supply-side resources, demand-side measures, and transmission resources.

4. Involve the public in the planning process in a meaningful way.

Id.

THE 2019 IRP REVIEW AND AMENDMENT PROCESS

In its review of the 2019 IRP, Idaho Power created teams of subject matter experts to examine the data used in the IRP model.[1] *Id.* at 2. Idaho Power then ensured that the data was in the correct format for the model. *Id.* at 3. Idaho Power then examined the model settings to ensure the data was interacting with the model in a logical manner and consistent with Idaho Power's knowledge of its own system and resources. *Id.* Idaho Power then reviewed the model output for

[1] For a comprehensive account of the Company's efforts to review and revise its 2019 IRP, see the 2019 IRP Review Report: Process and Findings, October 2020.

consistency and accuracy. *Id.* Through this process, Idaho Power identified several adjustments to its coal plant inputs and cost treatment, its natural gas plant inputs, demand response, financial assumptions and future supply-side resources, transmission inputs, and reliability inputs. *Id.* at 3 – 6. Idaho Power stated this process resulted in only one change to its near-term Action Plan, the accelerated exit from Valmy Unit 2. *See Id.* at 6.

To develop the 2019 IRP, the Company used for the first time the long-term capacity expansion ("LTCE") capability of AURORA to produce portfolios optimized to the Western Energy Coordinating Council ("WECC") territory.[2] *Id.* at 102. AURORA LTCE develops portfolios based on different planning assumptions about future natural gas and carbon costs. *Id.* at 103. For example, a future scenario with a high natural gas price and/or a high cost of carbon would be expected to have a lot of non-carbon emitting resources such as wind and solar because such a portfolio would likely be economic under such a scenario. *Id.* at 10. Idaho Power explained,

> Under the capacity expansion modeling approach used for the 2019 IRP, the AURORA model selects from the variety of supply- and demand-side resource options to develop portfolios that are least-cost for the given alternative future scenarios with the objective of meeting a 15-percent planning margin *and* regulating reserve requirements associated with balancing load, wind, and solar-plant output. The model can also select to retire existing generation units, as well as build resources based on economics absent a defined capacity need.

Id. at 10 (emphasis in original).

A subset of the top performing WECC-optimized portfolios were then manually adjusted by Idaho Power to reduce portfolio costs for the Idaho Power system. *Id.* at 102. Idaho Power evaluated 48 total portfolios, 24 of which were developed by the LTCE model and 24 of which were developed during the manual adjustment process. *Id.* at 104.

After the portfolios were developed using the LTCE function of AURORA then grouped together and manually optimized, Idaho Power used AURORA's portfolio cost analysis function to determine the portfolios' operating costs over the 20-year planning horizon. *See id.* at 111. Idaho Power explained,

> The AURORA software applies economic principles and dispatch simulations to model the relationships between generation, transmission, and demand to forecast market prices. The operation

[2] AUORA is an energy system modeling software developed by the company Energy Exemplar.

> of existing and future resources is based on forecasts of key fundamental elements, such as demand, fuel prices, hydroelectric conditions, and operating characteristics of new resources. Various mathematical algorithms are used in unit dispatch, unit commitment, and regional pool-pricing logic. The algorithms simulate the regional electrical system to determine how utility generation and transmission resources operate to serve load.

Id. at 111.

Idaho Power's 2019 preferred portfolio is based on planning gas and planning carbon conditions and selects B2H. *Id.* at 6. Idaho Power stated its Second Amended 2019 IRP "continues to demonstrate a clear cost-effective and reliable trajectory toward Idaho Power's clean energy future." Idaho Power's Reply Comments at 1. Idaho Power's near-term Action Plan, from 2020 to 2026, contains the following elements:

> (1) adding 120 [MW] of new solar generation by 2022; (2) exiting from four coal-fired units by year-end 2022, and from five of [Idaho Power's] seven coal-fired units by year-end 2026; and (3) completing the [B2H] transmission line by 2026. The development of B2H, in particular, provides a crucial carbon-free and cost-effective, supply-side resource that supports renewables and enables [Idaho Power's] transition away from coal.

Id.

THE COMMENTS AND REPLY COMMENTS

Two major issues emerged in Idaho Power's 2019 IRP process: (1) Idaho Power's use of the AURORA LTCE to develop portfolio scenarios, and (2) Idaho Power's analysis of the proposed B2H transmission line, specifically (a) partner commitments, and (b) market availability at the Mid-Columbia Interconnect ("Mid-C"). The parties' comments on these issues are presented together, along with Idaho Power's reply. The parties' other comments follow.

a. The AURORA LTCE.

Staff advised the Commission not to rely on Idaho Power's Second Amended IRP when making prudency determinations because the LTCE was optimized to the WECC, not Idaho Power's balancing authority. Staff Comments at 3. Staff expressed concern that the AURORA LTCE software may not be the tool for Idaho Power's IRP planning process. *Id.* Staff's concerns are rooted in its belief that optimizing portfolios to the WECC in the LTCE and then manually adjusting a subset of top performing portfolios may not result in a least-cost least-risk portfolio for

Idaho ratepayers. *Id.* at 4. Staff stated that the needs of the WECC are not necessarily the same as the needs of Idaho Power. *Id.* at 5. As an example, Staff pointed to the inconsistent and counterintuitive results Idaho Power obtained when modeling the Jackpot Solar PPA in the WECC-optimized LTCE, which led to Idaho Power's first request to suspend the 2019 IRP. *Id.* at 5. Staff described its concerns with Idaho Power's manually adjusted portfolios as:

> Although somewhat more cost effective for Idaho Power's customers, [Idaho Power] did not adequately explain the criteria for selecting these particular portfolios for manual adjustment, why it focused on timing of [Idaho Power's] exit from Bridger, and why manually adjusting WECC-optimized portfolios might be expected to produce the best results for Idaho Power's ratepayers.

Id.

Staff commended Idaho Power for withdrawing and revising its 2019 IRP and First Amended IRP upon learning that the analyses were flawed but doesn't believe Idaho Power addressed the underlying issue—the LTCE optimized the portfolios to the WECC instead of Idaho Power's service territory—in its Second Amended IRP. *Id.* at 6. Staff stated that Idaho Power should choose an objective function that optimizes portfolios to Idaho Power's system and iterated "that to be deemed prudent, [Idaho Power] must be able to demonstrate that proposed investments are in the best interests of Idaho Power's ratepayers, and not the WECC." *Id.*

Staff expressed concern that Idaho Power chose a tool—AURORA's LTCE—that is incapable of optimizing to Idaho Power's system and stated that Idaho Power should better define its goals when selecting a capacity expansion tool. *Id.* at 6-7. Staff also expressed concerns about Idaho Power's validation of the capacity expansion software. *Id.* at 7. Staff explained, "Software validation is the formal process of assuring that software is capable of meeting the requirements identified during the model selection process." *Id.* Staff stated that Idaho Power should have validated the model before buying the modeling software and accepting it for use. But instead, issues Idaho Power should have identified during software validation were not discovered until after the 2019 IRP was submitted. *Id.* at 7-8. Although Staff was concerned with Idaho Power's software validation, Staff was encouraged that Idaho Power verified that the LTCE model's results were consistent with Idaho Power's operations when developing the Second Amended 2019 IRP. *Id.* at 8.

