Rule No. 32
SMART RENEWABLE ENERGY PROGRAM

A. AVAILABILITY FOR CUSTOMER-GENERATORS

The Smart Renewable Energy Program (also known as the Smart DER Program), is available to customers of Hawaiian Electric Company, Inc. ("Company") who meet the following conditions ("Eligible Customer-Generators"):

(1) served under any applicable Advanced Rate Design Time-of-Use ("ARD TOU") rate schedule unless the customer elects to opt out of service on ARD TOU rates, or, after January 31, 2025, served under any applicable rate schedule;

(2) allow for the installation of an advanced meter by Company at the Eligible Customer-Generator's premises;

(3) are not concurrently enrolled or participating in the Schedule Q, Net Energy Metering ("NEM"), Feed-in Tariff, Standard Interconnection Agreement ("SIA"), Customer Grid Supply ("CGS"), Customer Grid Supply Plus ("CGS+"), Smart Export ("ISE"), or Customer Self-Supply ("CSS") tariff programs, Rider I, Rider M, or Community Based Renewable Energy ("CBRE"); and

(4) select and participate under, and in compliance with the terms and requirements of, either the Export Rider or the Non-export Rider.

Eligible Customer-Generators currently enrolled in NEM, CGS, CGS+, or ISE tariff programs ("Existing Export Programs") and who wish to transition to the Smart Renewable Energy Program Export Rider will not be required to make any upgrades or retrofits to their existing Generating Facility solely by reason of making such transition; provided, that such existing Generating Facility is in compliance with the applicable Existing Export Program's tariff and contractual requirements.

Eligible Customer-Generators currently enrolled in SIA or CSS tariff programs ("Existing Non-export Programs") and who wish to transition to the Smart Renewable Energy Program Non-export Rider will not be required to make any upgrades or retrofits to their existing Generating Facility solely by reason of making such transition; provided, that such existing Generating Facility is in compliance with the applicable Existing Non-export Program's tariff and contractual requirements. Eligible Customer-Generators currently enrolled in Existing Non-export Programs and who wish to transition to the Smart Renewable Energy Program Export Rider will be required



Docket No. 2019-0323, Order No. 41153 dated October 31, 2024.
Transmittal Letter dated November 8, 2024.

to terminate their existing interconnection agreement and reapply under the Smart Renewable Energy Program Export Rider.

Notwithstanding the foregoing, in the event an Eligible Customer-Generator proposes an amendment to their Generating Facility following such Eligible Customer-Generator's transition to the Smart Renewable Energy Program, the amended portion of the Generating Facility will be required to adhere to, at the Eligible Customer-Generator's expense, the interconnection requirements and standards that would be applicable to a new Generating Facility participating in the Smart Renewable Energy Program.

B. RATES

1. Effective February 1, 2025, new Smart Renewable Energy Program Eligible Customer-Generators will be served on the Eligible Customer-Generator's existing rate schedule. Effective February 1, 2025, existing Eligible Customer-Generators who participate in the Smart Renewable Energy Program who are served on an applicable ARD TOU rate schedule will continue to be served on such applicable ARD TOU rate schedule unless the Eligible Customer-Generator declines participation in the Company's ARD TOU rate schedule with notice and reverts back to their previous applicable rate schedule at the beginning of a subsequent billing period.

2. The measurement of the kWh delivered by the Company to the Eligible Customer-Generator and the kWh received by the Company from the Generating Facility, as such term is defined in the applicable Export Rider or Non-export Rider, shall begin on the first day of the next billing period after (a) installation of the required meter(s), and (b) after receiving the Company's approval to interconnect the Generating Facility. In addition, for customers who elect to leave service under this tariff, transfers to another applicable rate schedule at the current service location shall be made at the beginning of the next billing period.

3. Eligible Customer-Generators served under this tariff who also receive energy from the Company shall be billed monthly for the energy supplied by the Company, in accordance with the Company's Rule No. 8, the applicable rate schedule, and the Company's rules filed with the Commission.
4. All rates, terms, and conditions from the applicable rate schedule will apply.



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C. METERING

The Company, at its expense, will supply, install, own, and maintain all necessary advanced meters and associated equipment to record the flow of electric power received by the Company and delivered to the Eligible-Customer Generator for billing and performance auditing purposes. The Eligible Customer-Generator shall, at its expense, provide, install and maintain all conductors, service switches, fuses, meter sockets, meter instrument transformer housing and mountings, switchboard meter test buses, meter panels, and similar devices required for service connection and meter installation and operation on the customer's premises in accordance with the Company's Rule No. 14, Section A.2. The meters will be tested and read in accordance with the rules of the Commission and the Company.

D. INTERCONNECTION AGREEMENT AND REQUIREMENTS

1. Eligible Customer-Generator shall complete and sign an application for service and a Smart Renewable Energy Program Interconnection Agreement for Export Systems or Non-export Systems, as applicable, and as provided as Appendix I of the corresponding Rider to this tariff ("Interconnection Agreement"), to receive service under this tariff, which shall not be effective until approved and executed by the Company. Where the Eligible Customer-Generator is not the person or entity in whose name electric service is rendered for the Eligible Customer-Generator's premises where the Generating Facility is located, i.e., where a landlord-tenant relationship exists, only the Eligible Customer-Generator shall be required to complete and sign the application for service and the Interconnection Agreement. A tenant may itself also complete and sign the application for service and the Interconnection Agreement as the Eligible Customer-Generator upon providing to the Company supporting documentation establishing to the Company's satisfaction such tenant's right and authority to so apply.

2. The Eligible Customer-Generator's Generating Facility and interconnection systems must comply with all applicable safety and performance standards of the National Electric Code ("NEC"), the Institute of Electrical and Electronic Engineers ("IEEE"), accredited testing laboratories such as Underwriters Laboratories ("UL"), the Company's interconnection requirements provided in Rule No. 14, Paragraph H ("Rule 14H") and is subject to any other requirements provided in the Interconnection Agreement.



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E. INTERCONNECTION PROCESS

1. Eligible Customer-Generator requests to interconnect and operate a Generating Facility in parallel with the Company's electric system will be processed in accordance with the procedures in the Interconnection Process Overview provided in Appendix III of Rule 14H.

2. Under no circumstances shall an Eligible Customer-Generator interconnect and operate a Generating Facility in parallel with the Company's electric system without prior written approval by the Company, whether in the form of a fully executed Interconnection Agreement or other Company approved process or procedure (e.g. early energization option).

3. NON-EXPORT SYSTEMS ONLY: Generating Facilities that meet the Technical Specifications stated in Appendix II to the Customer Non-export Rider shall qualify for expedited interconnection subject to the terms and conditions set forth in Appendix III of Rule 14H.

F. APPLICATION CHARGE

Each Eligible Customer-Generator applying for service under this tariff may be subject to a one-time application charge of $50.00 unless such application is submitted electronically via the Company's online Customer Interconnection Tool ("CIT"), subject to CIT capability, in which case no application charge will be assessed.

G. MICROGRIDS

This Section H, Microgrids, shall only apply to those Eligible Customer-Generators whose Generating Facility is also subject to Rule No. 30, Microgrid Services Tariff.

1. Capitalized terms used in this section are as defined in Rule No. 30, Microgrid Services Tariff.

2. During Grid-Connected Mode, the Microgrid will be operated in parallel with the Company's System.

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3. An Eligible Customer-Generator may operate its Generating Facility as part of a Customer Microgrid or be a participant in a Hybrid Microgrid.

4. An Eligible Customer-Generator who intends to operate its Generating Facility within a Customer Microgrid, or as a participant in a Hybrid Microgrid, shall notify the Company in its application through the Customer Interconnection Tool.

5. An Eligible Customer-Generator who operates its Generating Facility as part of a Microgrid after obtaining interconnection approval from the Company shall update its application through the Customer Interconnection Tool. Such notification and revision shall satisfy the Customer's notice requirements set forth in Tariff Rule 3B (Change in Customer's Equipment or Operations).

6. Customer Microgrids and Hybrid Microgrid Participants shall comply with the requirements of Rule No. 30, Microgrid Services Tariff, including Section H, Microgrid Operation.



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# Rule No. 32
# SMART RENEWABLE ENERGY PROGRAM
# EXPORT RIDER

## A. ELIGIBLE CUSTOMER-GENERATOR

Export service is available to Eligible Customer-Generators who own or lease from a third party and operate or contract to operate with a third party a generating facility powered by renewable energy as defined under Hawaii Revised Statute section 269-91, or successor statute thereto, including without limitation and only as applicable, solar, wind turbine, biomass, or hydroelectric energy generating facility, or a hybrid system consisting of two or more of these facilities ("Generating Facility"), and where:

1. The Generating Facility, which may include an energy storage system, is located on the Eligible Customer-Generator's premises,

2. The Generating Facility will be operated in parallel with the Company's transmission and distribution facilities,

3. The Generating Facility is installed, designed, configured, and operates in conformance with the Company's interconnection requirements provided in Rule No. 14, Paragraph H ("Rule 14H"), and the requirements of this Tariff including its appendices, and

4. The Generating Facility is sized and designed such that all of the Generating Facility's output is intended to offset all or part of the Eligible Customer-Generator's own electrical requirements.

## B. AUTOMATIC TRANSITION

For any Eligible Customer-Generator participating in an Existing Export Program that has not otherwise already transitioned to the Smart Renewable Energy Program, such Eligible Customer-Generator shall be automatically transitioned to the Smart Renewable Energy Program Export Rider on the date that is seven years after the effective date of the Eligible Customer-Generator's Interconnection Agreement under its Existing Export Program; provided, however, that in no event shall such automatic transition occur before October 1, 2024. Eligible Customer-Generators participating in the NEM program are exempt from this requirement to transition to the Smart Renewable Energy Program.



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C. BILLING

1. The Export Periods shall be defined as follows:

| | |
|---|---|
| Daytime: | 9:00 a.m. – 5:00 p.m., Daily |
| Overnight: | 9:00 p.m. – 9:00 a.m., Daily |
| Evening Peak: | 5:00 p.m. – 9:00 p.m., Daily |

**Export Rates For Interconnection Agreements Executed April 2024-April 2027**

The applicable Export Rate for each Export Period shall be as follows:

| | MAUI | LANAI | MOLOKAI | |
|---|---|---|---|---|
| Daytime | 6.6 | 26.7 | 17.9 | cents per kilowatt hour ("kWh") daily |
| Overnight | 13.1 | 25.9 | 17.4 | cents per kWh daily |
| Evening Peak | 18.2 | 40.8 | 27.2 | cents per kWh daily |

If the Export Rates are revised during the Eligible Customer-Generator's billing period, the applicable Export Rates shall be the Export Rates in effect at the beginning of the next billing period.

The applicable BYOD Rate for each Export Period shall be as set forth in the BYOD Rider.

For new contracts, Export Rates for Eligible Customer-Generators participating under the Export Rider (a) shall be fixed for the first seven years of the contract term; and (b) may be updated beginning in the eighth year of the contract term by the Company subject to Commission approval or as otherwise ordered by the Commission. Eligible Customer-Generators transitioning or opting into the Export Rates from interim DER programs (e.g., CGS, CGS+, CSS, ISE) are credited at the current Export Rates and are not subject to the seven-year "lock-in" period.

Notwithstanding the foregoing, the Eligible Customer-Generator may, within the seven-year "lock-in" period, opt into the current Export Rates; provided, that such Eligible Customer-Generator shall be obligated to comply with the latest applicable tariff requirements. Eligible Customer-Generators who opt out

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of the lock-in period shall be compensated at the current applicable Export Rates and may not return to the rates in force during the lock-in period.

2. For each billing period, the kWh received by the Company within the Overnight, Daytime and Evening Peak export windows, respectively, shall be assigned to kWh credits applied to calculate the current bill ("Credits Applied") and/or to kWh credits carried over to the future billing period(s) within the current 12-month period ("Banked Credits"). The Company shall assign to kWh Credits Applied the amount of kWh received by the Company from the Generating Facility up to the amount of the kWh delivered by the Company to the Eligible Customer-Generator. Any kWh received by the Company from the Generating Facility in excess of the kWh delivered by the Company to the Eligible Customer-Generator shall be added to kWh Banked Credits. The balance of kWh Banked Credits shall be reduced by any kWh Banked Credits Applied, which are described below.

