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IDAHO PUBLIC
UTILITIES COMMISSION

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF IDAHO POWER COMPANY'S APPLICATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR THE BOISE BENCH BATTERY STORAGE FACILITY.	)))))))	CASE NO. IPC-E-24-16

IDAHO POWER COMPANY

DIRECT TESTIMONY

OF

JARED L. ELLSWORTH

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

A. My name is Jared L. Ellsworth and my business address is 1221 West Idaho Street, Boise, Idaho 83702. I am employed by Idaho Power as the Transmission, Distribution & Resource Planning Director for the Planning, Engineering & Construction Department.

Q. Please describe your educational background.

A. I graduated in 2004 and 2010 from the University of Idaho in Moscow, Idaho, receiving a Bachelor of Science Degree and Master of Engineering Degree in Electrical Engineering, respectively. I am a licensed professional engineer in the State of Idaho.

Q. Please describe your work experience with Idaho Power.

A. In 2004, I was hired as a Distribution Planning engineer in the Company's Delivery Planning department. In 2007, I moved into the System Planning department, where my principal responsibilities included planning for bulk high-voltage transmission and substation projects, generation interconnection projects, and North American Electric Reliability Corporation's ("NERC") reliability compliance standards. I transitioned into the Transmission Policy & Development group with a similar role, and in 2013, I spent a year cross-training with the Company’s Load Serving Operations group. In 2014, I was promoted to Engineering Leader of the Transmission Policy & Development department and assumed leadership of the System Planning group in 2018. In early 2020, I was promoted into my current role as the Transmission, Distribution and Resource Planning Director. I am currently responsible for the planning of the Company’s wires and resources to continue to provide customers with cost-effective and reliable electrical service.

Q. What is the Company’s request in this case?

A. Idaho Power is requesting the Idaho Public Utilities Commission (“Commission”) grant the Company a Certificate of Public Convenience and Necessity (“CPCN”) to acquire new dispatchable energy storage with 150 megawatts(“MW”) of operating capacity and necessary to meet the identified capacity deficiency in 2026.

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

A. The purpose of my testimony is to inform the Commission of the Company’s need for new resources to meet an identified capacity deficit in 2026 as informed by a Loss of Load Expectation (“LOLE”) methodology utilized in the 2021 Integrated Resource Plan (“IRP”), again in the 2023 IRP, and subsequently further enhanced through system reliability evaluations. I will describe the most recent assessment of system reliability and its impact to the capacity deficit identified in the annual capacity position utilized in the 2023 IRP. Finally, I will provide support for the acquisition of resources to address the identified near-term capacity needs.

Q. Is this the same assessment of system reliability that was performed to support the Company's request in Case No. IPC-E-24-12, *Idaho Power's Application for Approval of a Market Purchase Agreement filed on March 18, 2024*?

A. Yes, it is.

I. BACKGROUND

Q. What is the goal of the IRP?

A. The goal of the IRP is to ensure: (1) Idaho Power's system has sufficient resources to reliably serve customer demand and flexible capacity needs over a 20-year planning period, (2) the selected resource portfolio balances cost, risk, and environmental concerns, (3) balanced treatment is given to both supply-side resources and demand-side measures, and (4) the public is involved in the planning process in a meaningful way. Idaho Power uses Energy Exemplar's AURORA's Long-Term Capacity Expansion ("LTCE") modeling platform to develop portfolios, through the selection of a variety of supply- and demand-side resource options, that are least-cost for a variety of alternative future scenarios while meeting reliability criteria. To verify the top performing portfolios meet the Company's reliability requirements, Idaho Power utilizes a LOLE methodology.

Q. Please explain the Loss of Load Expectation.

A. The LOLE is a statistical measure of a system's resource adequacy, describing the expected number of event-days per year that a system would be unable to meet demand. As utilities continue to add more renewable energy to the electric grid, analyzing the effect variable energy resources have on system reliability has become more critical. The LOLE methodology recognizes that the output of variable energy resources, such as wind and solar, change with time (with their hourly output being dependent on a multitude of factors like weather and environmental conditions); it is essential to capture and value that variability.