ICL stated it has long recommended Idaho Power use capacity expansion software to model portfolios, and it believes Idaho Power considered a range of alternatives despite having to revise the IRP. ICL Comments at 2. ICL stated each revision showed the most economic choice for Idaho Power's customers is for Idaho Power to exit coal plants, especially when Idaho Power focused the analysis on the value to Idaho Power customers, rather than the WECC. *Id.*

Sierra Club supported Idaho Power's use of a capacity expansion model and stated that the model may have led to outcomes that otherwise would not have been immediately apparent to planners. Sierra Club Comments at 1-2. Sierra Club described the 2019 IRP modeling process as a "dramatic improvement" over the 2017 IRP. *Id.* at 2. Sierra Club stated that as Idaho Power refined its analyses in the 2019 IRP, accelerating the closure of the Jim Bridger coal plant emerged as the best option for Idaho Power's customers. *Id.* Sierra Club noted that Idaho Power owns 1/3 of Jim Bridger and PacifiCorp owns the rest. *Id.* Sierra Club stated the two utilities have expressed different timelines for exit/retirement, "Specifically, whereas Idaho Power is seeking exit from one Bridger unit as early as 2022 and a second Bridger [unit] in 2026, PacifiCorp announced they intend to only exit Jim Bridger 1 'by the end of December 2023,' and Bridger 2 by 2028, delays of a year and two years, respectively." *Id.* Sierra Club asked the Commission to not let PacifiCorp "hold Idaho Power hostage" to the "political machinations" in Wyoming, a state "openly hostile to the closure of non-economic coal plants." *Id.*

Sierra Club made three recommendations for modeling in the 2021 IRP process: 1) improve how AURORA values storage; 2) review projected net market purchases for reasonableness; and 3) make a more realistic estimate of future summer peak load growth. Sierra Club stated that the 2019 portfolios generated by AURORA "failed to include appropriate levels of storage, undermining the ability of [Idaho Power] to introduce more Idaho sited renewable energy cost effectively." *Id.* at 3. Sierra Club stated that it is unrealistic to assume that no new storage will come online in Washington, Oregon, and California in future years, and therefore the model likely assumes that large amounts of variable generation will be exported, which would suppress market prices in the model creating a bias toward west coast wholesale markets. *Id.* at 3-4.

STOP B2H alleged Idaho Power "manipulated the [AURORA] model base case data inputs . . . to stage the model for the next IRP. Perhaps the clearest example of this manipulation of the [AURORA] model is Idaho Power's unexplained sensitivity analysis around peaker O&M costs." STOPB2H Comments at 28. STOP B2H stated, "In this Second Revised 2019 IRP modeling, Idaho Power has fundamentally changed the dispatch logic for Idaho Power peakers by moving variable O&M costs (which accrue as the unit is operated) to a single startup cost which is incurred only when the unit is started." *Id.* STOP B2H stated that in the Second Amended 2019

IRP, "Idaho Power eliminated the roughly $3 MWh variable O&M adder in AURORA and replaced it with an hourly adder of over $100 per MWh for the first hour of operation." *Id.* at 29. STOP B2H said there were significant modifications to the amended IRP and that Idaho Power's responses to questions about its modeling were concerning. *Id.* STOP B2H alleged that Idaho Power included over 1,800 MW of "phantom coal generation" selling into the Mid-C market in AURORA. *Id.* at 35. STOP B2H also alleged Idaho Power did not include Bonneville Power Administration ("BPA") wheeling charges assessed to Idaho imports from the Pacific Northwest. *Id.* at 35.

Idaho Power Reply: In response to Staff concerns about model selection and validation, Idaho Power acknowledged a learning curve in the 2019 IRP process that it stated will be leveraged in the 2021 IRP process. Idaho Power Reply Comments at 26. Idaho Power stated the most current version of AURORA can optimize concurrently to the WECC and Idaho Power's system, a function the prior version did not have. *Id.* at 29. Idaho Power also noted "the importance of the model's ability to concurrently optimize resources for both Idaho Power's system and the broader WECC to produce market prices and operating conditions that are representative of specific modeled scenarios." *Id.* at 26-27. Idaho Power noted that the market for LTCE software is limited and stated that it reviewed software options using pre-defined criteria before it selected AURORA as the best option for Idaho Power's needs. *Id.* at 27-29.

Idaho Power responded to STOP B2H criticisms about Idaho Power's inclusion of startup costs for natural gas peaker plants in its Second Amended 2019 IRP. *Id.* at 46-47. Idaho Power stated it made the adjustment after it realized its natural gas peakers were dispatched more frequently in the model than in reality. *Id.* at 47. Idaho Power stated it carefully examined the costs associated with natural gas peakers O&M and startup costs and updated the model to more accurately reflect the actual costs incurred when dispatching a peaker plant. *Id.* at 47.

Idaho Power described its process of developing WECC-optimized portfolios through the AURORA LTCE model and manually adjusting them to identify portfolios based on Idaho Power's system needs. *Id.* at 24 – 40. Idaho Power acknowledged that its demand is approximately 2 percent of WECC overall average demand. *Id.* at 32. Idaho Power explained that it is important for AURORA to account for all WECC resources because the cost to serve Idaho Power's system depends on the resources selected for the WECC, because these resources affect market prices in the model. *Id.* at 31-32. Idaho Power stated, "While the objective function for the initial LTCE portfolios was to optimize for the WECC (of which Idaho Power's system is part), the series of manual adjustments changed that objective function to identify the least-cost, least-risk portfolio specifically for Idaho Power's system." *Id.* at 32. Idaho Power stated that the manual optimization process began with Idaho Power grouping WECC-optimized portfolios that had similar resource buildouts and timing. *Id.* at 33. Idaho Power stated that grouping WECC-optimized portfolios allowed Idaho Power to evaluate a variety of portfolios for manual optimization, responding to a prior critique that Idaho Power had evaluated a narrower selection of portfolios, allowed Idaho Power to determine if further cost reductions were possible for Idaho Power's specific system needs, and provided a reasonable level of assurance that the least-cost, least-risk resource portfolios were analyzed. *Id.* at 34. Idaho Power stated its manual adjustment process focused on identifying the optimal exit scenarios for Idaho Power's Jim Bridger coal units. *Id.* Idaho Power evaluated B2H and non-B2H portfolios for: Planning Gas-Planning Carbon, Planning Gas-High Carbon, and High Gas-High Carbon. *Id.* Idaho Power described the guiding principles for adjusting these portfolios. *Id.* at 35. These manual adjustments resulted in 18 new portfolios. *Id.* at 36.

Idaho Power then applied a fourth manual adjustment, which it applied to each carbon/gas planning future with and without B2H, which resulted in eight additional manually adjusted portfolios. *Id.* Idaho Power described the parameters for this adjustment, which aimed to test the cost-effective adoption of flexible resources at different sizes while accelerating solar and battery resources and reducing reliance on thermal resources. *Id.* at 36-37. Idaho Power determined manual adjustments under this fourth scenario exercise did not produce a lower-cost portfolio compared to the prior three manually adjusted scenarios. *Id.* at 37. In sum, Idaho Power's manual adjustment process resulted in it using AURORA to evaluate 24 more portfolios to determine their net present value. *Id.* at 37-38.

b. Boardman to Hemingway.

