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BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF IDAHO POWER COMPANY'S AUTHORITY TO ESTABLISH NEW SCHEDULES FOR RESIDENTIAL AND SMALL GENERAL SERVICE CUSTOMERS WITH ON-SITE GENERATION.	)))))	**CASE NO. IPC-E-17-13** **IDAHO CONSERVATION LEAGUE SIERRA CLUB, IDAHO CHAPTER IDAHO CLEAN ENERGY ASSOCIATION NORTHWEST ENERGY COALITION**

RECONSIDERATION BRIEF

The Idaho Conservation League (ICL), the Idaho Chapter of the Sierra Club, the Idaho Clean Energy Association, and the Northwest Energy Coalition submit the following brief in response to *Order No. 34098.* Responding to Vote Solar's Petition for Reconsideration, the Commission ordered parties to provide:

> "[B]riefing related to whether a customer's ability to export energy should determine if the customer should be included in new Schedules 6 and 8." *Order No. 34098 at 2.*

Customer's Ability to Export is the Distinguishing Characteristic

The Commission, in Order 34046, found, "it is time to distinguish a class of customers that uses the grid for standard energy import and use, from a class of customers that uses the grid to both import and export energy." *Order No. 34046 at 16.* After considering the arguments of the parties, the Commission drew a clear line between customers who actually export energy to the grid and those that do not. Therefore, we submit that the ability to export is the distinguishing characteristic to determine a customer's eligibility for Schedules 6 or 8.

However, the term "export" is vague in this context. The primary issue is the appropriate time period to measure whether a customer is exporting or consuming energy. In this docket, Idaho Power explains they measure customer-owned generation and consumption hourly. However, the Company currently uses a 15-minute time period to measure customer demand, and five-minute intervals at a system level. Anyone can watch the power meter at home spin instantly.

Because of the uncertainty regarding Idaho Power's metering capabilities, instead of a specific time period we recommend the Commission adopt a policy that the relevant period to measure exports is the smallest time interval over which a customer is billed. This policy aligns with billing practices, places the responsibility for metering on the entity that has the ability and authority to operate the meters, and incents the utility to continually improve metering ability.

Use Export Limiting Devices to Determine Eligibility for Rate Schedule

In *Order No. 34098*, the Commission also asked for "information about export limiting devices, effects of battery storage, additional information on the meaning and repercussions of "in parallel" connection, and the masking of usage created by hourly analysis of customer and Company energy exchanges." *Order No. 34098 at 2-3.*

We support a policy that uses objective technical specifications regarding the possibility of energy exports to determine a customer's appropriate rate schedule. Hawaii has adopted a net metering policy that allows customers to elect a non-export option. The Hawaii Electric Company Rule 22, Appendix II provides five options for technical specifications that determine if a customer will not export energy. We recommend adopting these options that reflect current capabilities and industry standards for customer-owned generation equipment. The full Appendix II is attached to this brief as Exhibit 405.

The standards developed by the Hawaii Electric Company are a good model for this Commission. The utility and stakeholders developed these standards recently so they reflect current industry capabilities and practices. Because the specifications are based on system design or technological functions, individuals are extremely unlikely, if not unable, to evade export limits. And even if a customer did, Idaho Power's metering

system would alert the company instantly. Finally, because these are objective standards adopted in a prominent market, compliant equipment is readily available from customer-owned generation equipment suppliers.

Battery storage:

The distinguishing characteristic the Commission identified is the ability of a customer to export energy to the grid. Therefore, whether a customer has a battery is not the issue in this docket; rather the issue is whether that battery is used solely for self-consumption or exporting to the gird. Hawaii's Rule 22, Appendix II applies to customer owned batteries as well as customer owned generation to address potential exports. Any cost or rate issue related to battery storage will be addressed in the next phase of this docket.

Masking of usage created by hourly analysis:

We submit that customers cannot "mask usage"; rather the utility elects to use a certain level of granularity in the metering system for recording customer consumption. If the utility chooses to use an hourly time interval, then customer variation within the hour is not "masking", it is the normal variation the utility accepts as part of doing business. If the utility elects to use a more granular time, like 15 minutes, then the customer is not "masking" usage any more or less; the utility is just measuring consumption better.

