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**BEFORE THE
IDAHO PUBLIC UTILITIES COMMISSION**

IN THE MATTER OF IDAHO POWER
COMPANY'S APPLICATION TO INITIATE A
MULTI-PHASE COLLABORATIVE PROCESS
FOR THE STUDY OF COSTS BENEFITS AND
COMPENSATION OF NET EXCESS ENERGY
ASSOCIATED WITH CUSTOMER ON-SITE
GENERATION

Case No. IPC-E-21-21

**CITY OF BOISE CITY'S
FORMAL COMMENTS**

The city of Boise City ("Boise City") submits these formal comments on the proposed scope of the study to be undertaken by Idaho Power ("Company") to comprehensively evaluate the costs and benefits of on-site generation. Boise City submits these initial formal comments pursuant to Rule 203 of the Commission's Rules of Procedure, IDAPA 31.01.01.203, and pursuant to the Notice of Scheduling, Order No. 35193, issued by the Commission on October 7, 2021.

1. Boise City has an interest in ensuring the study design will comprehensively evaluate the costs and benefits of customer-owned on-site generation, so its citizens have the opportunity to be fairly compensated for installing on-site generation and to prevent non-participants in the

program from being unfairly and unreasonably burdened by the decisions of others. Only through a fair, just, and reasonable program design can both ends be attained. The study framework must represent a balanced approach and must reasonably account for all costs and benefits from on-site generation. The study must address the concerns of customers and answer their questions about on-site generation. The study must also provide the Commission with a basis to analyze future proposals to change the net-metering program.

2. Pursuant to the procedure established for this docket, Boise City and other parties to the case submitted proposed additions to the Company's Study Framework to Commission Staff, which Staff integrated into Commission Staff's Study Framework submitted to the Commission on September 30, 2021.

3. Boise City recommends the study consistently analyze each study component at various on-site generation penetration levels. Boise City believes it would be appropriate to analyze each study component at current penetration levels, at penetration levels 10x greater than current levels, and at penetration levels 25x greater than current levels. Similarly, Boise City believes the study should look at a 20-year planning horizon, which is consistent with Company's Integrated Resource Plan (IRP) and the lifespan of a distributed energy resource. Boise City believes doing so would provide insight about the current state of Idaho Power's net metering program and allow evaluation of potential future impacts.

4. Boise City believes the Study Framework must be structured to facilitate a comprehensive review of all risk mitigation benefits provided by customer-generated energy. Distributed energy resources are uniquely situated to cost-effectively promote system reliability and customer resiliency, particularly as the Company's service area and region experience increasing impacts of climate change. Boise City recommends the Study Framework incorporate

the variabilities and system impacts identified in the 2021 IRP Climate Change scenario, with increased hydro-electric generation variability, high gas prices, and high load growth, across all identified avoided cost, benefit, and utility cost calculations.

5. Boise City recommends the Commission include the following areas in the Study Framework, which the Commission ordered Rocky Mountain Power to study in PAC-E-19-08 Order Nos. 34573 and 34798, that were not included in Idaho Power's proposed Study Framework:

- a. Quantify the value of grid stability, resiliency, and cybersecurity protection provided by customer generators at each penetration level.
- b. Quantify the value to local public health and safety from reduced local impacts of global warming such as extreme temperatures, reduced snowpack variation, reduced wildfire risk, reduced hydroelectric generation, degraded air quality, and other impacts that can have direct impacts on Idaho Power customers at each penetration level.
- c. Quantify local economic benefits, including local job creation and increased economic activity in the immediate service territory at each penetration level.
 - i. Boise City recommends the Company incorporate the IMPLAN model analysis used in Maryland's 2018 Cost and Benefits of Solar study. The method used to calculate the Jobs and Local Economic Impact & Inflation is described at pages 171-180. DAYMARK ENERGY ADVISORS, BENEFITS AND COSTS OF UTILITY SCALE AND BEHIND THE METER SOLAR RESOURCES IN MARYLAND p. 171-180, 2018 *available at* <https://www.psc.state.md.us/wp-content/uploads/MD-Costs-and->

[Benefits-of-Solar-Draft-for-stakeholder-review.pdf](#) (last visited November 10, 2021).