Staff expressed several concerns with Idaho Power's B2H analysis. Staff Comments at 8 – 11. First, Staff noted the analysis was conducted using WECC-optimized portfolios. *Id.* at 8. Second, Staff stated the analysis made "overly optimistic assumptions about the availability of power in the Pacific Northwest for import into Idaho Power's system." *Id.* Staff noted that Idaho Power did not evaluate the potential impacts of Washington's Clean Energy Transformation Act ("CETA") on the energy available for export from Boardman to Idaho Power's system. *Id.* at 9. Third, Staff stated Idaho Power did not analyze the substantially increased ownership share in B2H that Idaho Power is contemplating as its potential partners in the transmission line, PacifiCorp and

BPA, explore alternatives. *Id.* at 8. Staff stated that BPA excluded B2H from the 2020 BPA Transmission Plan, which describes BPA's ten-year system expansion and reinforcement plans. Further, PacifiCorp's 2019 IRP described B2H as "an alternative to PacifiCorp's originally proposed transmission segment from Eastern Idaho into Southern Oregon." *Id.* at 10 *citing* PacifiCorp 2019 IRP at 83.

Staff also stated Idaho Power's inadequate B2H investment evaluation left three areas of risk. First, Staff stated, "Forecasting future market prices for a capacity resource that has not been identified, and may not exist, is not a reliable method for evaluating costs associated with the B2H line." *Id.* at 9. Second, competition from other regional utilities looking for capacity resources will affect regional resource adequacy. *Id.* Third, neighboring states' clean energy policies will constrain capacity resource options. *Id.* at 9 – 10. Staff also stated that Idaho Power's 2019 IRP did not analyze a potential additional 24 percent ownership share (that coincides with BPA's ownership share) even though Idaho Power disclosed to the Securities and Exchange Commission that it was investigating a "hypothetical 45% ownership." *Id.* at 10 *citing* SEC Form 8-K. Staff stated that BPA has advanced policies that "build at the smallest scale possible to meet customer needs." *Id.* at 11 *citing* Department of Energy, BPA Executive letter from Elliot Mainzer to parties interested in the I-5 Corridor Reinforcement Project. Staff recommended Idaho Power provide a detailed analysis of 45 percent and 100 percent ownership shares of B2H during the next IRP cycle. *Id.* at 11. Staff asserted there would be potential tax implications if Idaho Power took on additional B2H ownership. *Id.* Staff also noted that Idaho Power proposes using B2H, a project estimated to cost $1 billion to $1.2 billion, with a 21 percent ownership share at $292 million, to fill a 5 MW capacity deficiency in August 2029. *Id.*

STOP B2H expressed concerns about B2H project costs and partner commitments. STOP B2H Comments at 7-12. STOP B2H stated that financial risk disclosures portrayed a different B2H risk scenario than presented in Idaho Power's IRP. *Id.* at 4, 12-16. STOP B2H disagreed with Idaho Power's assessment that Mid-C is a flexible, liquid, and reliable market. *Id.* at 5. STOP B2H stated that the Northwest Power and Conservation Council ("NWPCC") projects upcoming resource inadequacy at Mid-C, which STOP B2H stated will drive prices up at Mid-C. *Id.* STOP B2H noted that in IPC-E-19-14, Commission Staff determined the Jackpot PPA would cost Idaho Power less than Mid-C purchases over 20 years. *Id.* STOP B2H stated Idaho Power hasn't effectively evaluated market purchases from other major market hubs. *Id.*

STOP B2H disputed Idaho Power's statement that its ability to transact at Mid-C is transmission constrained. *Id.* STOP B2H noted that Idaho Power routinely exceeds the transmission line's 1200 MW commercial rating and that STOP B2H could not identify a specific date on which Idaho Power could not buy the power it wanted from Mid-C. *Id.* STOP B2H claimed Idaho Power operates its transmission Path 14 (to Mid-C) differently from its other transmission resources. STOP B2H noted that, in contrast to BPA and other utilities, Idaho Power refused to accept conditional firm energy on Path 14. *Id.* STOP B2H stated Idaho Power is not considering non-wire solutions, but other utilities are. *Id.* at 6.

STOP B2H doubted that Idaho Power's strategy to buy from Mid-C reflects a commitment to a clean energy future. *Id.* at 20. STOP B2H examined AURORA's carbon emissions forecast and highlighted that the preferred portfolio carbon forecast predicts greenhouse gas emissions will be 3.5 percent higher in 2028 than in 2019. *Id.* at 21. STOP B2H stated, "This persistent increase in Idaho Power's CO2 emissions occurs despite the addition of the 120 MW Jackpot Solar and the exit of one Bridger unit in 2022, the exit of a second Bridger unit in 2026 and the addition of B2H in 2026. In fact, in the three years after adding B2H (2026-2028), CO2 emissions on the Idaho Power system continue to increase." *Id.* at 23. STOP B2H stated that B2H is a clear path to a high-carbon future for Idaho Power. *Id.*

Idaho Power Reply: Idaho Power stated that it is negotiating with PacifiCorp and BPA about potential ownership and cost responsibility agreements for B2H. Idaho Power Reply Comments at 3. Idaho Power noted its July 1 and July 21, 2020 letters to the Commission advised the Commission that Idaho Power is exploring the acquisition of BPA's 24 percent ownership share. *Id.* Idaho Power stated BPA or its customers would pay for their respective usage of B2H. *Id.* Idaho Power emphasized that it is still negotiating with BPA and PacifiCorp, has no updates to report, expects the ownership agreements will be finalized by the time Idaho Power files its 2021 IRP. Further, Idaho Power stated it believes the negotiations on the ownership arrangements will not materially impact the 2019 preferred portfolio or the action items. *Id.* at 4. Idaho Power stated it will not agree to ownership arrangements that shift cost risks to its customers without corresponding increases in benefit. *Id.* at 5. Idaho Power stated it believes PacifiCorp remains committed to Idaho Power's longstanding plan to own 55 percent of B2H. *Id.* at 6. Idaho Power agreed to consider Staff's concerns, such as tax and cost implications of Idaho Power assuming a greater ownership in B2H in its 2021 IRP. But Idaho Power claimed these concerns are immaterial for this IRP cycle because Idaho Power would not expose its customers to increased costs without a commensurate increase in benefits due to partnership changes. *Id.* at 7, 9.