Q. What inputs are derived from the LOLE methodology that are utilized in the AURORA LTCE model?

A. Idaho Power implements the LOLE methodology through an internally developed Reliability and Capacity Assessment Tool ("RCAT") which is capable of producing inputs such as a Planning Reserve Margin ("PRM") and resource Effective Load Carrying Capability ("ELCC") values. The PRM metric can be defined as the percentage of expected capacity resources above forecasted peak demand. The ELCC calculation is a reliability-based metric used to assess the capacity contribution of variable and energy-limited resources. The PRM and ELCC values that are calculated using the LOLE methodology are a direct input to the AURORA LTCE model.

Q. How are the PRM and ELCC values utilized?

A. Because the AURORA LTCE model and the RCAT are two separate tools, a translation is required between the probabilistic LOLE analysis performed in RCAT and the portfolios produced by the AURORA LTCE model. First, PRM and ELCC values are calculated using the LOLE methodology and directly inputted to the AURORA LTCE model. After AURORA solves for and produces portfolios, select resource buildouts and their corresponding data are analyzed with the LOLE methodology and tested to ensure they meet the pre-designated reliability hurdle through the calculation of annual capacity positions. It is critical when comparing future resource portfolios that each plan achieves at least a base reliability threshold. Figure 1 below illustrates the model consolidation process.

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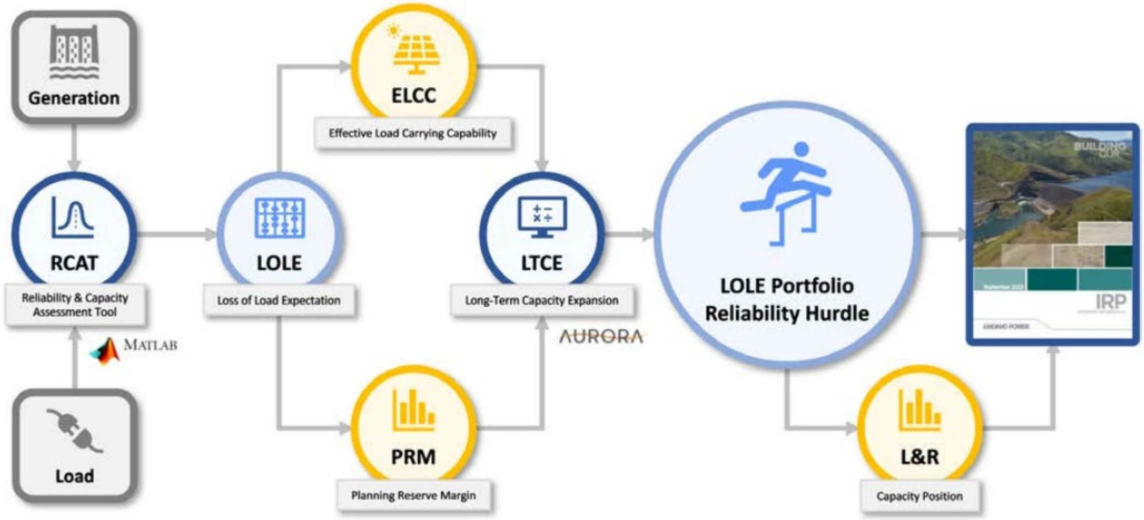
Figure 1. Idaho Power's Reliability Flowchart



Q. Have the LOLE-derived annual capacity positions replaced the previously utilized load and resource balance?

A. Yes. While they serve the same purpose, to determine capacity deficiencies, the annual capacity position calculation is a 2023 IRP methodology improvement that replaced the load and resource balance process performed in prior IRP filings. The load and resource balance was a tabulated plan that helped visually ensure Idaho Power had sufficient resources to meet projected customer demand including a margin to account for extreme conditions, reserves, and resource outages, identifying resource deficiencies during the 20-year IRP planning horizon. Beginning with the 2023 IRP, to better align with and represent the probabilistic reliability analyses utilized and to be consistent with best practices in the industry, the RCAT was utilized to calculate annual capacity positions in place of the deterministic load and resource balance. The LOLE-derived annual capacity position calculation is a better indication of resource reliability as compared to the previously utilized load and resource balance. The goal is the same under both processes: identification of the timing of the Company’s first resource need, or the point at which Idaho Power’s reliability requirements may not be met.

