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IDAHO PUBLIC
UTILITIES COMMISSION

Attorney for Intervenor Idaho Irrigation Pumpers Association, Inc.

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

**IN THE MATTER OF IDAHO POWER
COMPANY'S APPLICATION TO
COMPLETE THE STUDY REVIEW PHASE
OF THE COMPREHENSIVE STUDY OF
COSTS AND BENEFITS OF ONSITE
GENERATION & FOR AUTHORITY TO
IMPLEMENT CHANGES TO SCHEDULES
6, 8, AND 84 FOR NON-LEGACY SYSTEMS**

**CASE NO. IPC-E-22-22
IDAHO IRRIGATION PUMPERS
ASSOCIATION, INC.'S REPLY
COMMENTS RE: ICL'S &
CROSSBORDER ENERGY'S
REVIEW OF IPC'S VODER STUDY**

INTRODUCTION AND SUMMARY

Q. PLEASE STATE YOUR NAME AND OCCUPATION.

A. My name is Lance D. Kaufman. I am a consultant representing utility customers before state public utility commissions in the Northwest and Intermountain West. I have a Ph.D. in economics and have ten years of experience analyzing and testifying on energy and regulatory matters.

Q. PLEASE IDENTIFY THE PARTY ON WHOSE BEHALF YOU ARE TESTIFYING.

A. I am testifying on behalf of the Idaho Irrigation Pumpers Association ("IIPA"). IIPA is an Idaho non-profit trade association representing farm interests in electric utility rate matters affecting farmers in southern and central Idaho who use electricity to pressurize their irrigations systems.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I respond to comments filed in this docket by the Idaho Conservation League (“ICL”).

The majority of IIPA’s members are Idaho Power Company (“IPC”) customers. As customers, our primary interest in this docket is to ensure that IPC’s customer generation tariffs lead to safe, reliable, and economical rates. In my initial comments, I voiced general support for IPC’s VODER study, and provided specific recommendations for ensuring that rates paid for excess generation are fair and equitable to both generating customers and non-generating customers. I am concerned that the recommendations made in the ICL comments will not lead to fair and equitable rates.

Q. THE ICL COMMENTS ALLEGE THAT THE COMPANY’S USE OF DISCRETION IN DEVELOPING THE VODER STUDY WERE EXERCISED IN FAVOR OF IPC’S PROGRAMATIC AND BUSINESS AIMS AT THE EXPENSE OF DISTRIBUTED GENERATION DEVELOPMENT. DO YOU AGREE WITH THIS ASSESSMENT?

A. ICL does not dispute the validity of the assumptions or modeling choices made by IPC in the VODER study, but ICL’s comments state the IPC’s modeling choices and assumptions disfavor distributed generation. The comments further imply that the VODER study was biased in favor of IPC’s business interests. The ICL’s comments inappropriately frame this case as a process intended to develop distributed generation. The Commission should instead approach this issue with a focus on establishing mechanisms and rates that lead to safe, reliable, and affordable energy for customers. I believe that distributed energy, when properly priced and tariffed, can play an important role in the IPC’s energy portfolio. But this role should be the outcome of economically supportable analysis, and not the outcome of a general policy goal to increase distributed generation for its own sake.

As I note in my initial comments, the results of the VODER study, and the specific model selections recommended in my comments, can be expected to result in a fair measure of the value and benefits of net generation. The IPC's motivation is a moot point if the outcome of the study is fair, just, and reasonable rates.

AVOIDED ENERGY COSTS

Q. WHAT IS YOUR RESPONSE TO ICL'S STATEMENT THAT DISRUPTION TO FOSSIL FUEL MARKETS MAKES THE [VODER] STUDY'S INPUTS AND ESTIMATES OF AVOIDED COSTS OUTDATED AND INSUFFICIENT TO MEANINGFULLY INFORM THE COMMISSION.

A. The VODER study appropriately provided a range of market price measures, one of which, the EIM price, is supported by both the ICL and IIPA's initial comments. The ICL's support of one of the VODER study's proposed price measures, the EIM, is inconsistent with the ICL's assertion that the VODER study's price assumptions were inappropriate. The ICL notes that market prices are volatile and change yearly. I agree with ICL's assessment and addressed this issue in my initial comments by recommending prices be updated and true up annually. A true up mechanism will ensure that unexpected price shocks do not unfairly benefit either IPC or net exporting customers.