- d. Quantify the reduced risk from end-of-life disposal concerns for the Company compared to fossil-fueled resources at each penetration level.
- e. Explain how seasonal and time-of-delivery price differences will be used to help align customer-generated exported energy with the Company's system needs at each penetration level.
- f. Quantify and analyze the fuel price guarantee value provided by customer-generators at each penetration level.
- g. Quantify the avoided uncertainty in fuel price fluctuations from displaced resources across the planning period.

6. Boise City recommends the Commission direct the Company to study specific environmental benefits and avoided costs of energy exported to the grid by renewable on-site generation. In addition to the areas to be studied from PAC-E-19-08, Boise City requests the Commission include the following items:

- a. Quantify the total avoided carbon emissions from renewable on-site customer-generators at each penetration level.
- b. Calculate the avoided costs of compliance with carbon emissions regulation at each penetration level and incorporating the following carbon costs:
 - i. 2021 IRP Planning Case Carbon Cost.
 - ii. \$51 per metric ton of CO₂ – this is the 2020 social cost of carbon at 3% discount rate as determined by the Interagency Working Group on Social Cost of Greenhouse Gases. INTERAGENCY WORKING GROUP ON

SOCIAL COST OF GREENHOUSE GASES, UNITED STATES GOVERNMENT, TECHNICAL SUPPORT DOCUMENT: SOCIAL COST OF CARBON, METHANE, AND NITROUS OXIDE INTERIM ESTIMATES UNDER EXECUTIVE ORDER 13990 p. 5, 2021 available at https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf (last visited November 10, 2021).

iii. \$93 per metric ton of CO₂- to achieve Net zero emissions by 2040 as identified in Kaufman, N., Barron, A.R., Krawczyk, W. et al. A near-term to net zero alternative to the social cost of carbon for setting carbon prices. Kaufman, N., Barron, A.R., Krawczyk, W., A NEAR-TERM TO NET ZERO ALTERNATIVE TO THE SOCIAL COST OF CARBON FOR SETTING CARBON PRICES, NAT. CLIM. CHANG. p.10, 1010-1014 (2020) available at <https://doi.org/10.1038/s41558-020-0880-3> (last visited November 10, 2021).

c. Quantify the benefits from the following avoided environmental impacts of renewable on-site generation at each penetration level:

i. Methane:

1. Quantify the avoided methane leakage from displaced resources, incorporating natural gas production, transmission rates and intra-plant leakage/loss throughout. The Gas Index 2020 “Where Leaks Occur” report identified 338 grams of methane per Mcf of natural gas leaked out of the production and transmission systems that deliver natural gas to Boise. THE GAS INDEX, p.6,

(2020) available at <https://thegasindex.org/> (click on “Download Report” last visited November 10, 2021).

2. Utilizing the identified total methane leakage avoided from renewable on-site generation, quantify the avoided social cost of methane utilizing the February 2021 Interagency Working Group on Social Cost of Greenhouse Gases reported at \$1500 in 2020 dollars per metric ton of methane. INTERAGENCY WORKING GROUP ON SOCIAL COST OF GREENHOUSE GASES, UNITED STATES GOVERNMENT, TECHNICAL SUPPORT DOCUMENT: SOCIAL COST OF CARBON, METHANE, AND NITROUS OXIDE INTERIM ESTIMATES UNDER EXECUTIVE ORDER 13990 p. 5, 2021 available at https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf (last visited November 10, 2021).

ii. Water: Quantify the avoided acre feet and avoided cost of water from decreased water use required for electric generation due to renewable on-site generation at each penetration level. Reference the method used by Crossborder Energy and Arizona Public Service in the 2013 study for the Arizona Corporation Commission. CROSSBORDER ENERGY, THE BENEFITS AND COSTS OF SOLAR DISTRIBUTED GENERATION FOR ARIZONA PUBLIC SERVICE p. 12-13, (Beach, R.T., McGuire, P.G. eds., 2013) available at

<https://www.seia.org/sites/default/files/resources/AZ-Distributed-Generation.pdf> (last visited November 10, 2021).