Q. If the goal of both processes is the same, how is the LOLE-derived annual capacity position calculation an IRP methodology improvement?

A. In the 2021 IRP, the Company derived static PRM and resource ELCC values that were held constant throughout the 20-year planning horizon. As the RCAT and AURORA serve different purposes in Idaho Power’s planning process, the Company recognized that further efforts were needed to translate and align the data exchanged between the two models. Historically, the PRM was based on the peak load of a given year plus some additional amount to account for abnormal weather events or equipment outages. This method worked well to ensure reliability for Idaho Power as a summer peaking utility with mostly flexible generation resources. However, as the wider industry, and the Company, experience increased reliance on variable energy resources, whose hour-to-hour and season-to-season generation changes, it is no longer viable to only contemplate peak hour requirements.

To ensure that AURORA would recognize similar capacity needs as identified by the RCAT, the Company developed seasonal PRM values for years in the planning horizon that experience significant changes in the resource buildout, better representing the seasonal resource needs. Historically, when a portfolio added predominantly flexible generation resources it was also sufficient to give these resources a static peak capacity contribution as it was harmonious with a static PRM. As variable energy resource and energy limited resource additions increase, static values no longer account for the reduced peak capacity contribution due to saturation nor do they capture the diversity benefit (positive or negative) of a mix of different types of variable energy resources and energy limited resources.

Q. Were any changes made to the use of resource ELCC values as well?

A. Yes. The ELCC of future variable energy resources and energy limited resources are dependent upon the resources built before them, making the ELCC calculation of future resources challenging. Idaho Power implemented seasonal resource specific ELCC saturation curves for variable energy resources and energy limited resources in the AURORA LTCE model for the 2023 IRP.

Q. Please explain the synchronization of the RCAT and the AURORA LTCE model.

A. To better assess the dynamic diversity benefit caused by a changing resource mix, a feedback process was implemented between the AURORA LTCE model and the RCAT for the 2023 IRP. Under the feedback process, the annual capacity positions for an AURORA LTCE main case portfolio buildout were calculated using the RCAT. Once the annual capacity positions were known, the PRM in the AURORA LTCE model was modified in years that had significant resource changes so that both models identified a similar annual capacity position. The feedback loop continued until the main case portfolio was reliable under the LOLE threshold. The resulting AURORA-produced optimized main case portfolios provide the least-cost, least-risk future resource buildouts.

II. ANNUAL CAPACITY POSITION

Q. What have the previous capacity position results indicated with respect to Idaho Power's resource sufficiency?

A. The Company has been generally resource-sufficient since the addition of the Langley Gulch natural-gas fired power plant almost a decade ago until the filing of the 2021 IRP. That is, Idaho Power's owned generation and transmission resources, along with negotiated purchases under Power Purchase Agreements ("PPA") and mandatory purchases under the Public Utility Regulatory Policies Act of 1978 ("PURPA"), were sufficient to meet the Company's load growth over that time. With the resource and load inputs from the 2021 IRP, Idaho Power rapidly moved from an expected resource-sufficient position through 2028,[1] to a near-term capacity deficiency starting in 2023. The rapid change in the resource position, identified during preparation of the 2021 IRP, was caused by several dynamic and converging factors, including third-party transmission capacity constraints, load growth, and a decline in the peak-serving effectiveness of certain supply-side and demand-side resources. These dynamic circumstances led the Company to immediately file a request for a CPCN to acquire resources to be online in 2023.[2]

Q. What were the capacity positions ultimately identified in the 2021 IRP?

A. The capacity positions identified in Idaho Power's 2021 IRP, acknowledged with Order No. 35603, [3] were deficits of approximately 101 MW in 2023, 186 MW in 2024,

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[1] Idaho Power's Second Amended 2019 Integrated Resource Plan, Case No. IPC-E-19-19.
[2] Case No. IPC-E-22-13.
[3] Case No. IPC-E-21-43.

