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BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF IDAHO POWER)
COMPANY'S APPLICATION TO) **CASE NO. IPC-E-22-22**
COMPLETE THE STUDY REVIEW PHASE)
OF THE COMPREHENSIVE STUDY OF)
COSTS AND BENEFITS OF ON-SITE) **REPLY COMMENTS OF THE**
CUSTOMER GENERATION & FOR) **COMMISSION STAFF**
AUTHORITY TO IMPLEMENT CHANGES)
TO SCHEDULES 6, 8, AND 84)

Staff of the Idaho Public Utilities Commission, by and through its Attorney of record, Riley Newton, Deputy Attorney General, submits the following Reply Comments.

BACKGROUND

Idaho Power ("Company" or "Idaho Power") offers net energy metering ("NEM") programs under which customers can generate electricity to meet their own demand and export any excess electricity back to the Company's grid in exchange for an energy credit that can offset the customer's monthly energy consumption. Currently, customers who wish to install on-site generation can interconnect an exporting system under the terms of Schedule 6 – Residential Service On-Site Generation ("Schedule 6"), Schedule 8 – Small General Service On-Site Generation ("Schedule 8"), and Schedule 84 – Commercial, Industrial, and Irrigation ("Schedule 84").

On May 9, 2018, in Case No. IPC-E-17-13, the Commission ordered the Company to prepare and file a credible and fair study on the costs and benefits of on-site generation to the Company's system, as well as proper rates and rate design, transitional rates, and related issues of compensation for net excess energy provided as a resource to the Company. Order No. 34046 at 31.

On December 20, 2019, in Case No. IPC-E-18-15, the Commission clarified that the study: (1) must use the most current data possible and must be readily available to the public, and in the Commission's decision-making record; (2) must be designed in coordination with the parties and the public, and the Commission will determine the final scope of the study; and (3) the study must be written so it is understandable to an average customer, but its analysis must be able to withstand expert scrutiny. Order No. 34509 at 9.

On June 28, 2021, in Case No. IPC-E-21-21, the Company filed an application to initiate a multi-phase process for the study of costs, benefits, and compensation of net excess energy associated with customer on-site generation. Included in the application was a proposed study scope and a study design schedule including time for public workshops. In that case, the Commission received intervening party and public comments on the different elements included in the scope. Based on those comments, the Commission provided additional direction and specific requirements for each element to be included in the study. Order No. 35284.

On June 30, 2022, the Company submitted an application to "Complete the Study Review Phase of the Comprehensive Study of Costs and Benefits of On-Site Customer Generation and for Authority to Implement Changes to Schedules 6, 8, and 84 ("Application")".

The following entities were granted intervention in this case: ABC Power, Clean Energy Opportunities of Idaho ("CEO"), the city of Boise City ("Boise City"), Industrial Customers of Idaho Power ("ICIP"), Idaho Conservation League ("ICL"), Idaho Hydroelectric Power Producers Trust ("IdaHydro"), Idaho Irrigation Pumpers Associations, Inc. ("IIPA"), Idaho Solar Owners Network ("ISON"), Richard E. Kluckhohn and Wesley A. Kluckhohn, *pro se*, ("Kluckhohns"), and Micron Technology. See Order Nos. 35472, 35493, 35499, and 35505.

On September 21, 2022, Commission Staff ("Staff"), and four of the ten Intervenor submitted comments ("Initial Comments") regarding the Value of Distributed Energy Resource Study ("VODER Study" or "Study"). In addition, over 600 public comments had been received.

STAFF REVIEW

Staff's Initial Comments, filed September 21, 2022, addressed whether the VODER Study complied with the Commission's directives in Order No. 35284 on the Study's Scope. These Comments also addressed the feedback received from the public at the public workshops and from the comments filed with the Commission. With these Reply Comments, Staff further analyzes the areas in the VODER Study and addresses some Parties' Initial Comments.

From Parties' Initial Comments, Staff identified areas within the VODER Study that need additional clarity and analysis that should be considered by the Commission. The Company also recognizes that, based on the feedback received, parts of the VODER Study may need additional clarity and analysis. The Company anticipates submitting an amended Study with its Final Response Comments on October 26, 2022, that responds to the recommendations received from Parties and the public on the VODER Study.¹ The discussion below identifies areas that may need additional analysis in the Company's Final Response Comments and/or through an amendment to the VODER Study filed by the Company.