3. The credits for each Export Period shall be determined as the Export Rate for the Export Period, shown in section C.1 above, multiplied by the sum of kWh Credits Applied plus kWh Banked Credits Applied for the respective Export Period ("Export Period Credits"). The total Export Credits for the billing period shall be calculated as a sum of the Export Period Credits determined for each Export Period. The Export Period Credits and the total Export Credits for the billing period shall appear as separate line items on the Eligible Customer-Generator's electric bill. Application of Smart Renewable Energy Program Export Credits may only reduce such electric bill to an amount equal to the minimum charge for the applicable rate schedule, plus any surcharges that are applicable in addition to such minimum charge.

4. The determination of kWh Credits Applied and kWh Banked Credits Applied will be based on the Export Period that the kWh was received by the Company from the Eligible Customer-Generator. For each Export Period, current month kWh received by the Company is included in kWh Credits Applied up to the amount of current month kWh delivered to the Eligible Customer-Generator during the corresponding period ("first pass assignment"). Remaining current month kWh received is the kWh received in excess of kWh delivered.

   The Company will track by Export Period any remaining current month kWh received by the Company that is not included in kWh Credits Applied in the above calculation. If the total amount of current month kWh received assigned



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to kWh Credits Applied across all Export Periods in this calculation is less than the total amount of current month kWh delivered to the Eligible Customer-Generator across all periods, then remaining current month kWh received from the Generating Facility is added to kWh Credits Applied, up to the total amount of current month kWh delivered, in the following order: first, any remaining current month kWh received in the Evening Peak Period; second, any remaining current month kWh received in the Overnight Period; and last, any remaining current month kWh received in the Daytime Period ("second pass assignment"). Any remaining current month kWh received from the Generating Facility that is not added to kWh Credits Applied in this second pass assignment to kWh Credits Applied is then included in current month's kWh Banked Credits, by Export Period.

5. If the total current month kWh delivered to the Eligible Customer-Generator across all periods is greater than the total current month kWh received by the Company across all Export Periods, then a determination of kWh Banked Credits Applied is made, up to the amount that current month kWh delivered exceeds current month kWh received, in the following order: first, any prior cumulative kWh Banked Credits for the Evening Peak Period; second, any prior cumulative kWh Banked Credits for the Overnight Period; and last, any prior cumulative kWh Banked Credits received in the Daytime Period. Any prior cumulative kWh Banked Credits by Export Period not assigned in this process remain as cumulative kWh Banked Credits in the respective Export Period.

6. A reconciliation will be made every 12 months for the Eligible Customer-Generator's energy delivered by the Company with the energy received by the Company from the Eligible Customer-Generator's Generating Facility. The kWh delivered by the Company and the kWh received by the Company from the Eligible Customer-Generator shall be recorded for 12 billing periods. Coincident with the twelfth bill following the start of the Interconnection Agreement and each 12-month period thereafter, the Eligible kWh shall be determined as the difference between the kWh delivered to the Eligible Customer-Generator by the Company and the Credited kWh. Credited kWh is defined as the sum of kWh Credits Applied plus kWh Banked Credits Applied over the 12-month period.

   This reconciliation will be performed as follows:

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If the Credited kWh is greater than or equal to the Eligible kWh, then there is no Reconciliation Bill Credit.

A Reconciliation Bill Credit shall be applied if the Eligible kWh is greater than the Credited kWh, and if there are remaining cumulative kWh Banked Credits. The kWh for the Reconciliation Bill Credit shall be determined as follows, up to the amount that the Company-delivered kWh over the 12-month billing period exceeds the Credited kWh, in the following order: first, any remaining cumulative kWh Banked Credits for the Evening Peak period; second, any remaining cumulative kWh Banked Credits for the Overnight Period; and last, any remaining cumulative kWh Banked Credits received in the Daytime Period. The Reconciliation Bill Credit shall be calculated by Export Period and summed using the respective cumulative kWh Banked Credits assigned to kWh for the Reconciliation Bill Credit multiplied by their respective Export Rate from section C.1 above.

Any prior cumulative kWh Banked Credits not assigned to kWh for the Reconciliation Bill Credit are not applied, and the balance of the cumulative kWh Banked Credits is set to zero for the next 12-month period.

If an Eligible Customer-Generator terminates its Export service under this tariff prior to the end of any 12-month period, the Company shall reconcile such Eligible Customer-Generator’s kWh delivered by the Company with the kWh received by the Company from the Eligible Customer-Generator's Generating Facility in the same manner as the reconciliation that would have been performed at the end of the normal 12-month period.

The kWh delivered by the Company and the kWh received from the Eligible Customer-Generator, including an accounting of the kWh Credits Applied, kWh Banked Credits, and kWh Banked Credits Applied in each billing period of the current 12-month period will be included in the customer’s regular billing statement.

7. BYOD grid service export kWh credits shall be tracked for the applicable Export Period separately from non-BYOD export kWh credits. BYOD export kWh credits shall be applied to the customer’s bill after any applicable Smart Renewable Energy Program credits are applied.

   If the customer is enrolled in BYOD, BYOD grid service export credits shall be determined by Export Period by multiplying BYOD grid service export kWh to

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the Company by the respective BYOD Rate (Smart Renewable Energy Program Evening Peak Export Rate), and summed across Export Periods. The total of BYOD grid service export credits in the current month will be credited to the Eligible Customer-Generator's bill without limitation. If the application of the BYOD grid service export credit creates a credit balance for the customer's account, the customer can elect to maintain such credit balance for future billing. Grid Service export credits will be carried forward until the end of BYOD program or when customer ends their participation at which time the Grid Service export credits will be forfeited by the customer. At the anniversary of the BYOD Program (e.g., April of each year), the Company will issue a check to customer for an equivalent dollar value of the customer's grid service export credits (capped at 300 kWh multiplied by the applicable BYOD Rate), and the customer's grid service export credits will be reduced by the corresponding amount of grid service export credits associated with the check.



Docket No. 2019-0323, Order No. 40670 dated March 19, 2024
Transmittal Letter dated March 25, 2024.

**APPENDIX 1**
**SMART RENEWABLE ENERGY PROGRAM INTERCONNECTION AGREEMENT FOR EXPORT SYSTEMS**

This Smart Renewable Energy Program Interconnection Agreement for Export Systems ("Agreement") is made by and between:

Maui Electric Company, Limited ("Company"),

_____ ("Customer-Generator") and, if applicable,

_____ ("Owner/Operator"),

and is made, effective and binding as of To be filled out by the Company ("Effective Date"). Company and Customer-Generator may be referred to individually as a "Party" and collectively as the "Parties".

**WHEREAS**, Company is an operating electric public utility subject to the Hawaii Public Utilities Law, Hawaii Revised Statutes, Chapter 269, and the rules and regulations of the Hawaii Public Utilities Commission ("Commission");

**WHEREAS**, the Customer-Generator receives service from the Company;

**WHEREAS**, the Customer-Generator qualifies as an "Eligible Customer-Generator," as defined in the Company's Tariff;

**WHEREAS**, the Customer-Generator intends to construct a generating facility, as further described herein ("Generating Facility") and desires to interconnect and operate the Generating Facility in parallel with the Company's electric system;

**WHEREAS**, the Owner/Operator, may be a person or entity other than the Customer-Generator, who owns and operates the Generating Facility.

**NOW, THEREFORE**, in consideration of the premises and the respective promises herein, the Company and the Customer-Generator, and if applicable, the Owner/Operator, hereby agree as follows:

1. **Scope and Purpose.** The Parties understand and agree that this Agreement applies only to the operation of Customer-Generator's Generating Facility described in Exhibit A, and if applicable, Exhibit A-1 (Description of Generating Facility- Additional Information) attached hereto. This Agreement provides for interconnection and operation of the Generating Facility in parallel with the Company's electric system to serve only the electrical requirements of the Customer-Generator. Such Generating Facility shall also be installed and operate in conformance with the Company's interconnection requirements provided in Rule No. 14, Paragraph H ("Rule 14H") and other applicable interconnection standards.

2. **Notice and Disclaimer Regarding Future Rate and Tariff Modifications**. This Agreement shall, at all times, be subject to modification by the Commission as said Commission may, from time to time, direct in the exercise of its jurisdiction. Without limiting the foregoing, Customer- Generator expressly acknowledges the following:

   **The Smart DER Tariff, including the Export Rider, is subject to modification by the Hawaii Public Utilities Commission ("Commission"). The credit rate associated with any electricity exported to the grid from your Generating Facility will be fixed and/or thereafter modified as set forth in Rule No. 32.**

**Your Agreement and Generating Facility shall be subject to any future modifications ordered by the Commission. Such modifications may positively or negatively impact any potential savings in your electricity bill that were calculated by you or presented to you to support your decision to buy or lease a Generating Facility and may otherwise change the value of your Agreement and Generating Facility. You agree to pay for any costs related to such Commission-ordered modifications**.

**BY SIGNING BELOW, YOU ACKNOWLEDGE THAT YOU HAVE READ, UNDERSTAND AND AGREE TO THE ABOVE NOTICE AND DISCLAIMER. FURTHER, BY SIGNING BELOW, YOU CONFIRM YOUR UNDERSTANDING THAT ANY POTENTIAL SAVINGS IN YOUR ELECTRICITY BILL THAT WERE CALCULATED BY YOU OR PRESENTED TO YOU TO SUPPORT YOUR DECISION TO BUY OR LEASE A GENERATING FACILITY MAY CHANGE.**

3. **Effectiveness of Agreement**. This Agreement shall not be effective until approved and executed by each Party, i.e., upon the Effective Date. Customer-Generator shall not interconnect and operate the Generating Facility in parallel with the Company's system prior to approval and execution of this Agreement by the Company, except to extent necessary to obtain governmental or utility approvals. Until this Agreement is effective, no Party shall have any legal obligations arising hereunder, express or implied, and any actions taken by a Party in reliance on the terms of this Agreement prior to the Effective Date shall be at that Party's own risk.

4. **Term and Termination**. This Agreement shall continue on a month-to-month basis from the Effective Date. Customer-Generator may terminate this Agreement at any time with thirty (30) days' written notice. Company may terminate this Agreement at any time if Customer-Generator fails to comply with any term of this Agreement or if Customer-Generator fails to be an Eligible Customer-Generator.

5. **Generating Facility Description**. For the purposes of this Agreement, the "Generating Facility" is defined as the equipment and devices, and associated appurtenances, owned by the Customer- Generator, which produce electric energy for use by the Customer-Generator and are to be interconnected and operated in parallel with the Company's system. The Generating Facility is identified in Exhibits A (Description of Generating Facility) and, if applicable, Exhibit A-1 (Description of Generating Facility- Additional Information) attached hereto.

6. **Parallel Operation**. Company shall allow Customer-Generator to interconnect and operate the Generating Facility in parallel with the Company's distribution system in accordance with the terms and conditions of this Agreement and Rule 14H. The electric power produced by the Generating Facility shall be used to offset all or part of the Customer-Generator's own electrical requirements. Customer-Generator shall not cause the Customer-Generator to be considered a "public utility" as such term is defined in Chapter 269 of the Hawaii Revised Statutes.

7. **Sale of Electric Power by the Company to the Customer-Generator**. This Agreement does not constitute an agreement by the Company to provide retail electric service to Customer-Generator. Such arrangement must be made separately between the Company and Customer-Generator and sales of energy delivered by the Company to the Customer-Generator shall be governed by the applicable rate schedule and the Company's rules filed with the Commission.

8. **Permits and Licenses**. Customer-Generator shall be responsible for the design, installation, operation, and maintenance of the Generating Facility and shall obtain at its expense, and maintain any required governmental authorizations and/or permits for the construction and operation of the Generating Facility. Customer-Generator shall not commence parallel operation of the Generating Facility until Company has provided written approval. Company shall provide such written approval within fifteen (15) business days from Company's receipt of a copy of the final inspection or approval of the Generating Facility, which has been issued by the governmental authority having jurisdiction to inspect and approve the installation.

Company's written approval shall not be unreasonably withheld. Company shall have the right to have its representatives present at the final inspection made by the governmental authority having jurisdiction to inspect and approve the installation of the Generating Facility. Customer-Generator shall be required to notify Company in accordance with the terms of Section 19 (Notices), herein, at least five (5) business days prior to such inspection.

9. **Installation**.