311 MW in 2025, 560 MW in 2026, and 665 MW in 2027. As a result, in addition to the Company's request for a CPCN for the 2023 resource procurement, Idaho Power filed a CPCN and approval of a PPA to acquire resources to be online in 2024[4] and a CPCN and approval of an Energy Storage Agreement to acquire resources to be online in 2025.[5]

Q. Since the completion of the 2021 IRP, has the Company refreshed its capacity positions, potentially influencing Idaho Power's resource need?

A. Yes. The Company continually assesses system reliability, monitoring near-term known changes, operational enhancements, limitations, or constraints on the existing system, if any, that would impact the resource needs. Furthermore, on September 29, 2023, the Company filed its 2023 IRP, which included current information on the expected timing of major new loads, the resource procurements the Company had made to date, annual capacity positions and other updates.

Q. What were the annual capacity positions identified in the 2023 IRP?

A. Incorporating modeling input updates and the additional enhancements to the Company's reliability evaluation discussed earlier in my testimony, the

[4] Case No. IPC-E-23-05 and IPC-E-23-20.
[5] Case No. IPC-E-23-20.

incremental capacity needs identified in the 2023 IRP were 22 MW in 2026 and 44 MW in 2027, with the need continuing to grow through the remainder of the planning horizon.

Q. Did Idaho Power's modeling updates include the Boardman to Hemingway transmission line ("B2H") as a new resource?

A. Yes. B2H was identified and acknowledged as a cost-effective resource in the Company's 2021 IRP preferred resource portfolio with a current planned in-service date of summer of 2026. B2H will provide Idaho Power with 750 MW of capacity in the west-to-east direction for market purchases for load service and transmission service to third-party transmission customers under the Company's Open Access Transmission Tariff. Further, an asset exchange between PacifiCorp and Idaho Power, in complement with B2H, will provide the Company with 200 MW of bidirectional transmission capacity between southern power markets (Mona and Four Corners) and the Idaho Power system. The full B2H capacity is modeled in the transmission portion of AURORA, with separate transmission links modeled for each owner, one with Idaho Power's share and one with PacifiCorp's share. The Company treats approximately 500 MW of B2H's summer capacity as equivalent to a summer resource and the 200 MW of transmission capacity to southern power markets as equivalent to a winter resource. All transmission capacity has the potential to be leveraged for market purchases. The 2023 IRP continued to confirm the cost-effectiveness of B2H and the associated asset exchange and its inclusion in the IRP's Preferred Portfolio.

Q. Did Idaho Power evaluate how the annual capacity position would change should the online date of B2H be delayed?

A. Yes. The 2023 IRP considered an alternative B2H online date beyond July 2026 should there be a delay in receiving permits, supply chain constraints, or other unforeseen events. The alternative scenario assumed a November 2026 online date for B2H, which changes the Company's capacity needs from 22 MW under a July 2026 B2H online date to 356 MW under a November 2026 B2H online date.

Q. You indicated Idaho Power continually assesses system reliability. Has the Company updated the system reliability assessment since the 2023 IRP was filed in September 2023?

A. Yes. The Company recognizes that during the near-term resource decision-making phase, the annual capacity positions can be very fluid. In addition, in the face of growing loads, Idaho Power constantly monitors resource needs and responds with added urgency, as evidenced by Idaho Power's consecutive requests for CPCNs to acquire resources to be online in 2023, 2024 and 2025.[6] The most recent system reliability assessment, which assumes the online date for B2H is beyond summer of 2026, has identified a capacity deficit of 236 MW in 2026.