Idaho Power stated it evaluated B2H within AURORA based only on B2H's benefits to Idaho Power's native load customers, not on B2H's benefit to the WECC. *Id.* at 10. Idaho Power stated that B2H is a lower capital cost resource than other options (*e.g.*, $626 per kW-peak for B2H compared to $1,294 per kW-peak for a combined-cycle combustion turbine) and would increase market purchases between the Pacific Northwest and Idaho. *Id.* Idaho Power stated that B2H's benefits to other entities will be compensated and the revenue will flow back to Idaho Power's retail customers. But to ensure a conservative financial picture, Idaho Power's 2019 IRP did not consider these potential third-party revenues. *Id.* at 10-11. Idaho Power also noted the 20 percent cost contingency factored into the B2H costs are unique to B2H and not utilized for other resources. *Id.* at 11. Idaho Power compared the top performing portfolios with and without B2H to estimate that B2H could still be cost effective even if B2H costs 30-35 percent more than Idaho Power's current 20 percent contingency estimate. *Id.* at 12. Idaho Power stated it is consulting with an engineering firm to revise its B2H cost estimate, intends to revise the 2021 IRP's cost estimate, and is evaluating whether to continue to include a contingency in its B2H cost estimates when it does not do so for other resources. Idaho Power also stated the 2021 IRP would incorporate a sensitivity analysis. *Id.*

Idaho Power reiterated that B2H is foundational to a clean energy future. *Id.* at 13. Idaho Power responded to Staff's concerns about market availability in the Northwest by stating the Northwest has ample hydro capacity resources, which will pair well with renewable energy resources. *Id.* at 14-15. Idaho Power disagreed with Staff's assessment that CETA will negatively affect Idaho Power's ability to acquire power from wholesale markets because the referenced studies include committed retirements without factoring in future resource plans or additions, and are only two data points of many provided by Idaho Power in Appendix D. *Id.* at 15. Idaho Power stated that CETA would lead the Northwest to build substantial renewables with corresponding firm, potentially non-thermal, capacity. *Id.* at 15-16. Idaho Power emphasized that it and other utilities will still have to meet reliability requirements even when transitioning away from thermal generation, and that the region will build out resources to meet winter peak needs, which Idaho Power stated are likely to grow with electrification, leaving excess resource availability in the summer. *Id.* at 16.

Idaho Power described Mid-C as a "deep market hub, with dozens of counterparties" that is "very liquid" with daily average trading volume on a day ahead basis during heavy-load hours in June and July from 10,000 MWh to 29,000 MWh. *Id.* Idaho Power summarized the NWPCC's Pacific Northwest Power Supply Assessment for 2024 as continuing to show that the Northwest primarily faces issues during the winter, while Idaho Power's peaks are in late June and early July. *Id.* at 17. Idaho Power stated that it anticipates the Northwest's new resources will be largely solar-plus-storage, and wind-plus-storage, which are even more effective at addressing summer peak than winter peak. *Id.* at 18. Additionally, B2H could be used to import remote renewable resources to load centers when the Mid-C lacks adequate market capacity. *Id.* at 19. Idaho Power stated B2H would provide a different value to its customers than would individual projects like solar projects because B2H would be a firm, diverse resource that could provide energy after the sun goes down. *Id.* Idaho Power expressed that STOP B2H incorrectly claimed that Idaho Power improperly included "phantom coal generation" and excluded BPA wheeling rates from B2H modeling. Idaho Power also provided the retirement dates for the coal resources and asserted it modeled the BPA wheeling rates in the B2H segment. *Id.* at 19-20.

Idaho Power described the difference between a transmission line's commercial transmission capacity and its actual power flows. *Id.* at 20-21. Idaho Power explained that the transmission path between the Northwest and Idaho (Path 14) has a commercial transmission capacity of 1,200 MW, which means that the transmission provider cannot allocate more than 1,200 MW of firm transmission requests. *Id.* at 21. Idaho Power acknowledged that over the past few years, Path 14 has had "adverse unscheduled flow" above the 1,200 MW rating, sometimes by hundreds of MW, but this does not mean that capacity is unconstrained. *Id.* Idaho Power stated that B2H provides an ancillary and unquantified benefit: B2H's 1,050 MW of West-to-East capability would offer operational flexibility and decrease adverse loop flow that could otherwise result in a transmission line exceeding its rated capacity. *Id.* at 21-22. Idaho Power stated that the grid faces significant stresses and is mostly constrained by transmission rather than generation. *Id.* at 22. Idaho Power pointed to the summer 2020 rolling outages in California as a prime example and noted that resources were available at Mid-C, but transmission availability limited the ability to move resources to load. *Id.* Idaho Power also pointed to FERC- and NERC-approved rules requiring margins in response to STOP B2H's concerns that Idaho Power is improperly representing transmission availability. *Id.* at 22-26.

c. Commission Staff Comments.

Staff stated Idaho Power improved its peak load forecast in its load and resource balance ("L&RB") compared to the 2017 IRP by, for example, improving the way it models the relationship between peak load and consumption drivers such as temperature. Staff Comments at 12. Staff also recommended Idaho Power include its L&RB in future IRPs, as Idaho Power has done in the past, so that stakeholders can readily access the information rather than have to request it through Production Requests. *Id.* Staff also reiterated its two recommendations from the 2017 IRP case that were not incorporated in the 2019 IRP. Specifically, Idaho Power should 1) obtain peak forecasts by aggregating results from individual classes, and 2) provide a sensitivity analysis with its forecast. *Id.* at 13.

Staff proposed Idaho Power modify how it determines first capacity deficit dates for PURPA contracts. *Id.* at 12. Staff stated that Idaho Power should assume all PURPA contracts, including wind, will be renewed when they expire. *Id.* at 14. Staff also stated there should be a market availability component to determining transmission capacity and that the lower of the two values should be used. *Id.* at 15. Staff also recommended that non-owned reserves (such as municipal and cooperative electric companies) be included as a decrease in existing resources because Idaho Power uses its own resources to provide non-owned reserves. *Id.* Staff also stated Idaho Power should change how it portrays its energy efficiency in the peak L&RB by clarifying that it includes existing and "expanded" or cost-effective energy efficiency. *Id.*

Staff recommended Idaho Power improve how Idaho Power implements regulation reserve requirements in the IRP modeling process. *Id.* at 16. Staff stated Idaho Power should also explore the impacts of reserve shortfalls from reliability and cost perspectives. *Id.* Staff stated, "it is not known if shortfalls result in unacceptable loss of load; how much it costs for [Idaho Power] to fulfill any shortfalls; and whether the costs are added into the costs of portfolios." *Id.* at 16-17.

Staff noted that the Original 2019 IRP used a 9.59 percent discount rate, which included Idaho Power's WACC plus a tax gross-up for the equity-financed portion of the overall costs. *Id.* at 17. In the 2019 IRP's subsequent iterations, Idaho Power reverted to using a 7.12 percent discount rate that reflects the after-tax WACC. *Id.* Staff stated that it agreed with the reversion to the after-tax WACC discount rate but looks forward to Idaho Power's additional analysis and justification for a post-tax WACC discount rate. *Id.*

<u>Idaho Power Reply:</u> Idaho Power responded to critiques by Commission Staff, Sierra Club, and STOP B2H about its peak forecasting. Idaho Power Reply Comments at 54-62. Idaho