Export Credit Rate ("ECR")

ICL's Initial Comments state that, "while Idaho Power's analysis generally complies with the Commission's direction to study individual components of the ECR, it consistently does so with assumptions and methodologies that minimize estimated value of solar generation." ICL Initial Comments at 3. In ICL's Attachment A—Crossborder Energy Study ("CE Study")—the authors state, "we conclude that Idaho Power's choice of assumptions and calculation methods significantly undervalue the five components that the utility quantified. In addition, the VODER Study fails to quantify important benefits of distributed solar that the Commission directed the utility to analyze in Order No. 35284." ICL Initial Comments, Attachment A at 1.

Staff reiterates that the VODER Study broadly complied with the Commission's orders with a few minor exceptions that the Company may address in an amended VODER Study. However, alternative methods of valuation are possible for various components of the ECR, the reasonableness of which are discussed below. Recommendations in support of one particular method will be reserved for the implementation phase.

¹ See Company Initial Comments at 6.

Avoided Energy Value

ICL states, “the VODER Study estimates avoided energy costs with dated price assumptions. Without accounting for this lasting shift in energy markets, the VODER Study fails to present an accurate or meaningful estimate of avoided energy costs.” ICL Initial Comments at 4. Staff recognizes that although current energy prices have changed from the prices in the VODER Study, the Company should not be expected to incorporate data that develops during production of the Study and after its release. The importance of the VODER Study should be placed on the method for deriving the ECR and not on the specific values. The appropriate data will be incorporated once decisions are made regarding the method, the source of the data, and frequency of updates.

IIPA claims the VODER Study does not address the cost to move exported energy to market. *See* IIPA Initial Comments at 6. The Company mentioned the issue in the VODER Study stating, “the non-firm energy provided under Schedule 86 is further discounted by an adjustment factor of 85% to account for the transmission and transaction related costs.” VODER Study at 43. However, in response to Staff’s Production Request No. 39, the Company explained that it is a net energy importer, and therefore it did not consider the cost to move exported energy to market. The Company did not explain why it dismissed this consideration. The Company also did not consider when exports from customer-generators occur relative to when the Company exports energy outside of its system. Staff recommends the Company amend the VODER Study with an analysis of the cost to move exports to the market during the timeframe that customer-generators export onto the Company’s system.

ICL and Boise City both commented on the benefits of customer exported energy as a hedge to fuel-cost risk. ICL states, “the VODER Study is incomplete without substantive discussion of fuel hedging benefits from DER development.” ICL Initial Comments at 9. Boise City states, “the ECR should incorporate the long-term nature of the price-risk hedge benefit provided by customer-generator export, separate from the energy market variability captured in the VODER Study.” Boise City Initial Comments at 3. Both parties suggest a valuation method included as a benefit through a case heard by the Maine Public Utilities Commission (“Maine PUC”). Staff recommends the Company amend the VODER Study with a detailed discussion on the fuel-cost hedge benefit. The discussion should explain how fuel-cost hedge benefits relate to

each of the proposed sources for energy valuation, as well as the advantages and disadvantages of the Maine PUC valuation method.

The CE Study states, “fuel hedging benefits should be included for customer solar generation that is self-consumed rather than exported.” ICL Initial Comments, Attachment A at 11. This position is contrary to Order No. 35284. Order No. 35284 states:

we find it reasonable to base the capacity value on the energy exported rather than the total generator installed capacity. Capacity and energy offset by customer generation behind the meter is not measured. This does not mean that the value is not realized by the on-site generator. Net-metering customers get 1:1 kWh benefit for all energy produced and used behind the meter.

Order No. 35284 at 18.

Avoided Capacity Value

The CE Study proposes four recommendations to determine the value of avoided generation capacity value:

1. Include self-consumed energy;
2. Use the Peak Capacity Allocation Factor (“PCAF”) instead of the Effective Load Carrying Capability (“ELCC”) to calculate the capacity contribution of customer generation;
3. Use battery storage as the surrogate resource because it is the next resource selected in the IRP instead of a simple-cycle combustion turbine (“SCCT”); and
4. Include the 15.5% planning reserve margin (“PRM”) as an adder.

Regarding the first recommendation, Order No. 35284 states the “value be limited to exported energy, not energy consumed behind the meter.” *Id* at 18. Staff disagrees with the CE Study’s first recommendation and does not recommend the Company analyze self-consumed energy within the VODER Study.

Regarding the second recommendation, the PCAF concentrates value around the *peak load* of the system, while the ELCC concentrates value around periods of *critical capacity need* for the system. With the proliferation of variable energy resources (“VERs”), there is a growing divergence between the system peak load and periods of critical capacity need. For this reason, Staff believes that the ELCC method is more robust for determining capacity contribution of customer exports. However, Staff recommends the Company amend the VODER Study with an

analysis of the strengths and weaknesses for determining capacity contribution using several different methods, including the PCAF.