Q. What drove the changes to the annual capacity positions for 2026 in the most recent system reliability assessment?

A. Aside from modeling input updates associated with the latest load forecast, expected existing resource availability and the most recent 5-year rolling average Equivalent Forced Outage Rates during Demand ("EFORd"), the biggest drivers of the change in the annual capacity position in 2026 are associated with (1) B2H, (2) the Capacity Benefit Margin ("CBM"), and (3) the North Valmy Generating Station ("Valmy"). Due to delays in obtaining some necessary permits, the anticipated in-service date of B2H is beyond the summer of 2026. Absent the available transfer capacity of B2H in July 2026 the capacity deficit increases.

Q. What changes were made to the CBM modeling assumptions since the annual capacity position identified in the development of the 2023 IRP?

A. CBM is transmission capacity Idaho Power sets aside on the Company's transmission system, as unavailable

[6] Case Nos. IPC-E-22-13, IPC-E-23-05, and IPC-E-23-20.

for firm use, for the purposes of accessing reserve energy to recover from severe conditions such as unplanned transmission and generation outages or energy emergencies. An energy emergency must be declared by Idaho Power before the CBM transmission capacity becomes firm. The Company holds 330 MW of import transmission capacity aside on the Idaho to Northwest path for CBM. CBM does not, however, have corresponding third-party transmission reservations to the Mid-C market.

Because of continued transmission market limitations beyond the Idaho Power border, in the 2023 IRP the Company reduced the contribution of CBM toward the annual capacity position, from 330 MW for all seasons to 200 MW for March through October and 0 MW in the winter for planning purposes. Idaho Power's continued evaluation of CBM has indicated that, similar to the winter months, last minute transmission acquisition between the market and Idaho Power's border under emergency conditions in the summer months has not been consistently available. The Company still believes CBM is valuable for customers from a reliability perspective and believes that transmission availability may change in the future. However, for the time-being, for resource planning purposes, the Company believes it is appropriate to adjust CBM to 0 MW year-round given the recent challenges ensuring a connection to the

Mid-C market in emergency conditions.

Q. What changes were made to Valmy's availability that have impacted the annual capacity position?

A. Since identification of the conversion of Valmy Units 1 and 2 to natural gas operations by 2026 as an economic resource alternative in the 2023 IRP, Idaho Power and NV Energy, the Valmy co-owners, have aligned on a decision to convert the units and have finalized a conversion agreement that will amend the pertinent sections of the existing ownership and operations agreements to reflect gas-fired operations of both units. With definitive agreements in place that detail the Company's increased Valmy capacity beginning in 2026, Idaho Power included the additional 261 MW of available capacity in the latest system reliability assessment.

Q. You indicated modeling input changes consisted of updates made to the latest load forecast, resource availability and EFORd. What has changed since development of the 2023 IRP?

A. Any time the system reliability evaluation is performed, Idaho Power includes the most up-to-date load and resource inputs. With the continued high load growth in the Company's service area, the load forecast is consistently monitored and updated as new information becomes available. In addition, planned maintenance of one of the Oxbow hydro units will reduce the overall resource availability in 2026. The 5-year rolling average EFORd was updated with the latest published data from the NERC Generation Availability Data System, reflecting the industry average generation resource performance data and outage rates using the most recent data. Finally, two PURPA contracts with solar projects proposed to be located in eastern Oregon were terminated due to the developers' failure to perform, resulting in the removal of 72 MW of available solar nameplate capacity.

Q. Based on your most recent evaluation of system reliability, how has the annual capacity position for 2026 changed since Idaho Power's 2023 IRP was filed?

A. The Company's most recent system reliability assessment to determine the annual capacity positions has identified an increase in the previously identified capacity deficit to 236 MW in 2026. As I discussed previously, due to the fluidity of the annual capacity positions during the near-term resource decision-making phase, Idaho Power continually assesses system reliability. But because the Company has been repeatedly matching near-term resource procurements with the capacity need identified at a point in time, the fluctuating need is requiring continued procurement of resources.

Q. Does the load forecast used to identify the 236 MW deficit in 2026 include large load inquiries that Idaho Power continues to experience in its service territory?