(a) Design, installation, operation and maintenance of the Generating Facility shall include appropriate control and protection equipment as specified by the Company, including but not limited to an automatic load-break device such as a circuit breaker or inverter and a manual disconnect that has a visible break or breaker with rack-out capability to isolate the Generating Facility from the Company's system. The manual disconnect device must be accessible by the Company and be capable of being locked by the Company in the open position, to establish working clearance for maintenance and repair work in accordance with the Company's safety rules and practices. The disconnect devices shall be furnished and installed by the Customer-Generator and are to be connected between the Generating Facility and the Company's electric system. The disconnect devices shall be located in the immediate vicinity of the electric meter serving the Customer-Generator. The manual disconnect device shall be, at a minimum, clearly labeled "Customer-Generator System Disconnect". With permission of the Company, the disconnect devices may be located at an alternate location which is readily and safely accessible to the Company on a 24-hour basis. Such alternate location shall be clearly identified with signage placed in the immediate vicinity of the electric meter serving the Customer-Generator.

(b) The Customer-Generator grants access to the Company to utilize the disconnect device, if needed. The Customer-Generator shall obtain the authorization from the owner and/or occupants of the premises where the Generating Facility is located that allows the Company to access the Generating Facility for the purpose specified in this Agreement. Company may enter premises where the Generating Facility is located, as permitted by law or tariff, for the following purposes: (a) to inspect Generating Facility's protective devices and read or test meter(s); and (b) to disconnect the Generating Facility and/or service to Customer-Generator, whenever in Company's sole opinion, a hazardous condition exists and such immediate action is necessary to protect persons, Company's facilities, or property of others from damage or interference caused by the Generating Facility, or the absence or failure of properly operating protective device.

(c) Under no circumstances shall a Customer-Generator interconnect and operate a generating facility in parallel with the Company's electric system without prior written approval by the Company in the form of a fully executed Agreement.

(d) Generating facilities that incorporate the use of an energy storage device, e.g., battery storage, which is interconnected to the Company's transmission and/or distribution facilities, shall obtain an interconnection review by the Company pursuant to this Agreement. Energy storage systems that are intended to be installed by an Eligible Customer-Generator after Company's execution of an Agreement shall constitute a material change and addition to a Generating Facility and shall require interconnection review pursuant to this Rule prior to installation.

(e) Once a Generating Facility is interconnected to the Company's system, the Company reserves the right to require the installation of, or modifications to, equipment determined by the utility to be necessary to facilitate the delivery of reliable electric service to its customers, subject to the requirement that such installation or modification be consistent with applicable interconnection standards (e.g., Rule 14H). The Company shall provide a written explanation of the need for such installation or modification. Such installation or modification shall be made by mutual agreement of the Company and the Customer-Generator. Any disputes related to this provision shall be

resolved according to the dispute resolution process described in Rule 14H. Energy storage systems that are intended to be installed by an Eligible Customer-Generator after Company's execution of Agreement shall constitute a material change and addition to a Generating Facility and shall require interconnection review pursuant to this Rule prior to installation.

10. **Metering**. Within fifteen (15) days of execution of this Agreement, the Company will supply, own, and maintain all necessary meters and associated equipment utilized for billing and energy purchase. The meters will be tested and read in accordance with the rules of the Commission and the Company. The Customer-Generator, at its expense, shall provide, install and maintain all conductors, service switches, fuses, meter sockets, meter instrument transformer housing and mountings, switchboard meter test buses, meter panels and similar devices required for service connection and meter installations on the Customer-Generator's premises in accordance with the Company's Rule 14H.

11. **Interconnection Facilities**.

(a) Customer-Generator-Owned Interconnection Facilities (for Generating Facilities larger than (30 kW or with three-phase electrical service).

(1) The Customer-Generator shall furnish, install, operate and maintain, at its cost, the interconnection facilities (such as circuit breakers, relays, switches, synchronizing equipment, monitoring equipment, and control and protective devices and schemes) identified in Exhibit B (Customer-Generator-Owned Generating Facility and Interconnection Facilities).

(2) The point of interconnection is shown on the single-line diagram and three-line diagram (provided by the Customer-Generator and reviewed by the Company) which are attached to Exhibit B (Customer-Generator-Owned Generating Facility and Interconnection Facilities). Pursuant to Company Rule 14H, Appendix I (Distributed Generating Facility Interconnection Standards Technical Requirements), Section 6.c (Review of Design Drawings), the Company must review and approve Customer-Generator's single-line and three-line diagrams prior to Customer-Generator constructing of the Generating Facility interconnection. The Customer-Generator agrees to test the Generating Facility, to maintain operating records, and to follow such operating procedures, as may be specified by the Company to protect the Company's system from damages resulting from the parallel operation of the Generating Facility, including such testing, records and operating procedures as more fully described in Exhibit C attached hereto.

(3) The Customer-Generator agrees to test the Generating Facility, to maintain operating records, and to follow such operating procedures, as may be specified by the Company to protect the Company's system from damages resulting from the parallel operation of the Generating Facility, including such testing, records and operating procedures as more fully described in Exhibit C attached hereto.

(4) The Company may inspect the Generating Facility and Customer-Generator's interconnection facilities.

(b) Company-Owned Interconnection Facilities (for Generating Facilities Larger than 30 kW or with three-phase electrical service).

(1) The Company agrees to furnish, install, operate and maintain such interconnection facilities on its side of the point of interconnection with the Generating Facility as required for the parallel operation with the Generating Facility and more fully described in Exhibit C (Company-Owned Interconnection Facilities) attached hereto and made apart hereof ("Company Interconnection Facilities"). All Company Interconnection

Facilities shall be the property of the Company. Where portions of the Company Interconnection Facilities are located on the Customer-Generator's premises, the Customer-Generator shall provide, at no expense to the Company, a suitable location for and access to all such equipment. If a 120/240 Volt power source or sources are required, the Customer shall provide these at no expense to the Company.

(2) The Customer-Generator agrees to pay to the Company: (1) a non-refundable contribution for the Company's investment in the Company Interconnection Facilities described in Exhibit C (Company-Owned Interconnection Facilities), subject to the terms and conditions included in Exhibit C and to pay for other interconnection costs. The interconnection costs will not include the cost of an initial technical screening of the impact of the Generating Facility on the Company's system.

12. **Indemnification:**

(a) The Customer-Generator shall indemnify, defend and hold harmless the Company and its officers, directors, agents and employees, from and against all liabilities, damages, losses, fines, penalties, claims, demands, suits, costs and expenses (including reasonable attorney's fees and expenses) to or by third persons, including the Company's employees or subcontractors, for injury or death, or for injury to property, arising out of the actions or inactions of the Customer-Generator (or those of anyone under its control or on its behalf) with respect to its obligations under this Agreement, and/or arising out of the installation, operation and maintenance of the Generating Facility and/or the Customer-Generator Interconnection Facilities, except to the extent that such injury, death or damage is attributable to the gross negligence or intentional act or omission of the Company or its officers, directors, agents or employees.

(b) The Owner/Operator shall indemnify, defend and hold harmless the Company and its officers, directors, agents and employees, from and against all liabilities, damages, losses, fines, penalties, claims, demands, suits, costs and expenses (including reasonable attorney's fees and expenses) to or by third persons, including the Company's employees or subcontractors, for injury or death, or for injury to property, arising out of the actions or inactions of the Owner/Operator (or those of anyone under its control or on its behalf) with respect to its obligations under this Agreement, and/or arising out of the installation, operation and maintenance of the Generating Facility and/or the Interconnection Facilities, except to the extent that such injury, death or damage is attributable to the gross negligence or intentional act or omission of the Company or its officers, directors, agents or employees.

**Provided, however, where the Customer-Generator is an agency of the United States, the following Section shall be applicable in place of Paragraphs 11(a) and (b):**

"The United States understands that it may be held liable for loss, damages expense and liability to third persons and injury to or death of persons or injury to property caused by the United States in its engineering design, construction ownership or operations of, or the making of replacements, additions betterment to, or by failure of, any of such party's works or facilities used in connection with this Agreement to the extent allowed by the Federal Tort Claims Act 28 U.S.C. § 2671 et seq. and the Agreement Disputes Act of 1978, 41 U.S.C. §§ 601-613.

Company shall be responsible for damages or injury caused by Company, Company's agents, officers, and employees in the course of their employment to the extent permitted by law."

**Provided, however, where the Customer-Generator is an agency of the State of Hawaii (the "State"), the following Section shall be applicable in place of Paragraphs 11(a) and (b):**

"The State shall be responsible for damages or injury caused by the State's agents, officers, and employees in the course of their employment to the extent that the State's liability for such damage or injury has been determined by a court or otherwise agreed to by the State. The State shall pay for such damage and injury to the extent permitted by law. The State shall use reasonable good faith efforts to pursue any approvals from the Legislature and the Governor that may be required to obtain the funding necessary to enable the State to perform its obligations or cover its liabilities hereunder. The State shall not request Company to indemnify the State for, or hold the State harmless from, any claims for such damages or injury.

(c) Company shall be responsible for damages or injury caused by Company, Company's agents, officers, and employees in the course of their employment to the extent that Company's liability for such damage or injury has been determined by a court or otherwise agreed to by Company, and Company shall pay for such damage and injury to the extent permitted by law. Company shall not request the State to indemnify Company for, or hold Company harmless from, any claims for such damages or injury."

(d) The Company shall indemnify, defend and hold harmless the Customer-Generator, and its officers, directors, agents and employees, from and against all liabilities, damages, losses, fines, penalties, claims, demands, suits, costs and expenses (including reasonable attorney's fees and expenses) to or by third persons, including the Customer-Generator's employees or subcontractors, for injury or death, or for injury to property, arising out of the actions or inactions of the Company (or those of anyone under its control or on its behalf) with respect to its obligations under this Agreement, and/or arising out of the installation, operation and maintenance of the Company Interconnection Facilities, except to the extent that such injury, death or damage is attributable to the gross negligence or intentional act or omission of the Customer-Generator or its officers, directors, agents or employees.

(e) Nothing in this Agreement shall create any duty to, any standard of care with reference to, or any liability to any person not a party to it.

13. **Continuity of Service**.

(a) The Company may require the Customer-Generator to temporarily curtail, interrupt or reduce deliveries of energy when necessary in order for the Company to construct, install, maintain, repair, replace, remove, investigate, test or inspect any of its equipment or any part of the Company System including, but not limited to, accommodating the installation and/or testing of non-utility owned facilities to the Company system; or if the Company determines that such curtailment, interruption or reduction is necessary because of a system emergency, forced outage, operating conditions on its system; or the inability to accept deliveries of energy due to excess energy conditions; or if either the Generating Facility does not operate in compliance with good engineering and operating practices or acceptance of energy from the Customer-Generator by the Company would require the Company to operate the Company system outside of good engineering and operating practices which in this case shall include, but not be limited to, excessive system frequency fluctuations or excessive voltage deviations, and any situation that the Company system operator determines, at his or her sole discretion, could place in jeopardy system reliability.

(b) In the event that the Company temporarily curtails, interrupts, or reduces deliveries of energy pursuant to Section 13(a), the Company shall not be obligated to accept or apply credit for any energy from the Customer-Generator. The Company shall take all reasonable steps to minimize the number and duration of interruptions, curtailments or reductions. Whenever feasible, Company shall give Customer-Generator reasonable notice of the possibility that interruption or reduction of deliveries may be required.

(c) In the event that the Company temporarily curtails or interrupts deliveries of energy from the Generating Facility pursuant to this Section 13, the Generating Facility shall not energize a de-energized utility line under any circumstances, but may operate the Generating Facility isolated from the utility system with an open tie point in accordance with Rule 14H.

14. **Personnel and System Safety**. If at any time the Company determines that the continued operation of the Generating Facility may endanger any person or property, the Company's electric system, or have an adverse effect on the safety or power quality of other customers, the Company shall have the right to disconnect the Generating Facility from the Company's electric system remotely or otherwise. The Generating Facility shall remain disconnected until such time as the Company is satisfied that the endangering or power quality condition(s) has been corrected, and the Company shall not be obligated to accept any energy from the Generating Facility during such period. The Company shall not be liable, directly or indirectly, for permitting or continuing to allow an attachment of the Generating Facility for the acts or omissions of the Customer-Generator that cause loss or injury, including death, to any third party.

15. **Prevention of Interference**. The Customer-Generator shall not operate equipment that superimposes a voltage or current upon the Company's system that interferes with the Company's operations, service to the Company's customers, or the Company's communication facilities. Such interference shall include, but not be limited to, overcurrent, voltage imbalance, and abnormal waveforms. If such interference occurs, the Customer-Generator must diligently pursue and take corrective action at its own expense after being given notice and reasonable time to do so by the Company. If the Customer-Generator does not take timely corrective action, or continues to operate the equipment causing interference without restriction or limit, the Company may, without liability, disconnect the Customer-Generator's equipment from the Company's system.