Power stated that "it is important to first consider the performance of the current model when evaluating whether the proposed changes will result in a more robust model with improved accuracy." *Id.* at 55. Idaho Power expressed concern that Staff's bottom-up approach (aggregating individual customer classes) would not improve accuracy over the current systemwide approach because the systemwide approach "leverages the rich system-level historical data, which allows the models to capture the nuances of peak behavior." *Id.* at 56. Idaho Power stated its present approach considers several variables that consumption modeling does not, such as "average daily peak temperature, average daily peak temperature trend, average system MW, and multiple indicator variables (e.g., adjustments for impacts related to the 2001 energy crisis)." *Id.* Idaho Power stated that a bottom-up approach would rely on a regression analysis using advanced metering infrastructure ("AMI") data. *Id.* Idaho Power stated its reliable bulk AMI data only goes back to 2014. *Id.* Additionally, the system peak data includes peak losses, which are about 8 to 12 percent, and the bottom-up approach would introduce additional uncertainty for calculating losses. *Id.* at 56-57. Idaho Power agreed that class peak dynamics are important to know and therefore, in response to Staff's recommendation, proposed that class-level AMI data be used to inform assignments of class contribution to system peak. *Id.* at 57. Idaho Power also agreed its future IRPs would analyze class-level peak contribution and include sensitivity or probability bands of its system peak forecast. *Id.*

Idaho Power stated that it retained Energy and Environmental Economics, Inc., to conduct a variable energy resource integration study, which included examining new regulation reserve requirements for the 2021 IRP. *Id.* at 39. Idaho Power agreed to explore the cost and reliability impacts from reserve shortfalls during the 2021 IRP process. *Id.*

Idaho Power responded to Staff critiques about the L&RB. *Id.* at 68-72. Idaho Power disagreed with Staff's recommendation to assume all QFs, including wind QFs, would renew their ESAs upon expiration. *Id.* at 68-69. Idaho Power listed factors it considered when deciding to assume that wind QFs would not renew their ESAs, including "the high cost of repowering wind facilities, reductions and/or elimination of tax credits applicable to wind projects, current integration costs for wind, and the notable fact that none of Idaho Power's wind QFs have requested or entered into replacement ESAs." *Id.* at 69. Idaho Power noted that of its 32 wind QF ESAs, the first is set to expire in 2025. *Id.* Idaho Power noted that four hydro QFs, two biomass QFs, and two cogeneration QFs did not renew contracts; thus, assuming renewal for any resource type adds risk to planning. *Id.* Idaho Power recognized that wind repowering does occur but Idaho

Power has no evidence to support intent or interest in repowering wind QFs. *Id.* at 70. Idaho Power stated it is open to revising its assumption as more QF wind replacement information becomes available, and its next IRP will include a sensitivity analysis about wind replacement assumptions and their impacts on resource planning. *Id.* Idaho Power agreed with Staff's recommendation that market availability should be evaluated alongside transmission capacity. *Id.* Idaho Power also agreed that the L&RB evaluation should include the contingency reserve requirements to serve transmission customers. *Id.* at 71. Idaho Power stated its L&RB already includes all cost-effective energy efficiency ("EE") measures, not just existing EE. *Id.* at 72.

d. ICL Comments.

ICL stated, "Overall, the 2019 IRP evidences a substantial improvement in Idaho Power's portfolio development and assessment process." ICL Comments at 1. ICL recommended the Commission acknowledge the IRP. *Id.* ICL also recommended the Commission direct Idaho Power to: 1) use publicly available forecasts for the natural gas price forecast and other critical inputs, or require Idaho Power to disclose all data, methods, and assumptions used for any proprietary forecast; 2) continue to improve its assessment of climate impacts on load and generation; 3) include distribution level planning in future IRPs to reflect the growth of DERs; and 4) issue a Request for Proposals to collect current and location-specific information on potential generation resources. *Id.* at 1-2.

ICL acknowledged that Platt's, the third-party vendor that created Idaho Power's natural gas forecast, presented its overall method and results to the IRPAC. But ICL claimed the IRPAC could not fully review the underlying basis for the price forecast. *Id.* ICL stated that Idaho Power merely listed other utilities that use proprietary forecasts and recommended Idaho Power analyze which gas price source has accurately predicted future prices. *Id.*

ICL stated that Idaho Power slightly improved the climate change assessment but Idaho Power reviewed only two studies, made general observations about the timing and volume of snow runoff and did not quantify the impacts in the load forecast or incorporate climate-related generation variability into the modeling process. *Id.* at 3. ICL requested the Commission direct Idaho Power to work with the scientific community and IRPAC on methods that account for climate-related changes to customer demand patterns and generation profiles. *Id.*

ICL expressed concern that Idaho Power determined resource costs based on stale data from the National Renewable Energy Laboratory's 2018 Annual Technology Baseline report. *Id.* at 4. ICL stated that other utilities in the region have gathered specific information from developers through Requests for Proposals in their IRP processes, which provides utility- and project-specific information and is the best way to determine accurate pricing and performance characteristics. *Id.* ICL stated that Idaho Power did not evaluate the impact of DERs on the load forecast or include that impact in the generation resource options the AURORA LTCE could select. *Id.* ICL stated Idaho Power took a "cursory look" at how DERs might defer some distribution level needs and made "crude assumptions" by using average values rather than location-specific values. *Id.* ICL recommended the Commission direct Idaho Power to incorporate DER concerns in the IRP process and do a "distribution level analysis of needs, constraints, hosting capacity, and options." *Id.*

ICL stated that Idaho Power analyzed energy storage technologies without considering ancillary services and by merely looking at energy and capacity that storage technologies can provide. *Id.* at 4-5. ICL recommended the Commission direct Idaho Power to work with the IRPAC to adopt methods to quantify the services storage can provide. *Id.* at 5.

Idaho Power Reply: In response to ICL's recommendation that Idaho Power issue a request for information ("RFI") about projects specific to Idaho and Idaho Power's needs to determine accurate pricing and performance characteristics to use as inputs in future IRPs, Idaho Power stated that it uses pricing information from several well-established and publicly available sources and adjusts the data to obtain location-specific data. *Id.* at 41. Idaho Power also stated that RFIs typically are not used for long-term resource planning, require substantial time and effort from bidding parties, and solicit near-term and time-limited information. *Id.* at 41-42.

Idaho Power responded to ICL's comments that its natural gas forecasts should be publicly available like the U.S. Energy Information Administration ("EIA") forecast. *Id.* at 62-65. Idaho Power stated it used the publicly available EIA High Oil and Gas Resource and Technology forecast in its 2017 IRP, which was highly criticized. *Id.* at 63. Idaho Power stated it chose a third-party forecaster, S&P Global Platts North American Natural Gas Analytics ("Platts"), based on IRPAC feedback and looking at peer utilities. *Id.* Idaho Power reiterated that a Platts representative presented Platts' forecast and assumptions in a 2019 IRPAC meeting. Further, the Platts forecast is more transparent than the EIA forecast because only the EIA forecast's output, and not the EIA forecast's input or assumptions, is publicly available. *Id.* Idaho Power stated that it verified the reasonableness of the Platt's forecast by comparing it to EIA forecasts, Moody's Analytics and the NYMEX natural gas futures settlements. *Id.* at 64. Overall, Idaho Power stated the Platts natural gas forecast is reasonable and should remain the source for future IRPs. *Id.* at 64-65.