Because the utility owns and controls the metering system, we recommend the Commission acknowledge that customer variation within the time period measured for billing is a normal part of utility business. This recommendation works in concert with our recommendation to draw a bright line between customers who elect to limit exports and those who do not and adopting technical specifications to govern this election.

Recommendation:

The Commission in *Order No 34046* and *30498* made clear the distinguishing characteristic for new Schedules 6 and 8 is the customer's ability to export energy to the system. We recommend the Commission establish an objective standard to determine if a customer may export based on industry capabilities and best practices.

1. Establish the time period for measuring exports is the smallest time interval over which a customer is billed. This aligns responsibility with the utility who controls the metering equipment and incents the utility to improve metering functions.

2. Require Idaho Power to define the eligibility for Schedules 6 and 8 to exclude a customer who elects to be a non-exporting customer. We recommend adopting the technical specifications in Hawaii Electric Company Rule 22 Appendix II to define a non-exporting customer.

We believe the recommendations above are simple, objective standards the Commission should adopt to clarify the distinction between exporting and non-exporting customers announced in *Order No 34046*. We look forward to the next phase of this docket – a collaborative study of the costs and benefits of customer owned distributed generation.

Respectfully submitted this 10th day of August 2018,

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RECONSIDERATION BRIEF

Exhibit 405

Hawaii Electric Company Rule 22, Appendix II

APPENDIX II

TECHNICAL SPECIFICATIONS FOR CUSTOMER SELF-SUPPLY SYSTEMS

The following technical specifications are intended to provide guidelines to facilitate the interconnection and parallel operation of Self-Supply Systems with the utility's Distribution System. These technical specifications have been established to maintain safety, reliability, and power quality standards for all utility customers and personnel. Unless otherwise defined herein, capitalized terms shall have the definitions set forth in Rule 14, Paragraph H ("Rule 14H").

Technical Specifications –

- **Maximum System Size**. The Generating Facility shall have a capacity of not more than one hundred kilowatts (100 kW).
- **Host Load Only**. The Generating Facility shall be sized and designed such that all of the Generating Facility's output is consumed by the Eligible Customer-Generator's load ("Host Load").
- **Non-Export Requirements**. The Generating Facility shall be designed to minimize the transfer of electrical energy from the Generating Facility to the utility. The Generating Facility shall not export electrical energy across the Point of Interconnection, except to provide Grid Support as described in Option 5, including during emergency conditions where Advanced Inverter functions, including functions that result in energy export, shall be provided pursuant to Rule 14H and this Agreement. In any situation in which Rule 22 conflicts with Rule 14H regarding energy export, Rule 14H controls. In order to qualify as a Self-Supply System under the Company's Customer Self-Supply tariff, the Generating Facility must utilize one or more of the following options:
  - **Option 1** ("Reverse Power Protection"): To ensure power is never exported across the Point of Interconnection, a reverse power relay may be provided. The default setting for this protective function shall be 0.1% (export) of the service transformer's rating, with a maximum 2.0 second time delay.
  - **Option 2** ("Minimum Power Protection"): To ensure at least a minimum amount of power is imported across the Point of Interconnection at all times (and, therefore, that power is not exported, other than for the short time periods noted), an under-power protective function may be provided. The default setting for this Minimum Power Protection shall be 5% (import) of Generating Facility's total gross rating, with a maximum 2.0 second time delay.
  - **Option 3** (Certified Non-Islanding Protection): To ensure the incidental export of power is limited to acceptable levels, this option requires that all of the following conditions be met: a) the total gross capacity of the Generating Facility must be no more than 25% of the nominal ampere rating of the Customer-Generator's dedicated service equipment; b) the total gross capacity of the Generating Facility must be no more than 50% of the Customer-Generator's dedicated service transformer capacity rating (this capacity requirement does not apply to Eligible Customer-Generator taking primary service without an intervening transformer); and c) the Generating Facility must be Certified as Non-Islanding.

    The ampere rating of the Eligible Customer-Generator's service equipment to be used in this evaluation will be that rating for which the Eligible Customer-Generator's utility service was originally sized or for which an upgrade has been approved. It is not the intent of this provision to allow increased export simply by increasing the size of the Eligible Customer-Generator's service panel, without separate approval for the resize.
  - **Option 4** (Relative Generating Facility Rating): This option, when used, requires the net rating of the Generating Facility to be small enough in comparison to its host facility's minimum load such that the use of additional protective functions is not required to ensure that power will not be exported to the Company's Distribution System. This option requires the Generating Facility capacity to be no greater than 50% of the Eligible Customer-Generator's verifiable minimum Host Load over the past 12 months. This option only applies to Eligible Customer-Generators with load profile metering with at least 12 months of historical data.