Regarding the third recommendation, Staff does not agree with using the next selected resource included in the Integrated Resource Plan (“IRP”) preferred portfolio as the surrogate resource, which, in this case, is battery storage. Battery storage is not the least fixed-cost dispatchable resource that the Company would consider strictly for capacity. The IRP selects resources for its portfolios using an algorithm that considers both the cost of capacity and the cost of energy. Since the objective is to identify a surrogate for determining the value of capacity separate from all other avoided costs, it is more accurate to base the surrogate on the least-cost capacity resource, which is a SCCT.² If the IRP selected resource was used as the surrogate, as recommended through the CE Study, the capacity benefits and the energy benefits of this resource would need to be separated in order to isolate capacity benefits and to avoid double-counting energy benefits. However, Staff recommends the Company amend the VODER Study with a discussion on why it chose the SCCT resource for valuing capacity.

Regarding the final recommendation, Staff believes that the 15.5% PRM should not be included in the capacity valuation of customer exports. The PRM is applied as an additional obligation to the system load in the IRP, for which the Company must plan sufficient resources. The capacity value of any resource used to satisfy this load – including customer exports – is not magnified by the PRM. The capacity value is determined on a one-for-one basis by the surrogate resource that is displaced. Although Staff disagrees with the CE Study recommendation, to provide additional transparency to Parties and the public, Staff recommends the Company amend the VODER Study with a discussion about the PRM and its non-relevance in valuing capacity contributions.

Avoided Transmission and Distribution (“T&D”) Capacity Costs

CEO states, “consideration is merited of alternative methods which take a smoother, more probabilistic approach to valuing avoidable T&D cost over time. The VODER Study should reflect those alternative methodologies.” CEO Initial Comments at 3. ICL states, “[r]egression models can account for marginal T&D costs and the value of infrastructure avoided

² The least-cost selectable capacity resource in the 2019 IRP is a reciprocating internal combustion engine. A SCCT was the least-cost surrogate resource in the 2021 IRP.

by reducing peak loads.” ICL Initial Comments at 7. The CE Study proposes a regression model that correlates a utility’s investment in transmission and distribution with changes in peak demand. *See* ICL Initial Comments, Attachment A at 5. The Company’s method for valuing avoided cost of transmission uses a bottom-up approach to valuing avoided T&D investment cost while CEO and ICL advocate a top-down probabilistic approach using statistical regression.

Staff believes a top-down approach has merit, especially to validate the Company’s analysis, provided the results of the top-down probabilistic approach: (1) identify the other major drivers of reduced T&D investment; (2) meet a reasonable level of statistical confidence; and (3) there is a recognition that this approach only provides a historical perspective, even though the value of contributed capacity from customer exports are costs avoided in the future and should only be taken into account when T&D capacity is deficient. Thus, Staff recommends that the Company amend the VODER Study with discussions of additional methods that may be used in valuing avoided T&D capacity costs.

Avoided Line Loss

ICL states, “avoided line loss estimates fail to account for top marginal increases in load and rely on a decade old study that does not anticipate projected growth.” ICL Initial Comments at 8. The CE Study states, “marginal resistive losses are roughly double average losses. This means that the marginal impact on losses of reducing a kW of load on the T&D system is significantly greater than the average loss at that moment.” ICL Initial Comments, Attachment A at 7. Staff disagrees with the CE Study’s proposal to double the line loss percentage because of marginal line losses. The Company’s 2012 Line Loss study determined the line loss percentage over a long period (energy losses) and the line loss percentage during the peak load hour (peak losses). The miniscule difference between the two circumstances suggests that a doubled percentage for marginal line loss is not accurate. Staff recommends the Company clarify in an amended VODER Study the concepts of marginal line losses, average line losses, peak line losses, and energy line losses, to resolve any ambiguity and overlap between these concepts.

Implementation Considerations

Communication Material

The Company outlined in the VODER Study that it may need additional time to reach out to the on-site generation industry and update communication materials before it implements any changes to the NEM program. Current and future customer-generators may be under the impression that the current NEM program would not change. In Order No. 34509, the Commission unequivocally advised “stakeholders in the on-site generation industry, [(which include, but may not be limited to, the Parties, solar installers, solar advocates, and the Company)] to be completely transparent with potential investors that a utility’s rate schedule, including program fundamentals, is subject to change.” *Id* at 13. *Idaho Code* § 48-1805, Contents of Disclosure Statement for any Solar Agreement, clearly outlines that on-site generation participants need to be notified that the NEM program may change, and cost savings, or incentives, are also subject to change. Staff anticipates that meetings between the Company and interested parties will be necessary to discuss how current and future customer-generators may be notified of future program changes.