Q. ARE ICL'S AVOIDED COST ESTIMATES REASONABLE?

A. The ICL recommended value of net energy avoids \$183 per MWh in utility costs and an additional \$87.20 per MWh in avoided societal costs, for a total avoided cost of \$270.20 per MWh. For context, the proposed avoided cost is nearly triple Idaho Power's average retail rate. This is an irrational cost estimate, particularly when compared to other avoided cost measures across the country. ICL asserts that the "Crossborder [study] demonstrates that differing analytic choices by reasonable, competent industry professionals produce widely varying figures...." While the Crossborder study may have

been conducted by a reasonable, competent industry professional, the analytic choices themselves are not reasonable and should not be adopted. I caution the Commission against attempting to find a middle ground between the VODER study and the Crossborder study. The Commission should instead disregard all aspects of the Crossborder study. In my comments below I provide additional specific criticism of the assertions and proposals in the Crossborder study, however, given the length of this study and the scope available to me, I may not fully address every flaw in these comments. Omitted discussion of any aspect of the Crossborder study in my comments should not be interpreted as agreement with that aspect as these comments specifically note where I agree with ICL and the Crossborder study.

ADDITIONAL RECOMENDATIONS

Q. DID YOUR REVIEW OF THE CROSSBORDER STUDY CAUSE YOU TO HAVE ANY ADDITIONAL RECOMMENDATIONS FOR THE COMMISSION?

A. Yes, in my initial Comments I supported a decision to modify participation caps and deferred to IPC to craft appropriate changes. However, after reviewing the Crossborder study I have determined that there is some risk that the net generation tariff could become a substitute for solar developers that currently rely on the Qualified Facilities tariffs for compensation. If size limits are modified for net generation are wholly divorced from the customer's load, I see a risk of Qualified Facility developers using the net generation tariffs to circumvent the safe guards put in place through the Qualified Facility tariff. I therefore recommend that any change in size limits be paired with additional safeguards to circumvent developers from avoiding the Qualified Facility framework.

AVOIDED GENERATION CAPACITY

Q. THE ICL PROVIDES AN ALTERNATIVE CALCULATION FOR AVOIDED CAPACITY COSTS. WHAT CONCERNS DO YOU HAVE WITH THE ICL'S METHODOLOGY?

A. I have the following concerns:

- The ICL's use of the peak capacity allocation factor ("PCAF") overestimates capacity contribution of solar.
- The ICL's use of a battery to price capacity misrepresents the avoided cost of capacity.
- The ICL's method inappropriately grosses up the cost of capacity by the planning reserve margin.

Q. HOW DOES THE PCAF OVERESTIMATE CAPACITY CONTRIBUTION?

A. The PCAF overestimates capacity contribution because it does not scientifically identify hours where IPC is expected to be in capacity deficit. IIPA recently participated in an extensive analysis and revision of IPC's demand response programs. In that process, the effective load carrying capacity was used as the measure of avoided capacity. As recipients of demand response payments, IIPA has an interest in maximizing the value of the demand response payments, but IIPA accepted the use of the ELCC because it is an accurate and appropriate measure of capacity contribution. I have participated in avoided cost proceedings, integrated resource planning proceedings, and cost allocation proceedings across the Pacific Northwest and the ELCC is a well vetted and widely accepted measure of capacity contribution.

The peak capacity allocation factor, however, is neither widely used nor a mathematically sound measure of capacity contribution. I have never seen the peak capacity allocation factor adopted by a Commission for either avoided cost calculations,

capacity planning, or cost of service modeling. This lack of adoption is for good reason. The PCAF is not a mathematically sound measure of capacity contribution.

During IPC's demand response proceeding, IPC provided convincing evidence that IPC's capacity shortfall occurs during evening hours when demand is declining. IPC modified the dispatch hours of the irrigation load control programs to allow for curtailment in the late evening to specifically account for this shift in their capacity need. This shifting of curtailment windows into late evening places hardship on irrigators because late evening curtailment disrupts their irrigation schedule more than early evening curtailment. However, the Irrigators accepted this shift of curtailment in order to provide a more valuable product to IPC.