16. **Limitation of Liability**. Neither by inspection, if any, or non-rejection, nor in any other way, does the Company give any warranty, express or implied, as to the adequacy, safety, or other characteristics of any structures, equipment, wires, appliances or devices owned, installed or maintained by the Customer-Generator or leased by the Customer-Generator from third parties, including without limitation the Generating Facility and any structures, equipment, wires, appliances or devices appurtenant thereto.

17. **Customer-Generator and Generating Facility Information.** By signing this Agreement, the Customer-Generator expressly agrees and authorizes the Company to: (1) request and obtain from Customer-Generator and its contractors, vendors, subcontractors, installers, suppliers or agents (collectively "Customer-Generator Agents"), at no cost to Company, information related to the Generating Facility, including but not limited to Watts, Vars, Watt Hours, current and voltage, status of the Generating Facility, inverter settings, any and all recorded event or alarm logs recorded, (collectively "Generating Facility Data") that Company reasonably determines are needed to ensure the safe and reliable operation of the Generating Facility or the Company's system; or (2) make such modifications to the Customer-Generator's system, at no cost to the Company, that Company determines, in its reasonable discretion, are needed to ensure the safe and reliable operation of the Generating Facility or the Company's system. Customer-Generator expressly agrees and irrevocably authorizes Customer-Generator Agents to disclose such Customer-Generator Data to Company and to make such modifications to the Customer- Generator's Generating Facility upon request by Company.

18. **Confidentiality.** By signing this Agreement, the Customer-Generator and, if applicable, Owner expressly agree not to disclose any confidential or proprietary information of the Company, including but not limited to, interconnection equipment, processes, and other details contained in Exhibit C to the interconnection agreement; provided however, that nothing herein shall prohibit a Customer-Generator or Owner from selling or otherwise transferring the Generating Facility and Interconnection Agreement to a purchaser or transferee of the premises on which the Generating Facility is located. Any other disclosure or sharing of Exhibit C must be specifically authorized by the Company in writing.

19. **Additional Information**. The Company reserves the right to request additional information from Customer-Generator relating to the Generating Facility, where reasonably necessary, to serve the Customer-Generator under this Agreement or to ensure reliability, safety of operation, and power quality of the Company's system.

20. **No Material Changes to Generating Facility**. The Customer-Generator agrees that no material changes or additions to the Generating Facility shall be made without having obtained prior written consent from the Company, which consent shall not be unreasonably withheld. If a Generating Facility changes ownership, the Company may require the new Customer-Generator and/or Owner/Operator to complete and execute an amended Agreement or new Agreement, as may be applicable.

21. **Notices**. Any notice required under this Agreement shall be in writing and emailed or mailed at any United States Post Office with postage prepaid and addressed to the Party, or personally delivered to the Party at the address identified in Exhibit A (Description of Generating Facility), or if the Party is the Company, to the address provided on the last page of this Agreement. Changes in such designation may be made by notice similarly given. Notice sent by email or mail shall be deemed to have been given on the date of actual delivery or at the expiration of the fifth day after the date of mailing, whichever is earlier.

22. **Certification by Licensed Electrical Contractor**. Generating and interconnection systems must comply with all applicable safety and performance standards of the National Electrical Code (NEC), Institute of Electrical and Electronic Engineers (IEEE), and accredited testing laboratories such as the Underwriters Laboratories (UL), and where applicable, the rules of the Commission, or other applicable governmental laws and regulations, and the Company's interconnection requirements, in effect at the time of signing this agreement. This requirement shall include, but not be limited to, the interconnection provisions of the Company's Rule 14H, as authorized by the Commission. Upon request by Company, Customer-Generator shall cause a Licensed Electrical Contractor, as agent for Customer-Generator, to certify that once approved by the Company, the proposed Generating Facility will be installed to meet all preceding requirement(s).

23. **Force Majeure**. For purposes of this Agreement, "Force Majeure Event" means any event (a) that is beyond the reasonable control of the affected party; and (b) that the affected party is unable to prevent or provide against by exercising reasonable diligence, including the following events or circumstances, but only to the extent they satisfy the preceding requirements: acts of war, public disorder, insurrection or rebellion; floods, hurricanes, earthquakes, lightening, storms, and other natural calamities; explosions or fires; strikes, work stoppages, or labor disputes; embargoes; and sabotage. If a Force Majeure Event prevents a party from fulfilling any obligations under this Agreement, such party will promptly notify the other party in writing, and will keep the other party informed on a continuing basis of the scope and duration of the Force Majeure Event. The affected party will specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the affected party is taking to mitigate the effects of the event on its performance. The affected part will be entitled to suspend or modify its performance of obligations under this Agreement, other than the obligation to make payments then due or becoming due under this Agreement, but only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of reasonable efforts. The affected party will use reasonable efforts to resume its performance as soon as possible.

24. **Good Engineering Practice**.

    (a) Each party agrees to install, operate and maintain its respective equipment and facilities and to perform all obligations required to be performed by such party under this Agreement in accordance with good engineering practice in the electric industry and with applicable laws, rules, orders and tariffs.

    (b) Wherever in this Agreement and the attached Exhibits the Company has the right to give

specifications, determinations or approvals, such specifications, determinations and/or approvals shall be given in accordance with the Company's standard practices, policies and procedures, which may include the Company's Electric Service Installation Manual, the Company's Engineering Standard Practice Manual and the IEEE Guides and Standards for Protective Relaying Systems.

25. **Insurance**. The following insurance provisions are only applicable to Generating Facilities with a Total Rated Capacity greater than 16 kW:

The Customer-Generator shall, at its own expense and during the term of the Agreement and any other time that the Generating Facility is interconnected with the Company's system, maintain in effect with a responsible insurance company authorized to do insurance business in Hawaii, the following insurance or its equivalent at Company's discretion that will protect the Customer-Generator and the Company with respect to the Generating Facility, the Generating Facility's operations, and the Generating Facility's interconnection with the Company's system:

A commercial general liability policy, covering bodily injury and property damage combined single limit of at least the following amounts based on the Total Rated Capacity of the generator (for solar systems—Total Rated Capacity of the generator or inverter, whichever is lower, can be used with appropriate technical documentation on inverter, if not higher Total Rated Capacity will be used), for any occurrence. Generating Facilities less than or equal to 16kW are exempt and are not required to have a commercial general liability policy.

| Commercial General Liability (or equivalent) Coverage Amount | Total Rated Capacity of the Generating Facility |
|---|---|
| $5,000,000 | Greater than 1 MW |
| $2,000,000 | Greater than 250 kW and less than or equal to 1 MW |
| $1,000,000 | Greater than 30 kW and less than or equal to 250 kW |
| $500,000 | Greater than 16 kW and less than or equal to 30 kW |
| $0 | Less than or equal to 16 kW |

The Customer-Generator has responsibility to determine if higher limits are desired and purchased. Said insurance shall name the Company, its directors, officers, agents, and employees as additional insureds, shall include contractual liability coverage for written Agreements and agreements including this Agreement, and shall include provisions stating that the insurance will respond to claims or suits by additional insureds against the Customer- Generator or any other insured thereunder. Customer-Generator shall immediately provide written notice to the Company should the required insurance be cancelled, limited in scope, or not renewed upon expiration. "Claims made" policies are not acceptable, unless the Customer-Generator agrees to maintain coverage in full effect at all times during the term of this Agreement and for THREE (3) years thereafter. The adequacy of the coverage afforded by the required insurance shall be subject to review by the Company from time to time, and if it appears in such review that risk exposures require an increase in the coverages and/or limits of this insurance, the Customer-Generator shall make such increase to that extent and any increased costs shall be borne by the Customer-Generator. The insurance required hereunder shall provide that it is primary with respect to the Customer-Generator and the Company. Initially, certificates of insurance must be provided to the Company prior to executing the Agreement and any parallel interconnection. Receipt of any evidence of insurance showing less coverage than requested is not a waiver of the Customer-Generator's obligations to fulfill this provision. The Customer- Generator's indemnity and other obligations shall not be limited by the foregoing insurance requirements. Any deductible shall be the responsibility of the Customer-Generator.

Alternatively, where the Customer-Generator is a governmental entity, Customer Generator may elect to be self-insured for the amounts set forth above in lieu of obtaining insurance coverage to those levels from an insurance company.

26. **Miscellaneous.**

(a) **Disconnection and Survival of Obligations.** Upon termination of this Agreement, the Generating Facility shall be disconnected from the Company's system. The termination of this Agreement shall not relieve the Parties of their respective liabilities and obligations, owed or continuing at the time of termination.

(b) **Governing Law and Regulatory Authority.** This Agreement was executed in the State of Hawaii and must in all respects be interpreted, governed, and construed under the laws of the State of Hawaii. This Agreement is subject to, and the parties' obligations hereunder include, operating in full compliance with all valid, applicable federal, state, and local laws or ordinances, and all applicable rules, regulations, orders of, and tariffs approved by, duly constituted regulatory authorities having jurisdiction.

(c) **Amendment, Modifications, or Waiver**. This Agreement may not be altered or modified by either of the Parties, except by an instrument in writing executed by each of them. None of the provisions of this Agreement shall be considered waived by a Party unless such waiver is given in writing. The failure of a Party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishment of any such rights for the future, but the same shall continue and remain in full force and effect. This Agreement contains the entire agreement and understanding between the Parties, their agents, and employees as to the subject matter of this Agreement. Each party also represents that in entering into this Agreement, it has not relied on any promise, inducement, representation, warranty, agreement or other statement not set forth in this Agreement.

(d) **Termination of Existing Agreement**. This Agreement shall supersede any existing agreement, if any, under which Customer-Generator is currently operating the Generating Facility and any such agreement shall be deemed terminated as of the date this Agreement becomes effective.

(e) **Assignment.** This Agreement may not be assigned by either Party without the prior written consent of the other party. Such consent shall not be unreasonably withheld. The foregoing restriction on assignment shall not apply to the automatic and unconditional assumption of this Agreement, in accordance with Rule 14H, in the event the premises where the Generating Facility is located is sold or otherwise transferred.

(f) **Binding Effect.** This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors, legal representatives, and permitted assigns.

(g) **Relationship of Parties**. Nothing in this Agreement shall be deemed to constitute any Party hereto as partner, agent or representative of the other party or to create any fiduciary relationship between the Parties.

(h) **Limitations**. Nothing in this Agreement shall limit the Company's ability to exercise its rights or expand or diminish its liability with respect to the provision of electrical service pursuant to the Company's tariffs as filed with the Commission, or the Commission's Standards for Electric Utility Service in the State of Hawaii, which currently are included in the Commission's General Order Number 7, as either may be amended from time to time.

(i) **Execution of Agreement; Multiple Counterparts**. This Agreement may be executed in two or

more counterparts, each of which is deemed an original but all constitute one and the same instrument binding all Parties notwithstanding that all of the Parties are not signatories to the same counterparts. Signatures may be provided in original ("wet") form or by other means intended to preserve the original graphic and pictorial appearance of the signature, such as photocopy. A copy of a Party's signature shall be considered an "original" signature for purposes of this Agreement.

27. **Generator/Equipment Certification**

Generating Facilities that utilize inverter technology must be compliant with *Institute of Electrical and Electronics Engineers IEEE Std 1547* and *Underwriters Laboratories UL 1703* and *UL 1741* in effect at the time this Agreement is executed. Generating systems that use a rotating machine must be compliant with applicable National Electrical Code, Underwriters Laboratories, and Institute of Electrical and Electronics Engineers standards and rules and orders of the Public Utilities Commission of the State of Hawaii in effect at the time this Agreement is executed. By signing below, the Applicant certifies that the installed generating equipment will meet the appropriate preceding requirement(s) and can supply documentation that confirms compliance, including a certification of the same from the Installing Electrical Contractor upon request by the Company.

[Signature page follows]

**IN WITNESS WHEREOF,** the Parties hereto have caused two originals of this Agreement to be executed by their duly authorized representatives. This Agreement is effective as of the date first set forth above.