PUBLIC INPUT

Since the Initial Comments from Parties were filed on September 21, 2022, the Commission received an additional 55 comments for a total of 620.³ Of the total amount of comments, 207 (33% of total) were received from customers who acknowledged owning a solar system and being enrolled in NEM. Staff has included Table No. 1 to show the topics that the public has mentioned in their comments. The table does not include input from Parties and may not be all-inclusive. Some public comments have provided information that may need to be considered during the implementation phase. Such topics include tax implications of changing to a net billing program; maintain the current NEM and have a subscription to participate; and the impact of increasing the monthly service charge for current and future customer-generators. There has been no change from Staff’s Initial Comments, which identified the top five topics (*See bold text in Table No. 1*):

³ As of October 3, 2022, 620 public comments have been submitted to the Idaho Public Utilities Commission.

Table No. 1: Public Comments

| Topics | Topic Count ¹ | Count Percentage of Total | Relative to VODER Study |
|--|--------------------------|---------------------------|-------------------------|
| Requested Public Hearing(s) | 430 | 69% | |
| Compensation and Structure | 429 | 69% | Section 6 |
| Environmental And Societal Costs or Benefits | 334 | 54% | Section 4 |
| Reject Study or Have Third Party Conduct study | 163 | 26% | |
| Expand Grandfathering beyond December 20, 2020² | 142 | 23% | |
| Current Net Metering Customer | 207 | 33% | |
| Sierra Club / KNOW Who Template | 114 | 18% | |
| Measurement Interval | 45 | 7% | Section 3 |
| ECR | 42 | 7% | Section 4 |
| Include Crossborder Energy Study | 36 | 6% | |
| Effect On Demand (Peak Loads) | 29 | 5% | |
| Carbon Capture - Carbon Emissions | 26 | 4% | Section 4 |
| Billing Structure - Transfer of Credits | 24 | 4% | Section 10 |
| Recovering ECR | 20 | 3% | Section 8 |
| Frequency of ECR Updates | 14 | 2% | Section 5 |
| Class Cost of Service | 12 | 2% | Section 7 |
| Project Eligibility Cap | 5 | 1% | Section 9 |
| Implementation Considerations | 8 | 1% | Section 11 |
| Power During Outages | 6 | 1% | |
| ¹ Public Comments can discuss more than one topic. | | | |
| ² See Idaho Code 48.1805.c regarding public comments that mention that the current NEM participants being told that NEM would not change. | | | |

Staff will continue to review public comments and looks forward to hearing further feedback from the public about the VODER Study.

STAFF RECOMMENDATIONS

Staff believes the Study complies with Order Nos. 34046, 34509, and 35284 and recommends Commission approval, contingent on the Study being amended to include the

modifications recommended in Staff's Initial Comments and the additional modifications, as outlined below:

1. ECR.
 - a. Avoided Energy Value – provide additional explanation and analysis for: (1) cost to move exports to the market during the timeframe that customer-generators export onto the Company's system; and (2) the fuel-cost hedge benefit and explain the benefits that relate to each proposed sources for energy valuation, as well as the advantages and disadvantages of the Maine PUC valuation method.
 - b. Avoided Capacity Value – provide additional analysis and explanation for: (1) strengths and weaknesses for determining capacity contribution using all the different methods, including the PCAF; (2) the basis for selecting the proper surrogate resource for valuing capacity; and (3) the PRM and its non-relevance in valuing capacity contributions.
 - c. Avoided T&D Costs – provide additional methods that may be used in valuing avoided T&D capacity costs.
 - d. Avoided Line Losses – clarify the concepts of marginal line losses, average line losses, peak line losses, and energy line losses, due to ambiguity and potential overlap between each concept.

Respectfully submitted this 12th day of October 2022.



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i:umisc/comments/ipce22.22rntncchjbmsyyjt reply comments

CERTIFICATE OF SERVICE

I HEREBY CERTIFY THAT I HAVE THIS 12th DAY OF OCTOBER 2022, SERVED THE FOREGOING **REPLY COMMENTS OF THE COMMISSION STAFF**, IN CASE NO. IPC-E-22-22, BY E-MAILING A COPY THEREOF, TO THE FOLLOWING:

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