The PCAF does not account for the fact that IPC's capacity shortfall does not fall on peak hours, but rather occurs on shoulder hours when non-dispatchable solar resources do not produce.

The measure of capacity contribution should be consistent across IPC's various resource planning and procurement processes, including qualified facility rates, demand response rates, and net exporting customer rates. More importantly, these measures should be consistent with treatment in the IRP process. The same avoided capacity measure should be used to pay avoided costs as used to make planning decisions. That measure is the ELCC.

If the PCAF were used to measure capacity contribution, it would result in a subsidy of non-generating customers to net-exporting customers.

Q. WHY DOES THE USE OF BATTERY COSTS OVERVALUE CAPACITY COSTS?

A. There are two reasons for this. First, net generating customers retain the Renewable Energy Certificates of their self-generation. A renewable energy certificate carries all environmental attributes of the renewable generator. ICL implies that IPC's use of batteries in its IRP is related to its carbon goals. If this is correct, and the selection of batteries is due to carbon goals, then pricing capacity using a battery would be the equivalent of offering net generators a payment for renewable capacity, or renewable enabling capacity. This is inconsistent with the customer's retention of RECs.

If the net generator was required to surrender the RECs associated with their facilities to IPC, it may be appropriate to consider some form of renewable avoided capacity cost. However, even in this scenario, additional adjustments are needed to isolate the capacity cost of batteries from the other services that batteries provide.

In addition to capacity, batteries provide substantial arbitrage benefits as well as load shaping and other services. If batteries are used to value capacity, the cost of the battery should be apportioned between all the services that a battery provides and not fully attributed to capacity.

Q. WHY IS IT INAPPROPRIATE TO GROSS THE VALUE OF CAPACITY UP BY THE RESERVE MARGIN?

A. In resource planning, a planning reserve is added to forecasted load by multiplying forecasted load with a planning reserve margin. Generating resources are then procured to meet the load plus reserves. Net generation is a resource. To the extent that IPC uses net generation in their planning process, I expect it to be incorporated in their resource stack, not as an offset to native load. If net generation is incorporated in IPC's resource

stack there is a one-to-one correspondence between each MW of capacity contribution from net generation and capacity contribution from IRP resources.

TRANSMISSION AND DISTRIBUTION DEFERRAL

Q. DOES THE REGRESSION ANALYSIS CONDUCTED IN THE CROSSBORDER STUDY DEMONSTRATE AVOIDED TRANSMISSION AND DISTRIBUTION COSTS?

A. No, there are numerous issues with the ICL's regression approach to avoided cost. ICL's analysis fails account for how distributed generation is expected to impact an existing, built out transmission and distribution system. The data underlying the ICL analysis has several critical flaws. First, the cost metric of transmission additions come from FERC Form 1, and thus do not reflect transmission capacity addition, but overall transmission plant additions. This is an important distinction because a large share of plant additions is attributable to retirement and replacement of aging infrastructure. Because retired infrastructure has a cost basis from 50 or more years ago the replacement plant is expected to have a larger total capital expense than the retired plant. The coefficient in this regression is thus over-estimated because it is absorbing the natural inflation-driven growth in transmission plant.

Second, the independent variable "Peak Load" is distinctly different from "net export energy". This is important because Crossborder fails to demonstrate that net energy capacity reductions have the same incremental impact on transmission expense as load growth. To understand why these two distinct measures would have a different impact on transmission and distribution plant on must consider the underlying mechanics of how each affects plant additions. Peak load growth is typically due to buildout. Over the last 20 years, use per customer has been declining. This is because of efficiency gains in equipment and other energy saving measures. Load growth is primarily due to new

construction of residential buildings and corresponding growth in commercial and industrial customer accounts. This buildout drives distribution and transmission spending because it requires extending lines to new areas.

Net export energy does not reduce the need to build out transmission and distribution, it simply offsets the load on existing distribution. As the constraint on existing infrastructure decreases there is no way for the IPC to recoup the existing investment. Thus the only avoided cost is through avoiding upgrades to existing distribution and transmission buildout. Upgrades to existing transmission and distribution buildout is caused by infill, which is a much smaller share of plant investment and is appropriately modeled using the bottom-up approach proposed by IPC.