A. No. In the 2023 IRP, the Company provided a large load planning scenario that added 200 MW to Idaho Power's load forecast to account for potential additional large loads. Although the Company continues to receive inquiries for large loads that are considering siting in Idaho Power's service territory, the Company has not yet utilized this large load scenario to determine its future resource procurement needs. Idaho Power will continue to evaluate whether a transition to the large load scenario is necessary. Such a transition would increase resource deficits in future years.

III. <u>MEETING THE CAPACITY DEFICIENCY</u>

Q. Did Idaho Power evaluate any alternative solutions for meeting the capacity deficiencies to avoid building a new resource?

A. Yes. As I discussed earlier in my testimony, as part of the IRP process, the Company uses AURORA's LTCE modeling platform to develop portfolios, through the selection of a variety of supply- and demand-side resource options, that are least-cost for a variety of alternative future scenarios while meeting reliability criteria. The future supply- and demand-side resources available to meet identified capacity deficiencies, whose costs are generally based on the 2022 Annual Technology Baseline report released by the National Renewable Energy Laboratory,[7] include new gas-fired resources, hydrogen, wind, solar, battery storage, market purchases via available transmission capacity, demand response and energy efficiency. The Preferred Portfolio from the 2023 IRP, which included a July 2026 online date for B2H, identified the conversion of Valmy Units 1 and 2 to natural gas, the procurement of 100 MW of solar as the most cost-effective resources for meeting the identified capacity deficits in 2026 along with 19 MW of energy efficiency potential (identified in the energy efficiency potential study). In addition, as part of the 2023 IRP modeling, the Company evaluated an alternative B2H online date beyond July 2026 should there be a delay in receiving permits, supply chain constraints, or other unforeseen events, assuming an online date for B2H of November 2026. This evaluation is, in essence, identifying the most cost-effective alternative for meeting the identified capacity deficit should the B2H online date be delayed to November 2026.

Q. How was the evaluation of the November 2026 B2H on-line date performed?

[7] atb.nrel.gov/.

A. Three different November 2026 B2H simulations were analyzed with AURORA’s LTCE modeling: (1) a November 2026 B2H on-line date with a conversion of both Valmy Units 1 and 2 to natural gas, (2) a November 2026 B2H on-line date with the conversion of only Valmy Unit 2 to natural gas, and (3) a November B2H on-line date without the availability of either Valmy unit. These simulations include the costs associated with adding generation resources (both supply-side and demand-side) and optimally dispatching the resources to meet the constraints within the model. The three different simulations and their associated costs, presented below in Table 1, can be compared to identify the most cost-effective alternative to meeting the 2026 capacity deficit should B2H be delayed to November 2026.

Table 1. 2023 IRP Portfolio Costs

Portfolio	Net Present Value Years 2024-2043 ($ x 1,000,000)
(1) Nov2026 B2H Valmy 1&2	$9,767
(2) Nov2026 B2H Valmy 2	$9,880
(3) Nov2026 B2H Without Valmy	$10,192

With a portfolio cost of $9.767 billion, the conversion of Valmy Units 1 and 2 to natural gas in 2026 is $113 million less than the conversion of only Valmy Unit 2, and $425 million less than a portfolio that does not include the conversion to natural gas of either Valmy unit, indicating that the conversions of Valmy Units 1 and 2 to natural gas continues to be a cost-effective resource alternative, particularly with a November 2026 B2H online date.

Q. What additional resources were selected as cost-effective alternatives for meeting the capacity deficiency under a scenario with a November 2026 B2H online date and the conversion of both Valmy units to natural gas?

A. When compared to the 2023 IRP Preferred Portfolio, in 2026 an additional 300 MW of solar was selected, 400 MW in total, as well as 155 MW of battery storage and 40 MW of demand response, indicative of the Company's need to procure resources to continue to provide safe, reliable electric service to its customers in 2026 and beyond.