Idaho Power responded to critiques from ICL, Micron, and Sierra Club about the role of DERs in the IRP process. *Id.* at 42-44. Idaho Power stated it adjusted its long-term sales forecast downward to reflect the impact of estimated customer adoption of DERs. *Id.* at 43. Idaho Power calculated customer billing histories for Schedules 6, 8, and 84 and multiplied them by the estimated use-per-customer sales impact, which Idaho Power stated was derived from "historical trends and policy considerations." *Id.* At the end of the 20-year forecast, the annual residential sales forecast was reduced by about 38 aMW, and the commercial reduction was less than 4 aMW. *Id.* Idaho Power acknowledged that customer-generators accounted for one-half of one percent of retail customers when the 2019 IRP was developed but that recent adoption of solar is "relatively strong" in Idaho Power's service territory, and the higher values will be reflected in the 2021 load forecast. *Id.* Idaho Power agreed to include additional DER opportunities in the 2021 IRP and present those ideas in the 2021 IRPAC meetings. *Id.*

Idaho Power responded to Sierra Club and ICL's critiques about the assessment of battery storage technology in the 2019 IRP and stated that it "views storage solutions as an important part of Idaho Power's future, both to integrate new and existing resources and to provide ancillary services." *Id.* at 45. Idaho Power noted that its preferred portfolio includes 80 MW of battery storage, as selected economically by the AURORA LTCE, and that it included numerous storage technologies and sizes as available for selection in the model. *Id.*

Idaho Power responded to ICL's critique about assessing the impacts of climate change on energy demands and generation sources. *Id.* at 65-68. Idaho Power stated that it "tracks the latest climate projections, as well as studies that are being conducted to reflect relevant temperature, precipitation, and streamflow changes in the Snake River Basin." *Id.* at 65. Idaho Power noted that its hydropower system is downstream from federally managed irrigation and hydropower projects and changes to federal hydro operations will impact Idaho Power's hydropower system. Thus, Idaho Power relies on the River Management and Joint Operating Committee, Second Edition, part 1 report ("RMJOC-II Part 1 Report"). *Id.* Idaho Power stated the RMJOC-II Part 1 Report focuses on "potential changes to temperature, precipitation, snowpack, and natural streamflow in the Columbia and Willamette River Basins under a variety of future climate scenarios and with multiple methods for responding to hydrological changes." *Id.* at 65-66. Idaho Power stated it intends to continue using the RMJOC-II studies and findings as they become available. By doing so, the Company "maintains a consistent framework for understanding the risks and uncertainties associated with climate change impacts to hydropower throughout the Snake River Basin and allows Idaho Power's projections to be informed by findings for the upstream and downstream federal system." *Id.* at 66. Idaho Power stated that it conducted its own internal climate risk analysis for the 2019 IRP because upstream reservoir regulation was not yet available. *Id.* Both its internal analysis and the RMJOC-II Part 1 Report "found that inflow to Brownlee Reservoir is expected to increase in the winter to spring period and little-to-no change is expected to occur in the summer to fall, through the 20-year IRP planning period." *Id.*

e. Sierra Club Comments.

Sierra Club stated that the 2019 IRP "represents significant steps forward, both within the [IRPAC] process and in the use of a substantially more capable analytical framework compared to that used in the 2017 IRP." Sierra Club Comments at 1. Sierra Club stated there was an increase in transparency and stakeholder engagement in the 2019 IRP process. *Id.* Sierra Club noted that the 2019 IRP predicts dramatic increases in Idaho Power market purchases, forecasting that Idaho Power will acquire almost one-fourth of its total customer sales from other western entities by 2038. *Id.* at 5. Sierra Club stated the shift to net energy purchases largely coincides with the planned retirement of Idaho Power's coal and PURPA wind contracts (which Idaho Power assumes will not renew). *Id.* Rather than adding generation in Idaho, the 2019 IRP backfills with market purchases. *Id.* Sierra Club stated, "An expectation that [Idaho Power] will be able to rely on others for such a high portion of the energy required for its customer load seems highly unrealistic and should be carefully examined when reviewing portfolio alternatives in the 2021 IRP iteration." *Id.* at 6. Sierra Club stated, "[DERs] sited in Idaho could mitigate the risk of over-reliance on out-of-state resources." *Id.* at 7.

Sierra Club stated the 2019 IRP overestimates future peak load growth to the disadvantage of Idaho-based resources. *Id.* at 6. Sierra Club noted that the 2019 IRP projects peak loads to grow by 50 MW per year, while the average energy requirement is predicted to grow by 20 MW per year. *Id.* Sierra Club stated, "Idaho Power's assumption of aggressive peak load growth reduces the perceived value of low-cost energy sources such as Idaho solar and implies unrealistic barriers to economically beneficial earlier retirement of coal units." *Id.* at 6-7.

Idaho Power Reply: In response to Sierra Club's statements about Idaho Power's ownership interest in the Jim Bridger coal units, Idaho Power clarified that it has no contractual mechanism with PacifiCorp to pursue early exit and is working with PacifiCorp to determine the costs and details of exiting Jim Bridger. Idaho Power Reply Comments at 40.

Idaho Power responded to Sierra Club criticisms about its reliance on market purchases. *Id.* at 47-48. Idaho Power stated that it modeled transmission constraints in the 2019 IRP and that it is engaged with Northwest utilities to create the framework for a regional resource adequacy program to provide coordinated planning on a regional basis. *Id.*

Idaho Power responded to Sierra Club claims that Idaho Power's peak load forecast is dramatically higher than historic records might indicate. *Id.* at 57-58. Idaho Power stated that, when making a historic comparison to peak, it is important to adjust for demand response ("DR") and any major changes in customer base (e.g., exclusion of Astaris), and to recognize that not every annual peak-hour event was driven by the same or similar weather conditions. *Id.* at 58. In response to Sierra Club's graph, Idaho Power stated, "adding a trendline through actual peaks—where each historical year's peak has its own probability of occurrence—has little meaning and can lead to confusing results and misinterpretation." *Id.* at 58. Idaho Power stated that for IRP planning purposes, it uses 50th percentile conditions plus a 15 percent planning margin. *Id.* "Comparing the trend of average peak load growth unadjusted for historical weather or precipitation to a forecast reflecting 50th percentile conditions plus 15 percent would always demonstrate that the trendline is less than forecasted peak." *Id.* Idaho Power stated Sierra Club's historic figures only go back to 2000, and that its method is more accurate than Sierra Club's. *Id.* at 59. Idaho Power also states that its system has become "peakier" with peak growth outpacing average energy consumption, particularly in summer months. *Id.*

Idaho Power stated it uses 12 regression equations, each for one month of the year, generally estimated over 25 years of historical data. *Id.* at 67. "The peak-hour forecasting regressions express system peak-hour demand as a function of monthly sales (stated in average MW) and average peak-day temperatures, as well as real electricity prices and precipitation when statistically significant." *Id.* Idaho Power's three special contract customers' contribution to system peak is separately determined and added to the overall system peak demand. *Id.* Idaho Power stated that the forecast of average peak-day temperatures, which are calculated over the most recent 30-year period, is a key driver of the monthly system peak models. *Id.* Idaho Power models peak scenarios based on 50th, 90th, and 95th percentiles for each month of the year, with June, July, and August re-specified to reflect an increasing temperature trend during those months. *Id.* Idaho Power stated it will continue to work toward better reflecting climate change in its load and generation forecasts. *Id.* at 67-68.

f. STOP B2H Comments.