- **Option 5** (Advanced Inverter Functionality): To prevent the unpermitted reverse power flow, or Net Export, from the Customer's Generating Facility across the Point of Interconnection, the use of an internal transfer relay, Energy Management System, or other Company approved Customer Facility hardware or software system(s) is required. This option must meet the following requirements identified below:

  1) Inadvertent Export: Inadvertent Export is the unpermitted, unscheduled, and uncompensated export or real power generated from a Customer's Generating Facility and delivered to the Company. The magnitude of Inadvertent Export shall be less than the Generating Facility's Nameplate Rating and the duration shall be less than 30 seconds for any single event. There are no limits to the number events.

  2) Nameplate Rating: For the purpose of calculating Inadvertent Export, Nameplate Rating is defined as the lesser of (i) the Total Inverter Capacity (kW) or (ii) the sum of the Total Module Capacity and the Total Energy Storage System Capacity (kW) (i.e. the aggregate of the DC-power components), as those amounts are stated in Exhibit A (Description of Generating Facility) of the Customer's Standard Interconnection Agreement for Self- Supply Systems, and as depicted on the single-line diagram and three-line diagram.

  3) Net Export Limit: Net Export is the cumulative amount of Inadvertent Export energy produced by the Customer's Generating Facility and delivered to the Company. Net Export shall be less than the limit of the Customer's Generating Facility's Nameplate Rating multiplied by one (1) hour per customer billing cycle. The Company will install an ANSI certified meter or similar device to register the Net Export produced by the Customer's Generating Facility per billing cycle.

  4) Grid Support: Grid Support is the import and export of real and/or reactive power in a controlled and specified manner in order to maintain safety, reliability, and/or power quality. When permitted by the Company and agreed to by the Customer, the Generating Facility may provide Grid Support. Cumulative Grid Support export energy shall be deducted from the Customer's Net Export Limit per billing cycle, so as to not count towards a Generating Facility's Net Export Limit.

  5) Cease to Energize: Any amount of export of real power across the Point of Interconnection lasting longer than 30 seconds for any single event shall result in a trip of the Customer's Generating Facility within two (2) seconds of exceeding the 30 second duration limit, except to provide Grid Support when permitted by the Company, including during emergency conditions where Advanced Inverter functions, including functions that result in energy export, shall be provided

pursuant to Rule 14H and this Agreement. In any situation in which Rule 22 conflicts with Rule 14H regarding energy export, Rule 14H controls. The event reconnection time limit will be a minimum offive
(5) minutes, unless otherwise directed by the Company, pursuant to Rule 14, Paragraph H, Appendix I, Required Delay on Reconnection.

6) Control System Failure: Where applicable, any failure of the Customer's Generating Facility control system for thirty (30) seconds or more, which includes but is not limited to; the internal transfer relay, Energy Management System, or other Company approved Customer Facility hardware or software system(s) intended to prevent the reversepower flow, shall cause the Customer's Generating Facility to enter a safe operating mode whereby the production of energy from the Generating Facility is autonomously limited to an amount that shall not cause Inadvertent Export to occur until such time that the Customer has reestablished real power output control of the Generating Facility.

- **Advanced Inverter Requirements to Provide Grid Support.** The Generating Facility shall comply with the Advanced Inverter requirements set forth in Rule 14, Paragraph H, Appendix I (Advanced Inverter Generating Facility Design And Operating Requirements). In any situation in which Rule 22 conflicts with Rule 14H regarding energy export, Rule 14H controls.

CERTIFICATE OF SERVICE

I hereby certify that on this 10th day of August 2018, I delivered true and correct copies of the foregoing RECONSIDERATION BRIEF to the following persons via the method of service noted:

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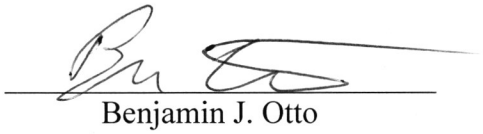

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