**CUSTOMER-GENERATOR**

By: _____ _____
Signature Date

Name (Print): _____

Company Name (if applicable): _____

Title (if applicable): _____

**OWNER/OPERATOR**
**(if different from Customer-Generator)** ☐ Not Applicable

By: _____ _____
Signature Date

Name (Print): _____

Company Name (if applicable): _____

Title (if applicable): _____

**HAWAIIAN ELECTRIC COMPANY**

By: To be filled out by the Company To be filled out by the Company
Signature Date

Name (Print): To be filled out by the Company

Title: To be filled out by the Company

**Contact us by mail or email:**

**Hawaiian Electric**
connect@hawaiianelectric.com
Customer Energy Resources
P.O. Box 2750, AL18-SE
Honolulu, HI 96840

**EXHIBIT A**

**DESCRIPTION OF GENERATING FACILITY**

Under no circumstances shall a Customer-Generator interconnect and operate a generating facility in parallel with the Company's electric system without prior written approval by the Company in the form of a fully executed Agreement. Generating facilities that incorporate the use of an energy storage device, e.g., battery storage, regardless of whether such energy storage device is intended to operate in parallel with the Company's transmission and/or distribution facilities, shall obtain an interconnection review by the Company pursuant to this Agreement. Energy storage systems that are intended to be installed by an Eligible Customer-Generator after Company's execution of an Agreement shall constitute a material change and addition to a generating facility and shall require interconnection review pursuant to this Rule prior to installation.

**1. Customer-Generator Information**

Name (print):_____

**Property Address:** _____

City:_____ State:_____ Zip:_____

Active Electric
Service Account #:_____ Meter #:_____ TMK:_____

Phone:_____ Cell:_____ Email: _____

☐ Mailing Address is the same as the Property Address

**Mailing Address:**_____

City:_____ State:_____ Zip:_____

**2. Owner-Operator Information** ☐ Not Applicable

Name (print): _____

Company:
(If applicable) _____

Mailing Address:_____

City:_____ State:_____ Zip:_____

Phone:_____ Cell:_____ Email:_____

**3. Electrical Contractor**

Electrical Contractor:_____Hawai`i License #:_____

Mailing Address:_____

City:_____ State:_____ Zip:_____

Phone:_____ Cell:_____ Email: _____

Supply certification that the generating system will be installed and inspected in compliance with the local Building/Electrical code of the County of: ☐ Honolulu ☐Maui ☐ Hawaii

Generating System Building Permit # (to be filled out by the Company upon the Company's approval and execution of Agreement): To be filled out by the Company

Interconnection Date (to be filled out by the Company upon the Company's approval and execution of the Agreement): To be filled out by the Company

**4. Insurance** ☐ Not Applicable (less than or equal to 16 kW)

Insurance Carrier: _____

**5. General Technical Information (Attached)**

☐ **Single Line Diagram** ☐ **Three Line Diagram** (if the Generating Facility's capacity is greater than or equal to 30 kW) ☐ **Relay List and Trip Scheme** (if applicable)

**6. Generator Qualifications**

Generator Type:

☐ Photovoltaic with Inverter

☐ Other renewable with Inverter (renewable energy source as defined in Hawaii Revised Statutes, Chapter 269, Part V; skip Section 8, include Exhibit A-1)

☐ Non-inverter Renewable (synchronous or induction generator producing or generating energy from a renewable energy source; Skip section 8, include Exhibit A-1)

What is the system's Maximum Export capability?

☐ Less than 30 kW

Technical System Size:_____ kW Maximum Export:_____ kW

☐ Greater than or equal to 30 kW (include Exhibit B)

Technical System Size:_____ kW Maximum Export:_____ kW

Maximum Site Load without Generation:___ kW Minimum Site Load without Generation:_____ kW

**7. Interconnecting Equipment Technical Data**

Generator Disconnect Information:

Manufacturer:_____ Catalog #:_____

Type: _____ Rated Amps: _____ Rated Volts: _____

☐ Fused *or* ☐ Non-Fused | ☐ Single Phase *or* ☐ Three Phase | ☐ Uses multiple disconnects

Mounting Location: _____

Will an interposing transformer be used between the generator and the point of interconnection?

☐No ☐ Yes (include Exhibit A-1)

**8. Customer-Generator Information**

System Information:

| Micro Inverter | Central/ String Inverter | Inverter Manufacturer | Model | Qty. | Nominal AC Output Rating (kW)* | Quantity x Nominal AC Output Rating (kW) |
|---|---|---|---|---|---|---|
| ☐ 1 | ☐ 1 | | | | | |
| ☐ 2 | ☐ 2 | | | | | |
| ☐ 3 | ☐ 3 | | | | | |
| ☐ 4 | ☐ 4 | | | | | |
| ☐ 5 | ☐ 5 | | | | | |
| | | | | | Total Inverter Capacity (kW): | |

| Inverter | DC Generator Manufacturer | Model | Qty. | Rating (kW)* | Quantity x Rating (kW) |
|---|---|---|---|---|---|
| ☐ 1 | | | | | |
| ☐ 2 | | | | | |
| ☐ 3 | | | | | |
| ☐ 4 | | | | | |
| ☐ 5 | | | | | |
| | | | | Total DC Capacity (kW): | |

| Total Capacity of Inverter #: | 1: | 2: | 3: | 4: | 5: |
|---|---|---|---|---|---|

| | |
|---|---|
| **Program System Size (kW):** | |

Program System Size is the combined sums of the lesser of the AC or DC capacities per inverter.

*All equipment ratings must match those listed on their manufacturer's specification sheets.

**9. Energy Storage Information** ☐ Not Applicable

*Specification sheets must be provided for all equipment listed in the section below*

| | Energy Storage System Manufacturer | Model | Qty. | Size kW | Usable Capacity kWh | Rated kW Charge | Qty. x Size kW |
|---|---|---|---|---|---|---|---|
| ☐ 1 | | | | | | | |
| ☐ 2 | | | | | | | |
| ☐ 3 | | | | | | | |
| ☐ 4 | | | | | | | |
| ☐ 5 | | | | | | | |
| | | | | | | Total Energy Storage System Size (kW) | |

Description of Energy Storage System Operations:

What is the energy storage operation type? (check all that apply)

☐ Self-consumption

☐ Emergency Backup

☐ Scheduled Dispatch

☐ Remote Dispatch

☐ Emergency Dispatch

☐ Other

Describe mode(s) of operation (e.g. charge and discharge timing; does the system match the load with PV and battery?)

Will the distribution grid be used to charge the storage device?
☐ No ☐ Yes, charging periods: _____

Will power be exported to the grid?
☐ No ☐ Yes, maximum export to the grid: _____

**EXHIBIT A-1**

**DESCRIPTION OF GENERATING FACILITY – ADDITIONAL INFORMATION**

**[ADDITIONAL INFORMATION FOR GENERATING FACILITIES THAT: (1) INCLUDE SYNCHRONOUS AND INDUCTION GENERATORS; OR (2) HAVE A PROGRAM SYSTEM SIZE GREATER THAN 30 KW OR THREE-PHASE ELECTRICAL SERVICE]**

☐ Not Applicable

*Specification sheets must be provided for all equipment referenced in the section below*

Number of starts per day: _____ Maximum Starting kVA: _____ Generator Operating Power Factor: _____

Generator Grounding Method (check all that apply):

☐ Effectively Grounded ☐ Resonant Grounded ☐ Low-Inductance Grounded ☐ Low-Resistance Grounded ☐ High-Resistance Grounded ☐ Ungrounded

* Not needed if Generator Nameplate and Manufacturer's Specification Sheet are provided.

Direct Axis Synchronous Reactance, $X_d$: _____ P.U. Direct Axis Transient Reactance, $X'_d$: _____ P.U.

Direct Axis Subtransient Reactance, $X''_d$: _____ P.U. Inertia Constant, H: _____ P.U. Excitation Response Ratio: _____

Direct Axis Open-Circuit Transient Time Constant, $X_d$: _____ Seconds Direct Axis Open-Circuit Subtransient Time Constant, $T''_d$: _____ Seconds

2. Interconnecting Equipment Technical Data

Transformer Data ☐ Not Applicable

*A copy of transformer Nameplate and Manufacturer's Test Report may be substituted*

Transformer Primary (Volts): _____ Transformer Secondary (Volts): _____

☐ Delta ☐ Wye ☐ Wye Grounded ☐ Delta ☐ Wye ☐ Wye Grounded

Size: _____ KVA Transformer Impedance: _____ % on _____ KVA Base

Transformer Fuse Data ☐ Not Applicable

*Attach fuse manufacturer's Minimum Melt & Total Clearing Time-Current Curves*

☐ At Primary Voltage ☐ At Secondary Voltage

Manufacturer: _____ Type: _____ Size: _____ Speed: _____

Transformer Protection (if not fuse) ☐ Not Applicable

Please describe: _____

Generator Main Circuit Breaker ☐ Not Applicable

*A copy of circuit breaker's Nameplate and Specification Sheet may be substituted*

Manufacturer: _____ Type: _____

Continuous Load Rating (Amps): _____ Interrupting Rating (Amps): _____ Trip Speed (Cycles): _____

Feeder Circuit Breaker ☐ Not Applicable

*Attach copy of any proposed Time-Overcurrent Coordination Curves*

| Manufacturer | Type | Style/Catalog No. | Proposed Setting |
|---|---|---|---|
| | | | |
| | | | |

| | | | |
|---|---|---|---|
| | | | |
| | | | |

Current Transformer Data ☐ Not Applicable

*Attach copy of Manufacturer's Excitation & Ratio Correction Curves*

| Manufacturer | Type | Accuracy Class | Proposed Ration Connection |
|---|---|---|---|
| | | | /5 |
| | | | /5 |
| | | | /5 |
| | | | /5 |
| | | | /5 |

**EXHIBIT B**

**CUSTOMER-GENERATOR-OWNED GENERATING FACILITY**

**AND INTERCONNECTION FACILITIES**

**[THIS EXHIBIT IS ONLY APPLICABLE TO GENERATING FACILITIES EQUAL TO OR GREATER THAN 30 kW OR WITH THREE-PHASE ELECTRICAL SERVICE.]**

**1. Generating Facility**

a. Compliance with laws and standards. The Generating Facility, Generating Facility design, and Generating Facility drawings shall meet all applicable national, state, and local laws, rules, regulations, orders, construction and safety codes, and shall satisfy the Company's Distributed Generating Facility Interconnection Standards, Technical Requirements ("Interconnection Standards"), as set forth in Rule 14, Paragraph H.1 of the Company's tariff.

b. Avoidance of adverse system conditions. The Generating Facility shall be designed, installed, operated and maintained so as to prevent or protect against adverse conditions on the Company's system that can cause electric service degradation, equipment damage, or harm to persons, such as:

- Unintended islanding.
- Inadvertent and unwanted re-energization of a Company dead line or bus.
- Interconnection while out of synchronization.
- Overcurrent.
- Voltage imbalance.
- Ground faults.
- Generated alternating current frequency outside of permitted safe limits.
- Voltage outside permitted limits.
- Poor power factor or reactive power outside permitted limits.
- Abnormal waveforms.

c. Specification of protection, synchronizing and control requirements. The Customer-Generator shall provide the design drawings, operating manuals, manufacturer's brochures/instruction manual and technical specifications, manufacturer's test reports, bill of material, protection and synchronizing relays and settings, and protection, synchronizing, and control schemes for the Generating Facility to the Company for its review, and the Company shall have the right to specify the protection and synchronizing relays and settings, and protection, synchronizing and control schemes that affect the reliability and safety of operation and power quality of the Company's system with which the Generating Facility is interconnected ("Facility Protection Devices/Schemes").

d. Generating Facility protection. The Customer-Generator is solely responsible for providing adequate protection for the Generating Facility.

e. Customer-Generator Interconnection Facilities.

(i) The Customer-Generator shall furnish, install, operate and maintain interconnection facilities (such as circuit breakers, relays, switches, synchronizing equipment, monitoring equipment, and control and protective devices and schemes) designated by or acceptable to the Company as suitable for parallel operation of the Generating Facility with the Company's system ("Customer-Generator Interconnection Facilities"). Such facilities shall be accessible at all times to authorized Company personnel.

(ii) The Customer-Generator shall comply with the Company's Interconnection Standards.