STOP B2H stated it is "extremely concerned with the accuracy and validity of the data in Case No. IPC-E-19-19." STOP B2H Comments at 4. STOP B2H disputed Idaho Power's assessment that its preferred portfolio enables a clean energy future. STOP B2H stated that 2005 is not a representative year to use as a baseline for carbon emissions because 2005 was an extremely poor year for Idaho Power's hydroelectric resources. *Id.* at 23-24. STOP B2H stated that it "has examined the carbon intensity of Idaho Power's individual resources and has concluded that Idaho Power has quietly embarked on a high-carbon operating strategy for its gas-fired resources and unfettered trading in the EIM appears to be the motive." *Id.* at 24. STOP B2H examined the carbon intensity of the Langley Gulch combined-cycle combustion turbine from 2013 to 2019 and concluded that Idaho Power operated Langley Gulch efficiently for the first five years and averaged 820 lbs of CO2 per MWh from 2013 to 2017. *Id.* at 25. STOP B2H stated that after Idaho Power joined the EIM in 2018, "Idaho Power profoundly changed the operating regime of Langley Gulch resulting in gross inefficiencies in operation." *Id.* STOP B2H stated that the carbon intensity of Langley Gulch jumped by almost 20 percent to 969 lbs. of CO2 per MWh. *Id.* STOP B2H stated,

> This curious operation of Langley Gulch by Idaho Power in 2018-2019 resulted in almost 200,000 tons of unnecessary CO2 emissions and over $10 million of unnecessary fuel costs, at actual 2018-2019 gas prices, to the detriment of ratepayers . . . . Under the EIM, the 'benefits' of the EIM accrue to stockholders while this $10 million of excess fuel costs is paid by ratepayers.

Id. STOP B2H stated it "does not know the drivers behind this wasteful and expensive operation of Langley Gulch but maintaining the plant in wasteful hot standby to bid into the EIM, frequent operation at partial load, and operating power augmentation (duct firing) to achieve quick and dirty ramping capacity for EIM participation are likely contributors." *Id.*, FN 43.

STOP B2H stated that Idaho Power's stochastic analysis in the Second Amended 2019 IRP was improperly structured to bias the analysis against portfolios optimized under a high-carbon cost future. *Id.* at 27. STOP B2H alleged Idaho Power did this "by hard-wiring different carbon price inputs into AURORA depending on which Portfolio was being studied." *Id.* STOP B2H stated, "This hidden bias against every Portfolio optimized for a high carbon cost future in the stochastic analysis ensures that Idaho Power will always prefer a Portfolio with little or no renewables." *Id.*

STOP B2H urged Idaho Power to evaluate whether adding new resources within Idaho Power's service territory would enable Idaho Power to reduce or eliminate the 330 MW Capacity Benefit Margin on Path 14, which it stated would open 330 MW of new long-term firm capacity on Path 14. *Id.* at 36. STOP B2H relied on Staff's analysis in IPC-E-19-14, which demonstrated that the Jackpot Solar PPA would be more cost effective than buying from Mid-C. *Id.* at 32-34.

STOP B2H disputed Idaho Power's load and sales forecast. *Id.* at 37-45. STOP B2H stated, "The increase in Idaho's residential population has been perfectly matched by a decrease in average residential use." *Id.* at 37. STOP B2H claimed that Idaho Power consistently overestimates its load forecasts in its IRPs. *Id.* at 38-39. STOP B2H asked if Kalman filtering, spectral decomposition, or time-series analysis had been applied to Idaho Power's long-term projections, and if not, why not. *Id.* at 39. STOP B2H stated that the "hyper-complex mixed regression analyses employed for the utility's simulations of sales and load forecasts, dependent as they are on an impossibly large collection of open-ended parameters, is at the root of the problem[.]" *Id.* at 40.

STOP B2H stated that Idaho Power's DR savings have declined since 2010-2012 and remained relatively static since 2015, and are expected to achieve the same savings in 2036 as were achieved in 2012. *Id.* at 47. STOP B2H stated that Idaho Power chronically underestimates its EE targets, which makes the resource stack forecast untrustworthy. *Id.* at 48. STOP B2H stated, "The Commission should not acknowledge the Second Amended 2019 IRP as it stands and, at a minimum, should pause continued permitting and construction of the B2H until partners are signed and a solid budget developed." *Id.* at 52.

<u>Idaho Power Reply:</u> Idaho Power responded to STOP B2H's argument that B2H would increase Idaho Power's near-term carbon emissions by focusing on B2H as a long-term resource that will allow Idaho Power to integrate more renewables across widespread geographic areas. *Id.* at 13-14. Idaho Power stated that stochastic risk analysis is unnecessary for carbon price futures, contrary to what STOP B2H argued, because the range of carbon prices are neither unpredictable nor uncertain. *Id.* at 38. Idaho Power stated that two of the three portfolio groupings selected for manual optimization were developed under a high-carbon price scenario to ensure a range of possible policy futures. *Id.* at 39.

Idaho Power responded to STOP B2H critiques about demand-side resources and stated that it has a mature EE and DR portfolio and has steadily increased its DSM offerings. *Id.* at 48. Idaho Power stated that in 2019, it achieved its highest EE savings since the Idaho Energy

Efficiency Rider was established in 2002, and that it has achieved a 25 percent increase in energy savings since 2015. *Id.* at 48-49. Idaho Power contrasted its EE growth to regional EE savings, which it stated have plateaued or declined since 2010. *Id.* at 49-50. Idaho Power stated that the AURORA LTCE model could select additional EE bundles above the amounts identified as economic and achievable in the third-party Potential Study conducted by Applied Energy Group for Idaho Power, but the model selected none of the higher-cost EE bundles. *Id.* at 50-51.

Idaho Power responded to STOP B2H comments about Idaho Power's DR efforts. *Id.* at 52-54. Idaho Power acknowledged that its DR capacity has decreased since 2012 but stated that its DR programs were designed "specifically to avoid or delay the need to build new supply-side peaking resources within very limited peak hours and days." *Id.* at 52. Since 2012, Idaho Power stated that its analyses have forecasted no capacity deficit in peak hours, and therefore Idaho Power petitioned and the Commission approved temporary suspension of two out of three DR programs to avoid spending money on an unneeded resource. *Id.* at 52-53. Idaho Power stated that despite the decrease in DR, its 2019 DR capacity as a percent of system peak is significantly higher than most utilities. *Id.* at 53-54. Idaho Power stated that its IRP analysis showed that additional DR capacity will not be the lowest-cost resource until 2030. *Id.* at 54.

Idaho Power separately responded to STOP B2H claims about its modeling. *Id.* at 60-62. Idaho Power stated it has incorporated considerations and feedback into its modeling processes and its "present forecast methodology provides a long-term planning framework that aligns retrospective comparisons to weather-adjusted growth, while accounting for the specific factors that impact Idaho Power's future load." *Id.* at 61. Idaho Power stated that it continues to believe that its inferred econometric models are "the best available means for long-term load growth forecasting, with their ability to factor in both a rich history of data and to account for a range of factors impacting load growth. These models are the industry standard for long-term load forecasting in the IRP context." *Id.* Idaho Power stated that clear data refutes STOP B2H's claim that decreased average residential use has counteracted an increase in residential population and noted that its weather-adjusted residential sales recently have grown about 1 to 2 percent per year, and its agricultural base continues to grow. *Id.* at 61-62.