Q. WHAT ASPECTS OF THE CROSSBORDER TRANSMISSION AND DISTRIBUTION ANALYSIS DO YOU FIND RELEVANT?

- A. The Crossborder study correctly notes that distributed generation is unlikely to be uniformly spread across all IPC's feeders. For example, IIPA is aware that many of the larger net generation customers are on rural feeders due to the low land cost involved in large solar installations. It is possible that a well-placed and sufficiently large, distributed generation system could have a material impact on avoiding additional distribution or transmission, but this would require multiple coincidental factors. Because this type of avoided cost is fact specific, it is not appropriate to build these avoided costs into a generic rate. However, IPC could consider incorporating custom avoided distribution cost studies into its assessment of large-scale projects to account for this. The Commission could also consider authorizing Idaho Power to proactively notify large customers that are situated in such locations of the potential for additional avoided cost benefits.

AVOIDED LINE LOSSES

Q. IS THE CROSSBORDER STUDY CORRECT THAT LINE LOSSES HAVE INCREASED SINCE THE LAST LINE LOSS STUDY?

- A. No, the Crossborder study provides no supporting evidence and utilizes flawed logic. While loads have grown since the last study, so have distribution and transmission capacity; line losses are a function of both load and capacity. Under the Crossborder logic, line losses double every ten years. The Crossborder study assumes that line losses double from 5.8 percent in 2012 to 11.6 percent in 2022. This leads to the absurd result that line losses will be 23.4 percent in 2032 and nearly 100 percent by 2052. IIPA's initial comments contain additional discussion on line losses and the appropriateness of applying line losses to various cost calculations.

Q. WHAT IS YOUR RESPONSE TO THE CROSSBORDER'S RECOMMENDED LINE LOSS ESTIMATE?

- A. The Crossborder study notes that a 2021 IRP case with extensive battery additions shows an integration cost of \$0.64 per MWh, which is lower than the 2020 integration study of \$2.93 per MWh used in the VODER study. The Crossborder study attributes the decrease in integration costs to the modeled investment in batteries. As I noted earlier in my testimony, batteries provide multiple functions beyond capacity, one of those functions is integration. I also note earlier in these comments that the cost of a battery installation should be apportioned between all the functions that the battery performs. It is inappropriate to use the \$0.64 per MWh figure proposed in the Crossborder study because that measure relies on the free provision of battery services by the utility to the net exporter.

ENVIRONMENTAL ATTRIBUTES

Q. DOES THE CROSSBORDER STUDY ACCURATLY REPRESENT THE VALUE OF HEDGING?

A. No, the Crossborder study indicates that the value of reducing fuel price risk is \$23 per MWh. Note that hedging eliminates both up-side and down-side risk and does not impact the expected fuel cost. Thus, a \$23.40 per MWh payment to reduce fuel price risk constitutes a pure price adder to expected energy costs. It is absurd to claim that IPC customers are willing to double their energy costs in order to achieve less fuel price risk.

Q. DO YOU RECOMMEND THAT IPC OR OTHER UTILITIES IN GENERAL HEDGE FUEL PRICE RISK?

A. No, I have never advocated for fuel price hedging and have actively argued against long term fuel price hedging. This does not bring value to customers.

Q. SHOULD AVOIDED CARBON EMISSIONS BE CONSIDERED IN AN EXPORT RATE CALCULATION?

A. No, environmental attributes should be considered when pricing net export rates. This includes avoided carbon emissions and all other environmental considerations listed in the Crossborder study. All environmental attributes of the net exporter should be retained by the net exporter. As such, no environmental attributes should be incorporated into the net export rate. This would constitute a double counting of these attributes.

Q. DOES THIS CONCLUDE YOUR RESPONSE TESTIMONY?

A. Yes.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 12th day of October, 2022, I served a true, correct and complete copy of the Comments of Idaho Irrigation Pumpers Association, Inc. to each of the following, via U.S. Mail or private courier, email or hand delivery, as indicated below:

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