(iii) 1) Single-line diagram of the Generating Facility, 2) relay list, trip scheme and settings of the Generating Facility, 3) Generating Facility Equipment List, and 4) three-line diagram (if the Generating Facility's capacity is greater than or equal to 30 kW), which identify the circuit breakers, relays, switches, synchronizing equipment, monitoring equipment, and control and protective devices and schemes, shall, after having obtained prior written consent from the Company, be attached to Exhibit A and made a part hereof at the time the Agreement is signed. The single-line diagram shall include pertinent information regar ding operation, protection, synchronizing, control, monitoring, and alarm requirements. The single-line diagram and three-line diagram shall expressly identify the point of interconnection of the Generating Facility to the Company's system. The relay list, trip scheme and settings shall include all protection, synchronizing and auxiliary relays that are required to operate the Generating Facility in a safe and reliable manner. The three-line diagram shall show potential transformer and current transformer ratios, and details of the Generating Facility's configuration, including relays, meters, and test switches.

f. Approval of Design Drawings. If the Generating Facility's capacity is greater than or equal to 30 kW, the single-line diagram, relay list, trip scheme and settings of the Generating Facility, and three-line diagram shall be approved by a Professional Electrical Engineer registered in the State of Hawaii prior to being submitted to the Company. Such approval shall be indicated by the engineer's professional seal on all drawings and documents.

**2. Verification Testing.**

a. Upon initial parallel operation of the Generating Facility, or any time interface hardware or software is changed, a verification test shall be performed. A licensed professional engineer or otherwise qualified individual shall perform verification testing in accordance with the manufacturer's published test procedure. Qualified individuals include professional engineers, factory trained and certified technicians, and licensed electricians with experience in testing protective equipment. The Company reserves the right to witness verification testing or require written certification that the testing was performed.

b. Verification testing shall also be performed every four years. The Company reserves the right to perform, at its expense, additional verification testing. All verification tests prescribed by the manufacturer shall be performed. If wires must be removed to perform certain tests, each wire and each terminal shall be clearly and permanently marked. The Customer-Generator shall maintain verification test reports for inspection by the Company.

c. Inverters shall be verified once per year as follows: once per year the Customer-Generator shall operate the customer generator system disconnect switch and verify the Generating Facility automatically shuts down and does not reconnect with the Company's system until the Company's system continuous normal voltage and frequency have been maintained for a minimum of 5 minutes. The Customer-Generator shall maintain a log of these operations for inspection by the Company.

d. Any system that depends upon a battery for trip power shall be checked once per month for proper voltage. Once every four (4) years the battery shall either be replaced or have a discharge test performed. The Customer-Generator shall maintain a log of these operations for inspection by the Company.

e. Tests and battery replacements as specified in this section 2 of Exhibit B shall be at the Customer-Generator's expense.

**3. Inspection of the Generating Facility.**

a. The Company may, in its discretion and upon reasonable notice not to be less than 24 hours (unless otherwise agreed to by the Company and the Customer-Generator), observe the construction of the Generating Facility (including but not limited to relay settings and trip schemes) and the equipment to be installed therein.

b. Within fourteen days after receiving a written request from the Customer-Generator to begin producing electric energy in parallel with the Company's system, the Company may inspect the Generating Facility (including but not limited to relay settings and trip schemes) and observe the performance of the verification testing. The Company may accept or reject the request to begin producing electric energy based upon the inspection or verification test results.

c. If the Company does not perform an inspection of the Generating Facility (including but not limited to relay settings and trip schemes) and observe the performance of verification testing within the fourteen-day period, the Customer-Generator may begin to produce energy after certifying to the Company that the Generating Facility has been tested in accordance with the verification testing requirements and has successfully completed such tests. After receiving the certification, the Company may conduct an inspection of the Generating Facility (including but not limited to relay settings and trip schemes) and make reasonable inquiries of the Customer-Generator, but only for purposes of determining whether the verification tests were properly performed. The Customer-Generator shall not be required to perform the verification tests a second time, unless irregularities appear in the verification test report or there are other objective indications that the tests were not properly performed in the first instance.

d. The Company may, in its discretion and upon reasonable notice not to be less than 24 hours (unless an apparent safety or emergency situation exists which requires immediate inspection to resolve a known or suspected problem), inspect the Generating Facility (including but not limited to relay settings and trip schemes) and its operations (including but not limited to the operation of control, synchronizing, and protection schemes) after the Generating Facility commences operations.

**4. Operating Records and Procedures.**

a. The Company may require periodic reviews of the maintenance records, and available operating procedures and policies of the Generating Facility.

b. The Customer-Generator must separate the Generating Facility from the Company's system whenever requested to do so by the Company's System Operator pursuant to this Agreement. It is understood and agreed that at times it may not be possible for the Company to accept electric energy due to temporary operating conditions on the Company's system, and these periods shall be specified by the Company's System Operator. Notice shall be given in advance when these are scheduled operating conditions.

c. Logs shall be kept by the Customer-Generator for information on unit availability including reasons for planned and forced outages; circuit breaker trip operations, relay operations, including target initiation and other unusual events. The Company shall have the right to review these logs, especially in analyzing system disturbance.

**5. Changes to the Generating Facility, Operating Records, and Operating Procedures.**

a. The Customer-Generator agrees that no material changes or additions to the Generating Facility as reflected in the single-line diagram, relay list, trip scheme and settings of the Generating Facility, Generating Facility Equipment List, and three-line diagram (if the Generating Facility's capacity is greater than or equal to 30 kW), shall be made without having obtained prior written consent from the Company, which consent shall not be unreasonably withheld.

b. As a result of the observations and inspections of the Generating Facility (including but not limited to relay list, trip scheme and settings) and the performance of the verification tests, if any changes in or additions to the Generating Facility, operating records, and operating procedures and policies are required by the Company, the Company shall specify such changes or additions to the Customer-Generator in writing, and the Customer-Generator shall, as soon as practicable, but in no event later than thirty (30) days after receipt of such changes or additions, respond in writing, either noting agreement and action to be taken or reasons for disagreement. If the Customer-Generator disagrees with the Company, it shall note alternatives it will take to accomplish the same intent, or provide the Company with a reasonable explanation as to why no action is required by good engineering practice.

**6. Generating Facility Equipment List.**

The Generating Facility shall include the following equipment:

[Specific items to be attached as necessary. The Generating Facility Equipment List, together with the single-line diagram, relay list and trip scheme, and three-line diagram (if the Generating Facility's capacity is greater than or equal to 30 kW), should be attached to this Exhibit B.]

**EXHIBIT C**

**COMPANY-OWNED INTERCONNECTION FACILITIES**

**(To be filled out by Company)**

**1. Description of Company Interconnection Facilities**

The Company will purchase, construct, own, operate and maintain all interconnection facilities required to interconnect the Company's system with the Generating Facility at ___ volts, up to the point of interconnection.

The Company Interconnection Facilities, for which the Customer-Generator agrees to pay, include:

[Need to specify the interconnection facilities. If no interconnection facilities, state "None".]

**2. Customer-Generator Payment to Company for Company Interconnection Facilities, Review of Generating Facility, and Review of Verification Testing**

The Customer-Generator shall pay to the Company the total estimated interconnection cost to be incurred by the Company (Total Estimated Interconnection Cost), which is comprised of (i) the estimated cost of the Company Interconnection Facilities, (ii) the estimated engineering costs associated with a) developing the Company Interconnection Facilities and b) reviewing and specifying those portions of the Generating Facility which allow interconnected operation, and iii) witnessing and reviewing the verification testing, which shall include testing of the telemetry and control interface which allows the Company to remotely measure, monitor, evaluate and verify technical compliance, Generating Facility performance, and power quality and, if necessary, control the Generating Facility. The following summarizes the Total Estimated Interconnection Cost:

| **Description** | **Estimated Cost ($)**<br>[If no cost, state "None".] |
|---|---|
| | |
| **Total Estimated Interconnection Cost ($):** | |

The Total Estimated Interconnection Cost, which, except as otherwise provided herein, is non-refundable, shall be paid by the Customer-Generator fourteen (14) days after receipt of an invoice from the Company, which shall be provided not less than thirty (30) days prior to start of procurement of the Company Interconnection Facilities.

Within thirty (30) days of receipt of an invoice, which shall be provided within fourteen (14) days of the final accounting, which shall take place within sixty (60) days of completion of construction of the Company Interconnection Facilities, the Customer-Generator shall remit to the Company the difference between the Total Estimated Interconnection Cost paid to date and the total actual interconnection cost (Total Actual Interconnection Cost). The latter is comprised of (i) the total costs of the Company Interconnection Facilities, and (ii) the total engineering costs associated with a) developing the Company Interconnection Facilities and b) reviewing and specifying those portions of the Generating Facility which allow interconnected operations as such are described in Exhibit A, and iii) reviewing the verification testing. If in fact the Total Actual Interconnection Cost is less than the payments received by the Company as the Total Estimated Interconnection Cost, the Company shall repay the difference to the Customer-Generator within thirty (30) days of the final accounting.

If the Agreement is terminated prior to the Customer-Generator's payment for the Total Actual Interconnection Cost (or the portion of this cost which has been incurred) or prior to the Company's repayment of the over collected amount of the Total Estimated Interconnection Cost (or the portion of this cost which has been paid), such payments shall be made by the Customer-Generator or Company, as appropriate. If payment is due to the Company, the Customer-Generator shall pay within thirty (30) days of receipt of an invoice, which shall be provided within fourteen (14) days of the final accounting, which shall take place within sixty (60) days of the date the Agreement is terminated. If payment is due to the Customer- Generator, the Company shall pay within thirty (30) days of the final accounting.

All Company Interconnection Facilities shall be the property of the Company.

**3. Operation, Maintenance and Testing Costs**

The Company will bill the Customer-Generator monthly and the Customer-Generator will, within 30 days after the billing date, reimburse the Company for any costs incurred in operating, maintaining or testing the Company Interconnection Facilities. The Company's costs will be determined on the basis of outside service costs, direct labor costs, material costs, transportation costs, applicable overheads at time incurred and applicable taxes. Applicable overheads will include such costs as vacation, payroll taxes, non-productive wages, supervision, tools expense, employee benefits, engineering administration, corporate administration, and materials handling. Applicable taxes will include the Public Service Company Tax, and Public Utility Fee.

**4. Facility Parties Use of Company Interconnection Facilities Upon Termination**

Notwithstanding that all Company Interconnection Facilities are the property of the Company, upon termination of the Agreement, the Company shall identify any equipment paid for by the Facility Parties that can feasibly be returned to the Facility Parties. If Facility Parties desire such equipment, Facility Parties shall pay for the removal of the equipment and the restoration of the Company's system to the Company's satisfaction.

# Rule No. 32
# SMART RENEWABLE ENERGY PROGRAM
# NON-EXPORT RIDER

## A. ELIGIBLE CUSTOMER-GENERATOR

Non-export service is available to Eligible Customer-Generators who own or lease from a third party and operate or contract to operate with a third party a non-renewable generating facility or a generating facility powered by renewable energy as defined under Hawaii Revised Statute section 269-91, or successor statute thereto, including without limitation and only as applicable, solar, wind turbine, biomass, hydroelectric energy, or a hybrid system consisting of two or more of these facilities ("Generating Facility"), and where:

1. The Generating Facility, which may include an energy storage system, is located on the Eligible Customer-Generator's premises,

2. The Generating Facility will be operated in parallel with the Company's transmission and distribution facilities,

3. The Generating Facility is installed, designed, configured, and operates in conformance with the Company's interconnection requirements provided in Rule No. 14, Paragraph H, and the requirements of this Tariff including its appendices,

4. The Generating Facility is sized and designed such that all of the Generating Facility's output is intended to offset all or part of the Eligible Customer-Generator's own electrical requirements, and

5. The Eligible Customer-Generator does not intend to export electrical energy to the utility system, except when permitted to provide Grid Support as set forth in Appendix II attached hereto.

## B. INADVERTENT EXPORT

1. Company's agreement to accept inadvertently exported electric power from the Generating Facility under this tariff is solely an accommodation. Neither this tariff nor the Interconnection Agreement provide for, require or otherwise obligate Company to measure, purchase, transmit, distribute, or store any electric power that may be delivered to Company's distribution system by Eligible Customer-Generator. Non-compliance with the Non-export Requirements will be determined through the use of advanced meters to record the flow of electric power in each direction consistent with Appendix II.



Docket No. 2019-0323, Order No. 40670 dated March 19, 2024.
Transmittal Letter dated March 25, 2024.