Idaho Power responded to STOP B2H claims about its carbon emissions. *Id.* at 72-79. Idaho Power stated that the choice of 2005 as a baseline year is consistent with multiple greenhouse gas ("GHG") reduction frameworks and legislation including the proposed Waxman-Markey Bill. *Id.* at 72. Idaho Power stated that 2005 was selected as a baseline year "because that year was a generational peak for national GHG emissions." *Id.* at 73. Idaho Power acknowledged that its GHG profile consistently fluctuates based on stream flows and therefore it has consistently stated that an average intensity over several years is an appropriate metric. *Id.* Idaho Power noted that its voluntary GHG reduction goals have been extended and increased twice since 2009, including its March 2019 public proclamation that it will provide customers with 100 percent clean energy by 2045. *Id.*

Idaho Power responded to STOP B2H's claim that it operates Langley Gulch to maximize EIM participation to the benefit of shareholders and the detriment of ratepayers. *Id.* at 74-79. Idaho Power stated that it discovered discrepancies between FERC Form 1 data submitted to FERC, and upon which STOP B2H based its analysis, and the actual data collected through Idaho Power's continuous emissions monitoring system and gas billing records. *Id.* at 74-75. Idaho Power stated, "The values for Langley Gulch in 2018 and 2019 were inadvertently overstated because of manual-entry error for the two months of August 2018 and July 2019 in the FERC Form 1." *Id.* at 75. Idaho Power filed corrected FERC Form 1 data in January 2021. *Id.* at 75. Despite the error, Idaho Power stated that neither data set supports STOP B2H's claim that Idaho Power has embarked on a "high-carbon operating strategy." *Id.* Idaho Power stated that Langley Gulch's 2018 and 2019 emissions are "more, or less in line" with the 2013 to 2017 data with variation driven by factors such as customer demand and weather. *Id.* Instead of focusing solely on Langley Gulch, Idaho Power stated that from 2013 to 2018, "generation from thermal resources has declined and total CO2 emissions from those resources decreased by almost 50 percent[.]" *Id.* at 76. Idaho Power stated that both the costs and benefits of EIM participation flow back to customers and are realized as reduced net power supply expenses. *Id.* at 77. Idaho Power described the EIM dispatch procedures. *Id.* at 78.

g. Micron Technology Comments.

Micron noted that it is Idaho Power's largest customer and depends on Idaho Power's reliable service at reasonable rates to remain competitive in the global marketplace. Micron Comments at 1. Micron stated that it supports Idaho Power's transition to clean energy, which it described as the hallmark of the 2019 IRP. *Id.* Micron stated that it has established sustainability goals, "including aggressive efforts to reduce its emissions and power its operations with renewable energy." *Id.* at 2. Micron described these sustainability goals as "a 40 percent absolute reduction in greenhouse gases from its 2018 levels and implementing 100 percent renewable energy where available." *Id.* Micron stated that it is "currently evaluating several renewable energy strategies to meet its internal goals and is interested in potential cost-competitive partnerships that could be formed with [Idaho Power]." *Id.* Micron stated that Idaho Power's diligent efforts resulted in a preferred portfolio that "is marked by reasonable exits from coal-fired generating facilities, the addition of renewable resources, and access to regional electricity markets allowing for increased reliability and cost-effective electricity purchases." *Id.* Micron stated that it is specifically interested in Idaho Power's plans to add significant solar and battery facilities. *Id.* at 3. Micron stated it is evaluating possibilities including virtual power purchase agreements and on-site renewable generation at its Boise campus, and it is interested in working with Idaho Power and the Commission to develop cost-effective strategies to increase its use of renewable energy and invest in local renewable energy projects. *Id.*

PUBLIC COMMENTS

The Commission received hundreds of written comments on Idaho Power's 2019 IRP. The public comments predominately expressed support for Idaho Power's transition away from coal-fired generation resources toward greater integration of renewable resources and encouraged Idaho Power to pursue a more aggressive timeline for this transition.

DISCUSSION AND FINDINGS

Idaho Power is an electrical corporation and public utility as defined in *Idaho Code* §§ 61-119 and -129, and the Commission has jurisdiction over it and the issues in this case under Title 61 of the Idaho Code, including *Idaho Code* § 61-501. Having reviewed the record, we find that Idaho Power's Second Amended 2019 Electric IRP satisfies the requirements in the Commission's prior orders. We thus acknowledge that Idaho Power has filed the Second Amended 2019 Electric IRP. In doing so, we reiterate that an IRP is a working document that incorporates many assumptions and projections at a specific point in time. It is a plan, not a blueprint, and by issuing this Order we merely acknowledge *Idaho Power's ongoing planning process*, not the conclusions or results reached through that process. With this Order, the Commission does not approve the IRP or any resource acquisitions referenced in it, endorse any particular element in it, opine on Idaho Power's prudence in selecting the IRP's preferred resource portfolio, or allow or approve any form of cost recovery. The appropriate place to determine the prudency of the IRP or Idaho Power's decision to follow or not follow it, and the validation of predicted performance under the IRP, is a general rate case or other proceeding where the issue is noticed.

As evidenced by the extensive procedural record, the 2019 IRP process entailed significant learning about the intricacies of LTCE modeling. We appreciate Idaho Power's substantial efforts to ensure that the model reflects its understanding of its own system. We also appreciate the continued engagement of parties and other members of IRPAC. We look forward to seeing the co-optimized modeling in the 2021 IRP. Idaho Power responded to numerous party comments by indicating it will continue to work with IRPAC to address the concerns raised by the parties. We believe that approach is a good practice and that IRPAC is the proper forum to work through the technical issues and disputes. Idaho Power's presumption that PURPA contracts will renew, and the associated impact on Idaho Power's L&RB, should be examined in both Idaho Power's forthcoming capacity deficit filing and in IRPAC meetings. And B2H partnership status and demonstrating market availability at Mid-C should continue to be areas of focus.

The IRP planning process attempts to ensure that Idaho Power is well-positioned to meet the demands of a changing energy sector. While there are inherent limitations in trying to predict a multitude of conditions over the next 20 years, the planning process is worthwhile when Idaho Power strenuously evaluates model inputs, verifies the model logic, and collaborates with engaged stakeholders. Doing so helps ensure that Idaho Power can continue to provide reliable and economical service to its customers as the energy sector evolves.

In its reply comments, Idaho Power requested Commission authorization to delay filing its 2021 IRP. We find that interested persons and parties should have the opportunity to comment on the request and therefore direct Idaho Power to file a petition requesting an extension to its 2021 filing deadline.

ORDER

IT IS HEREBY ORDERED that the filing of Idaho Power's Second Amended 2019 IRP is acknowledged.

THIS IS A FINAL ORDER. Any person interested in this Order may petition for reconsideration within twenty-one (21) days of the service date of this Order. Within seven (7) days after any person has petitioned for reconsideration, any other person may cross-petition for reconsideration. *See Idaho Code* § 61-626.

DONE by Order of the Idaho Public Utilities Commission at Boise, Idaho this 16th day of March 2021.

PAUL KJELLANDER, PRESIDENT

KRISTINE RAPER, COMMISSIONER

ERIC ANDERSON, COMMISSIONER

ATTEST:

Jan Noriyuki,
Commission Secretary

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