Q. Has Idaho Power taken any actions to acquire resources to meet the 236 MW capacity deficit in 2026?

A. Yes. Under Idaho law, Idaho Power has an obligation to provide adequate, efficient, just, and reasonable service on a nondiscriminatory basis to all those that request it within its certificated service area.[8] Further, as indicated by Order No. 35643, Idaho Power is responsible for planning and managing its load and resource

[8] Idaho Code §§ 61-302, 61-315, 61-507.

portfolio and the Commission expects “the Company to closely monitor its projected capacity needs going forward and to act proactively to ensure a robust RFP process can be completed.”[9] Therefore, in order to meet its obligations to reliably serve customers, on September 15, 2022, Idaho Power filed an application with the Public Utility Commission of Oregon (“OPUC”) to open an independent evaluator selection docket to oversee the Request for Proposals (“RFP”) process.[10] This also ensured a fair and transparent procurement process that was compliant with the OPUC’s competitive bidding rules, which the Commission directed Idaho Power to follow as well.[11] The Company’s compliance with the OPUC competitive bidding guidelines, which will be discussed in greater detail in the direct testimony of Mr. Hackett, ultimately led to a competitive solicitation through the issuance of the 2026 All-Source RFP, seeking a combination of energy and capacity resources that provide a minimum of approximately 350 MW of peak capacity and up to 1,100 MW of variable energy resources for 2026 and 2027 (“2026 RFP”).

Q. Why did the 2026 RFP request a minimum of approximately 350 MW of peak capacity and up to 1,100 MW of

[9] Page 13.
[10] Docket UM 2255.
[11] Order No. 32745. Case No. IPC-E-10-03.

variable energy resources for 2026 and 2027 if the identified capacity deficit was 236 MW in 2026?

A. Following the 2021 IRP, the Company had identified a 311 MW deficiency in 2025 and a 665 MW deficiency in 2027. Assuming the 311 MW deficiency would be addressed through the 2024 and 2025 resource procurements for which Idaho Power received CPCNs, the incremental need was 354 MW (665 MW - 311 MW = 354 MW), or approximately a 350 MW peak capacity need.

Given the significant timeframe related to the RFP process under the OPUC competitive bidding guidelines, the 2026 RFP was responsive to the resource needs identified in the Company's 2021 IRP filing, which included near-term preferred portfolio additions of wind, solar, storage, cost-effective energy efficiency measures, the conversion of coal units to natural gas, incremental demand response, and B2H coming online in 2026. The transmission included in the 2021 IRP preferred portfolio, including B2H, provides valuable capacity that ultimately must be paired with energy to serve load. In addition to soliciting resources that provide capacity and energy aligned with the resource needs, the 2026 RFP solicited a portion of the energy market purchases that will be necessary to serve load for 2026 and beyond. This market purchase approach is intended to allow the Company to begin acquiring a portion of the energy that will be needed to serve load using pre-existing firm transmission rights, without acquiring more than what will be needed in a majority of hours, while also allowing Idaho Power to make additional procurement decisions and solicitations over time, considering updated information and the most recent IRP available at that time.

Additionally, the RFP needed to remain flexible to account for the fluidity of the Company's annual capacity positions as well as any potential delays in the B2H online date. Ultimately, the 2026 resources selected through the RFP process were based on the most recent capacity deficiency of 236 MW in 2026. As detailed in Company witness Mr. Hackett's testimony, through the Company's robust competitive bidding process, Idaho Power has identified the most cost-effective bids from the 2026 RFP evaluation as necessary to fill the 2026 capacity deficit. The first bid resulted in the execution of a 200 MW contract with Powerex for a capacity-based product and firm energy contract effective June 2026, for which the Company requested approval in Case No. IPC-E-24-12. The second bid selected was a benchmark resource, the Idaho Power-owned 4-hour battery storage facility providing up to 150 MW of operating capacity, and the resource the Company is requesting the Commission grant a CPCN in this proceeding. Idaho Power is currently negotiating agreements for a third project submittal resulting from the 2026 RFP, a 200 MW solar photovoltaic ("PV") plus a 100 MW 4-hour battery storage project and will present those agreements to the Commission for approval once executed.