**APPENDIX I**

**SMART RENEWABLE ENERGY PROGRAM INTERCONNECTION AGREEMENT FOR NON-EXPORT SYSTEMS**

This Smart Renewable Energy Program Interconnection Agreement for Non-Export Systems ("Agreement") is made by and between:
Maui Electric Company, Limited ("Company"),

_____ ("Customer-Generator") and, if applicable,

_____ ("Owner/Operator"),

and is made, effective and binding as of To be filled out by the Company ("Effective Date"). Company and Customer-Generator may be referred to individually as a "Party" and collectively as the "Parties".

**WHEREAS**, Company is an operating electric public utility subject to the Hawaii Public Utilities Law, Hawaii Revised Statutes, Chapter 269, and the rules and regulations of the Hawaii Public Utilities Commission ("Commission");

**WHEREAS**, the Customer-Generator receives service from the Company;

**WHEREAS**, the Customer-Generator qualifies as an "Eligible Customer-Generator," as defined in the Company's Tariff;

**WHEREAS**, the Customer-Generator intends to construct a generating facility, as further described herein ("Generating Facility") and desires to interconnect and operate the Generating Facility in parallel with the Company's electric system;

**WHEREAS**, the Owner/Operator, may be a person or entity other than the Customer-Generator, who owns and operates the Generating Facility.

**NOW, THEREFORE**, in consideration of the premises and the respective promises herein, the Company and the Customer-Generator, and if applicable, the Owner/Operator, hereby agree as follows:

1. **Scope and Purpose**. The Parties understand and agree that this Agreement applies only to the operation of Customer-Generator's Generating Facility described in Exhibit A, and if applicable, Exhibit A-1 (Description of Generating Facility- Additional Information) attached hereto. This Agreement provides for interconnection and operation of the Generating Facility in parallel with the Company's electric system to serve only the electrical requirements of the Customer-Generator. To facilitate the operation of the Generating Facility and the Company's system, this Agreement also allows for the occasional and inadvertent export of power to the Company's electric system, as specifically agreed to herein, and may permit and/or require import and export of real and/or reactive power to provide Grid Support, as specified under Rule No. 32 ("Smart Renewable Energy Program"), Rule No. 14, Paragraph H ("Rule 14H") or other applicable interconnection standards.

2. **Notice and Disclaimer Regarding Future Rate and Tariff Modifications**. This Agreement shall, at all times, be subject to modification by the Commission as said Commission may, from time to time, direct in the exercise of its jurisdiction. Without limiting the foregoing, Customer-Generator expressly acknowledges the following:

   **The Smart Renewable Energy Program, including the Non-Export Rider, is subject to modification by the Hawaii Public Utilities Commission ("Commission").**

   **Your Agreement and Generating Facility shall be subject to any future modifications ordered by the Commission. Such modifications may positively or negatively impact any potential savings in your electricity bill that were calculated by you or presented to you to support your decision to buy or**

**lease a Generating Facility and may otherwise change the value of your Agreement and Generating Facility. You agree to pay for any costs related to such Commission-ordered modifications**

**BY SIGNING BELOW, YOU ACKNOWLEDGE THAT YOU HAVE READ, UNDERSTAND AND AGREE TO THE ABOVE NOTICE AND DISCLAIMER. FURTHER, BY SIGNING BELOW, YOU CONFIRM YOUR UNDERSTANDING THAT ANY POTENTIAL SAVINGS IN YOUR ELECTRICITY BILL THAT WERE CALCULATED BY YOU OR PRESENTED TO YOU TO SUPPORT YOUR DECISION TO BUY OR LEASE A GENERATING FACILITY MAY CHANGE.**

3. **Effectiveness of Agreement**. This Agreement shall not be effective until approved and executed by each Party, i.e., upon the Effective Date. Customer-Generator shall not interconnect and operate the Generating Facility in parallel with the Company's system prior to approval and execution of this Agreement by the Company, except to extent necessary to obtain governmental or utility approvals. Until this Agreement is effective, no Party shall have any legal obligations arising hereunder, express or implied, and any actions taken by a Party in reliance on the terms of this Agreement prior to the Effective Date shall be at that Party's own risk.

4. **Term and Termination.** This Agreement shall continue on a month-to-month basis from the Effective Date. Customer-Generator may terminate this Agreement at any time with thirty (30) days' written notice. Company may terminate this Agreement at any time if Customer-Generator fails to comply with any term of this Agreement or if Customer-Generator fails to be an Eligible Customer-Generator.

5. **Generating Facility Description**. For the purposes of this Agreement, the "Generating Facility" is defined as the equipment and devices, and associated appurtenances, owned by the Customer-Generator, which produce electric energy for use by the Customer-Generator and are to be interconnected and operated in parallel with the Company's system. The Generating Facility is identified in Exhibits A (Description of Generating Facility) and, if applicable, Exhibit A-1 (Description of Generating Facility- Additional Information) attached hereto.

6. **Parallel Operation**. Company shall allow Customer-Generator to interconnect and operate the Generating Facility in parallel with the Company's distribution system in accordance with the terms and conditions of this Agreement and Rule 14H.

   (a) The electric power produced by the Generating Facility shall be used to offset all or part of the Customer-Generator's own electrical requirements. Customer-Generator shall not cause the Customer-Generator to be considered a "public utility" as such term is defined in Chapter 269 of the Hawaii Revised Statutes.

   (b) If, notwithstanding Customer-Generators efforts to regulate the electrical output of the Generating Facility, electric power flows from the Generating Facility to the Company's distribution system, Company shall attempt to receive such power. Unless acceptance of such energy from the Customer-Generator by the Company would require the Company to operate the Company system outside of good engineering and operating practices. In no event shall the delivery of electric power to Company's electric system exceed the amounts, duration, frequency of occurrence, or other limitations specified in Appendix II to the Non-Export Rider to Rule 32 ("Non-Export Appendix II"). If Customer-Generator does not regulate its Generating Facility in compliance with the limitations set forth in the Non-Export Appendix II, Company may require Customer-Generator to disconnect the Generating Facility from Company's electric system until Customer-Generator demonstrates to Company's sole satisfaction that Customer-Generator has taken adequate measures to regulate the output of the Generating Facility and control its export of power. Further, even if the Generating Facility is operating within the limitations set forth in Non-Export Appendix II, if at any time the Company determines that the continued operation of the Generating Facility may endanger any person or property, the Company's electric system, or have an adverse effect on the safety or power quality of other customers, the Company shall have the right to disconnect the Generating Facility from the Company's electric system in accordance with Section 16 (Personnel and System Safety) herein.

7. **No Purchase of Electric Power**. Company's agreement to accept electric power from the Generating Facility is solely an accommodation. This Agreement does not provide for, or otherwise obligate Company to measure, purchase, transmit, distribute, or store any electric power that may be delivered to Company's distribution system by Customer-Generator.

8. **No Delivery of Reactive Power**. Customer-Generator shall not deliver reactive power to Company's distribution system, except as provided under Non-Export Appendix II and Rule 14H, or unless the Parties have agreed otherwise in writing.

9. **Sale of Electric Power by the Company to the Customer-Generator**. This Agreement does not constitute an agreement by the Company to provide retail electric service to Customer-Generator. Such arrangement must be made separately between the Company and Customer-Generator and sales of energy delivered by the Company to the Customer-Generator shall be governed by the applicable rate schedule and the Company's rules filed with the Commission.

10. **Permits and Licenses**. Customer-Generator shall be responsible for the design, installation, operation, and maintenance of the Generating Facility and shall obtain at its expense, and maintain any required governmental authorizations and/or permits for the construction and operation of the Generating Facility. Customer-Generator shall not commence parallel operation of the Generating Facility until Company has provided written approval. Company shall provide such written approval within fifteen (15) business days from Company's receipt of a copy of the final inspection or approval of the Generating Facility, which has been issued by the governmental authority having jurisdiction to inspect and approve the installation. Company's written approval shall not be unreasonably withheld. Company shall have the right to have its representatives present at the final inspection made by the governmental authority having jurisdiction to inspect and approve the installation of the Generating Facility. Customer-Generator shall be required to notify Company in accordance with the terms of Section 19 (Notices), herein, at least five (5) business days prior to such inspection.

11. **Installation**.

    (a) Design, installation, operation and maintenance of the Generating Facility shall include appropriate control and protection equipment as specified by the Company, including but not limited to an automatic load-break device such as a circuit breaker or inverter and a manual disconnect that has a visible break or breaker with rack-out capability to isolate the Generating Facility from the Company's system. The manual disconnect device must be accessible by the Company and be capable of being locked by the Company in the open position, to establish working clearance for maintenance and repair work in accordance with the Company's safety rules and practices. The disconnect devices shall be furnished and installed by the Customer-Generator and are to be connected between the Generating Facility and the Company's electric system. The disconnect devices shall be located in the immediate vicinity of the electric meter serving the Customer-Generator. The manual disconnect device shall be, at a minimum, clearly labeled "Customer-Generator System Disconnect". With permission of the Company, the disconnect devices may be located at an alternate location which is readily and safely accessible to the Company on a 24-hour basis. Such alternate location shall be clearly identified with signage placed in the immediate vicinity of the electric meter serving the Customer-Generator.

    (b) The Customer-Generator grants access to the Company to utilize the disconnect device, if needed. The Customer-Generator shall obtain the authorization from the owner and/or occupants of the premises where the Generating Facility is located that allows the Company to access the Generating Facility for the purpose specified in this Agreement. Company may enter premises where the Generating Facility is located, as permitted by law or tariff, for the following purposes: (a) to inspect Generating Facility's protective devices and read or test meter(s); and (b) to disconnect the Generating Facility and/or service to Customer-Generator, whenever in Company's sole opinion, a hazardous condition exists and such immediate action is necessary to protect persons, Company's facilities, or property of others from damage or interference caused by the Generating Facility, or the absence or failure of properly operating protective device.

(c) Under no circumstances shall a Customer-Generator interconnect and operate a generating facility in parallel with the Company's electric system without prior written approval by the Company in the form of a fully executed Agreement.

(d) Generating facilities that incorporate the use of an energy storage device, e.g., battery storage, which is interconnected to the Company's transmission and/or distribution facilities, shall obtain an interconnection review by the Company pursuant to this Agreement. Energy storage systems that are intended to be installed by an Eligible Customer-Generator after Company's execution of an Agreement shall constitute a material change and addition to a Generating Facility and shall require interconnection review pursuant to this Rule prior to installation.

(e) Once a Generating Facility is interconnected to the Company's system, the Company reserves the right to require the installation of, or modifications to, equipment determined by the utility to be necessary to facilitate the delivery of reliable electric service to its customers, subject to the requirement that such installation or modification be consistent with applicable interconnection standards (e.g., Rule 14H). The Company shall provide a written explanation of the need for such installation or modification. Such installation or modification shall be made by mutual agreement of the Company and the Customer-Generator. Any disputes related to this provision shall be resolved according to the dispute resolution process described in Rule 14H. Energy storage systems that are intended to be installed by an Eligible Customer-Generator after Company's execution of Agreement shall constitute a material change and addition to a Generating Facility and shall require interconnection review pursuant to this Rule prior to installation.

12. **Metering**. Within fifteen (15) days of execution of this Agreement, the Company will supply, own, and maintain all necessary meters and associated equipment utilized for billing and energy purchase. The meters will be tested and read in accordance with the rules of the Commission and the Company. The Customer-Generator, at its expense, shall provide, install and maintain all conductors, service switches, fuses, meter sockets, meter instrument transformer housing and mountings, switchboard meter test buses, meter panels and similar devices required for service connection and meter installations on the Customer-Generator's premises in accordance with the Company's Rule 14H.

13. **Interconnection Facilities**.

(a) Customer-Generator-Owned Interconnection Facilities (for Generating Facilities Larger than (30 kW or with three-phase electrical service).

(1) The Customer-Generator shall furnish, install, operate and maintain, at its cost, the interconnection facilities (such as circuit breakers, relays, switches, synchronizing equipment, monitoring equipment, and control and protective devices and schemes) identified in Exhibit B (Customer-Generator-Owned Generating Facility and Interconnection Facilities).

(2) The point of interconnection is shown on the single-line diagram and three-line diagram (provided by the Customer-Generator and reviewed by the Company) which are attached to Exhibit B (Customer-Generator-Owned Generating Facility and Interconnection Facilities). Pursuant to Company Rule 14H, Appendix I (Distributed Generating Facility Interconnection Standards Technical Requirements), Section 6.c (Review of Design Drawings), the Company must review and approve Customer-Generator's single-line and three-line diagrams prior to Customer-Generator constructing of the Generating Facility interconnection. The Customer-Generator agrees to test the Generating Facility, to maintain operating records, and to follow such operating procedures, as may be specified by the Company to protect the Company's system from damages resulting from the parallel operation of the Generating Facility, including such testing, records and operating procedures as more fully described in Exhibit C attached hereto.