- iii. Land: Quantify the land use required per MW of utility scale solar and wind generation in an acre/MW calculation. Utilizing the 2021 IRP preferred portfolio, quantify the potential avoided acres and avoided land costs attributable to renewable on-site generation compared to utility scale solar deployment at each penetration level.
- d. Quantify and evaluate the following capacity values for renewable on-site generation:
 - i. Quantify and evaluate the capacity resource value for customer-generators with 4 hours of available on-site energy storage at each penetration level according to the method agreed to for calculating capacity payments in the IPC-E-18-15 settlement agreement and according to effective load carrying capacity (ELCC) value.
 - ii. Quantify and evaluate the customer-generator capacity resource value for solar PV customer-generators at each penetration level and according to the method agreed to for calculating capacity payments in the IPC-E-18-15 settlement agreement and according to ELCC value.

7. Using the method to calculate the avoided cost of energy agreed to in the IPC-E-18-15 settlement agreement, compare the avoided cost of energy rates a customer-generator would have received given a typical rooftop solar PV output profile in southern Idaho, with the cost of the Company's actual marginal resource for each hour of the year in 2018, 2019, and 2020.

8. Compare the stated cost-shift of the current value of customer-generated net-excess energy to:

- a. The inter-class cost shift from the residential customer class to the irrigation customer class in 2021.
- b. Forecasted gross revenue and fixed cost-recovery from residential customer load growth across planning period.
- c. The difference between the projected costs of operating and maintaining Langley Gulch to the actual costs of operating and maintaining Langley Gulch.

9. Additionally, Boise City recommends the Commission-ordered Study Framework include the following items and overarching principles to promote transparency and credibility:


- a. Direct the Company to make publicly available, as an appendix or attachment to the study, all data, assumptions, and inputs utilized in the resulting analysis of the comprehensive benefits and costs of excess energy generation.
- b. Ensure the focus of the study and any cost-of-service methodologies or rate design within the approved Study Framework are only evaluating the costs associated with net-excess energy produced by customer generators and not the energy consumption of those customer generators.

10. Boise City believes that customer concerns, in addition to utility concerns, must be addressed for the study to be considered comprehensive and useful for informing future Commission decisions. The Study Framework must ensure that the resulting study can credibly answer key customer questions. Specifically, the Study Framework must enable the Company to clearly explain the basis for and impacts of any proposed compensation changes for current non-grandfathered customer-generators and future customer-generators. The Study Framework must

also enable the Company to explain, particularly to customers without on-site generation, the fair value of the net-excess energy produced by their neighbors.

11. Boise City believes that a robust renewable on-site generation program can be a key resource in Idaho Power's portfolio. Boise City believes that the unique characteristics of the resource help to mitigate Idaho Power's exposure to risks brought about by climate change such as less predictable runoff and more extreme temperatures. Further, renewable on-site generation allows customers greater control over their energy bills, creates impactful jobs in Idaho Power's service territory, and can help protect against fuel price volatility. Boise City is interested in a strong and sustainable net-metering program that fairly compensates program participants for all the benefits they provide to Idaho Power's system now and into the future. Idaho Power's service territory benefits from abundant natural sunlight, a growing population base, and a summer peak that can be at least partially offset by renewable on-site generation. Boise City believes a strong and fair net metering program would be a benefit to all Idaho Power customers.

DATED this 16th day of November 2021.



Ed Jewell
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CERTIFICATE OF SERVICE

I hereby certify that I have on this 16th day of November 2021, served the foregoing documents on all parties of counsel as follows:

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