Q. How do the combined Powerex market purchase and the Company-owned battery storage facility providing up to 150 MW of operating capacity impact the 236 MW capacity deficiency?

A. The combined projects are estimated to reduce the 2026 deficit an additional 116 MW. As explained in Case No. IPC-E-24-12, in 2026, the Powerex market purchase reduces the capacity deficiency from 236 MW to approximately 186 MW – a 50 MW reduction. In the 2021 and 2023 IRPs, the Company had already assumed that transmission capacity between the Pacific Northwest and Idaho was resource equivalent capacity. Therefore, utilizing that same transmission capacity to import the Powerex 200 MW market purchase results in no incremental resource capacity gain, although it does begin to fulfill the Company's energy import needs as described in the 2026 RFP and earlier in my testimony. The Company was able to acquire 50 MW of incremental transmission, for one year through Montana, in 2026 and therefore the Powerex market purchase provides for 50 MW of capacity in 2026. Once B2H is completed, the Powerex contract will be treated as 200

MW of fully incremental capacity. The Idaho Power-owned battery storage facility will further reduce the 2026 capacity deficit approximately 66 MW.

Q. Why does a battery storage facility that provides 150 MW of operating capacity only reduce the deficit 66 MW?

A. When solar photovoltaic ("PV") and energy storage are added together with similar ratios, the ELCC of the combined resource is higher than the ELCC of the stand-alone solar PV or energy storage. When solar PV and battery storage additions become unbalanced via large additions of one and not the other, the result is a lower ELCC for the resource that was added, and a higher ELCC for the resource that was not added. This is occurring in 2026 given the large quantity of battery storage the Company is adding in 2025, and now further adding to this storage in 2026, resulting in a lower ELCC for energy storage facilities.

However, this lower ELCC is just a year-2026, snapshot in time issue. In addition to the 200 MW solar PV plus 100 MW energy storage project as a cost-effective resource addition in 2026, which the Company will present to the Commission in a future filing once the agreements are executed, Idaho Power is forecasting the addition of approximately 525 MW of solar PV, spread through late-2026 and 2028, associated with a large load customer. The addition of this stand-alone solar will increase the capacity contribution of the energy storage to the portfolio in those years. Thus, while the procurement of a higher amount of storage to meet 2026 needs may reduce its ELCC (all the procurement is necessary for reliability purposes), it sets the Company up well to accept planned stand-alone solar additions to the system in the future.

Q. Do you believe there is sufficient support for the procurement of the Idaho Power-owned battery storage facility providing up to 150 MW of operating capacity?

A. Yes, I do. The resource acquisitions were pursued and procured as a least cost/least risk method of meeting the capacity deficits first identified in the Company’s 2021 IRP, again in the 2023 IRP, and subsequently with the results of system reliability evaluation. The fluidity of the capacity deficit period and continued high load growth further supports these resource procurements which combined are necessary to adequately address 2026 capacity deficits.

IV. CONCLUSION

Q. Please summarize your testimony.

A. Idaho Power’s most recent system reliability evaluation has identified a capacity deficiency of 236 MW in 2026. In response to this resource need, the Company has executed a 200 MW capacity-based product and firm energy contract,[12] and identified an Idaho Power-owned battery storage providing 150 MW of operating capacity, for which Idaho Power is requesting the Commission grant a CPCN at this time.

Q. Does this complete your testimony?

A. Yes, it does.

[12] See Case No. IPC-E-24-12.

DECLARATION OF JARED L. ELLSWORTH

I, Jared L. Ellsworth, declare under penalty of perjury under the laws of the state of Idaho:

1. My name is Jared L. Ellsworth. I am employed by Idaho Power Company as the Transmission, Distribution & Resource Planning Director for the Planning, Engineering & Construction Department.

2. On behalf of Idaho Power, I present this pre-filed direct testimony in this matter.

3. To the best of my knowledge, my pre-filed direct testimony is 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 3rd day of April 2024, at Boise, Idaho.

Signed: ____________________