(3) The Customer-Generator agrees to test the Generating Facility, to maintain operating records, and to follow such operating procedures, as may be specified by the Company to protect the Company's system from damages resulting from the parallel operation of the

Generating Facility, including such testing, records and operating procedures as more fully described in Exhibit C attached hereto.

(4) The Company may inspect the Generating Facility and Customer-Generator's interconnection facilities.

(b) Company-Owned Interconnection Facilities (for Generating Facilities Larger than 30 kW or with three-phase electrical service).

(1) The Company agrees to furnish, install, operate and maintain such interconnection facilities on its side of the point of interconnection with the Generating Facility as required for the parallel operation with the Generating Facility and more fully described in Exhibit C attached hereto and made apart hereof ("Company Interconnection Facilities"). All Company Interconnection Facilities shall be the property of the Company. Where portions of the Company Interconnection Facilities are located on the Customer-Generator's premises, the Customer-Generator shall provide, at no expense to the Company, a suitable location for and access to all such equipment. If a 120/240 Volt power source or sources are required, the Customer shall provide these at no expense to the Company.

(2) The Customer-Generator agrees to pay to the Company: (1) a non-refundable contribution for the Company's investment in the Company Interconnection Facilities described in Exhibit C (Company-Owned Interconnection Facilities), subject to the terms and conditions included in Exhibit C and to pay for other interconnection costs. The interconnection costs will not include the cost of an initial technical screening of the impact of the Generating Facility on the Company's system.

14. **Indemnification:**

(a) The Customer-Generator shall indemnify, defend and hold harmless the Company and its officers, directors, agents and employees, from and against all liabilities, damages, losses, fines, penalties, claims, demands, suits, costs and expenses (including reasonable attorney's fees and expenses) to or by third persons, including the Company's employees or subcontractors, for injury or death, or for injury to property, arising out of the actions or inactions of the Customer-Generator (or those of anyone under its control or on its behalf) with respect to its obligations under this Agreement, and/or arising out of the installation, operation and maintenance of the Generating Facility and/or the Customer-Generator Interconnection Facilities, except to the extent that such injury, death or damage is attributable to the gross negligence or intentional act or omission of the Company or its officers, directors, agents or employees.

(b) The Owner/Operator shall indemnify, defend and hold harmless the Company and its officers, directors, agents and employees, from and against all liabilities, damages, losses, fines, penalties, claims, demands, suits, costs and expenses (including reasonable attorney's fees and expenses) to or by third persons, including the Company's employees or subcontractors, for injury or death, or for injury to property, arising out of the actions or inactions of the Owner/Operator (or those of anyone under its control or on its behalf) with respect to its obligations under this Agreement, and/or arising out of the installation, operation and maintenance of the Generating Facility and/or the Interconnection Facilities, except to the extent that such injury, death or damage is attributable to the gross negligence or intentional act or omission of the Company or its officers, directors, agents or employees.

**Provided, however, where the Customer-Generator is an agency of the United States, the following Section shall be applicable in place of Paragraphs 14(a) and (b):**

"The United States understands that it may be held liable for loss, damages expense and liability to third persons and injury to or death of persons or injury to property caused by the United States in its engineering design, construction ownership or operations of, or the making of replacements, additions betterment to, or by failure of, any of such party's works or facilities used in connection

with this Agreement to the extent allowed by the Federal Tort Claims Act 28 U.S.C. § 2671 et seq. and the Agreement Disputes Act of 1978, 41 U.S.C. §§ 601-613.
Company shall be responsible for damages or injury caused by Company, Company's agents, officers, and employees in the course of their employment to the extent permitted by law."

**Provided, however, where the Customer-Generator is an agency of the State of Hawaii (the "State"), the following Section shall be applicable in place of Paragraphs 14(a) and (b):**

"The State shall be responsible for damages or injury caused by the State's agents, officers, and employees in the course of their employment to the extent that the State's liability for such damage or injury has been determined by a court or otherwise agreed to by the State. The State shall pay for such damage and injury to the extent permitted by law. The State shall use reasonable good faith efforts to pursue any approvals from the Legislature and the Governor that may be required to obtain the funding necessary to enable the State to perform its obligations or cover its liabilities hereunder. The State shall not request Company to indemnify the State for, or hold the State harmless from, any claims for such damages or injury, Company shall be responsible for damages or injury caused by Company, Company's agents, officers, and employees in the course of their employment to the extent that Company's liability for such damage or injury has been determined by a court or otherwise agreed to by Company, and Company shall pay for such damage and injury to the extent permitted by law. Company shall not request the State to indemnify Company for, or hold Company harmless from, any claims for such damages or injury."

(c) The Company shall indemnify, defend and hold harmless the Customer-Generator, and its officers, directors, agents and employees, from and against all liabilities, damages, losses, fines, penalties, claims, demands, suits, costs and expenses (including reasonable attorney's fees and expenses) to or by third persons, including the Customer-Generator's employees or subcontractors, for injury or death, or for injury to property, arising out of the actions or inactions of the Company (or those of anyone under its control or on its behalf) with respect to its obligations under this Agreement, and/or arising out of the installation, operation and maintenance of the Company Interconnection Facilities, except to the extent that such injury, death or damage is attributable to the gross negligence or intentional act or omission of the Customer-Generator or its officers, directors, agents or employees.

(d) Nothing in this Agreement shall create any duty to, any standard of care with reference to, or any liability to any person not a party to it.

15. Continuity of Service.

(a) The Company may require the Customer-Generator to temporarily curtail, interrupt or reduce deliveries of energy when necessary in order for the Company to construct, install, maintain, repair, replace, remove, investigate, test or inspect any of its equipment or any part of the Company System including, but not limited to, accommodating the installation and/or testing of non-utility owned facilities to the Company system; or if the Company determines that such curtailment, interruption or reduction is necessary because of a system emergency, forced outage, operating conditions on its system; or the inability to accept deliveries of energy due to excess energy conditions; or if either the Generating Facility does not operate in compliance with good engineering and operating practices or acceptance of energy from the Customer-Generator by the Company would require the Company to operate the Company system outside of good engineering and operating practices which in this case shall include, but not be limited to, excessive system frequency fluctuations or excessive voltage deviations, and any situation that the Company system operator determines, at his or her sole discretion, could place in jeopardy system reliability.

(b) In the event that the Company temporarily curtails, interrupts, or reduces deliveries of energy pursuant to Section 15(a), the Company shall not be obligated to accept or apply credit for any energy from the Customer-Generator. The Company shall take all reasonable steps to

minimize the number and duration of interruptions, curtailments or reductions. Whenever feasible, Company shall give Customer-Generator reasonable notice of the possibility that interruption or reduction of deliveries may be required.

(c) In the event that the Company temporarily curtails or interrupts deliveries of energy from the Generating Facility pursuant to this Section 15, the Generating Facility shall not energize a de-energized utility line under any circumstances, but may operate the Generating Facility isolated from the utility system with an open tie point in accordance with Rule 14H.

16. **Personnel and System Safety**. If at any time the Company determines that the continued operation of the Generating Facility may endanger any person or property, the Company's electric system, or have an adverse effect on the safety or power quality of other customers, the Company shall have the right to disconnect the Generating Facility from the Company's electric system remotely or otherwise. The Generating Facility shall remain disconnected until such time as the Company is satisfied that the endangering or power quality condition(s) has been corrected, and the Company shall not be obligated to accept any energy from the Generating Facility during such period. The Company shall not be liable, directly or indirectly, for permitting or continuing to allow an attachment of the Generating Facility for the acts or omissions of the Customer-Generator that cause loss or injury, including death, to any third party.

17. **Prevention of Interference**. The Customer-Generator shall not operate equipment that superimposes a voltage or current upon the Company's system that interferes with the Company's operations, service to the Company's customers, or the Company's communication facilities. Such interference shall include, but not be limited to, overcurrent, voltage imbalance, and abnormal waveforms. If such interference occurs, the Customer-Generator must diligently pursue and take corrective action at its own expense after being given notice and reasonable time to do so by the Company. If the Customer-Generator does not take timely corrective action, or continues to operate the equipment causing interference without restriction or limit, the Company may, without liability, disconnect the Customer-Generator's equipment from the Company's system.

18. **Limitation of Liability**. Neither by inspection, if any, or non-rejection, nor in any other way, does the Company give any warranty, express or implied, as to the adequacy, safety, or other characteristics of any structures, equipment, wires, appliances or devices owned, installed or maintained by the Customer-Generator or leased by the Customer-Generator from third parties, including without limitation the Generating Facility and any structures, equipment, wires, appliances or devices appurtenant thereto.

19. **Customer-Generator and Generating Facility Information.** By signing this Agreement, the Customer-Generator expressly agrees and authorizes the Company to: (1) request and obtain from Customer-Generator and its contractors, vendors, subcontractors, installers, suppliers or agents (collectively "Customer-Generator Agents"), at no cost to Company, information related to the Generating Facility, including but not limited to Watts, Vars, Watt Hours, current and voltage, status of the Generating Facility, inverter settings, any and all recorded event or alarm logs recorded, (collectively "Generating Facility Data") that Company reasonably determines are needed to ensure the safe and reliable operation of the Generating Facility or the Company's system; or (2) make such modifications to the Customer-Generator's system, at no cost to the Company, that Company determines, in its reasonable discretion, are needed to ensure the safe and reliable operation of the Generating Facility or the Company's system. Customer-Generator expressly agrees and irrevocably authorizes Customer-Generator Agents to disclose such Customer-Generator Data to Company and to make such modifications to the Customer-Generator's Generating Facility upon request by Company.

20. **Confidentiality.** By signing this Agreement, the Customer-Generator and, if applicable, Owner expressly agree not to disclose any confidential or proprietary information of the Company, including but not limited to, interconnection equipment, processes, and other details contained in Exhibit C to the interconnection agreement; provided however, that nothing herein shall prohibit a Customer-Generator or Owner from selling or otherwise transferring the Generating Facility and Interconnection Agreement to a purchaser or transferee of the premises on which the Generating Facility is located. Any other disclosure or sharing of

Exhibit C must be specifically authorized by the Company in writing.

21. **Additional Information**. The Company reserves the right to request additional information from Customer-Generator relating to the Generating Facility, where reasonably necessary, to serve the Customer-Generator under this Agreement or to ensure reliability, safety of operation, and power quality of the Company's system.

22. **No Material Changes to Generating Facility**. The Customer-Generator agrees that no material changes or additions to the Generating Facility shall be made without having obtained prior written consent from the Company, which consent shall not be unreasonably withheld. If a Generating Facility changes ownership, the Company may require the new Customer-Generator and/or Owner/Operator to complete and execute an amended Agreement or new Agreement, as may be applicable.

23. **Notices**. Any notice required under this Agreement shall be in writing and emailed or mailed at any United States Post Office with postage prepaid and addressed to the Party, or personally delivered to the Party at the address identified in Exhibit A (Description of Generating Facility), or if the Party is the Company, to the address provided on the last page of this Agreement. Changes in such designation may be made by notice similarly given. Notice sent by email or mail shall be deemed to have been given on the date of actual delivery or at the expiration of the fifth day after the date of mailing, whichever is earlier.

24. **Certification by Licensed Electrical Contractor**. Generating and interconnection systems must comply with all applicable safety and performance standards of the National Electrical Code (NEC), Institute of Electrical and Electronic Engineers (IEEE), and accredited testing laboratories such as the Underwriters Laboratories (UL), and where applicable, the rules of the Commission, or other applicable governmental laws and regulations, and the Company's interconnection requirements, in effect at the time of signing this agreement. This requirement shall include, but not be limited to, the interconnection provisions of the Company's Rule 14H, as authorized by the Commission. Upon request by Company, Customer-Generator shall cause a Licensed Electrical Contractor, as agent for Customer-Generator, to certify that once approved by the Company, the proposed Generating Facility will be installed to meet all preceding requirement(s).

25. **Force Majeure**. For purposes of this Agreement, "Force Majeure Event" means any event (a) that is beyond the reasonable control of the affected party; and (b) that the affected party is unable to prevent or provide against by exercising reasonable diligence, including the following events or circumstances, but only to the extent they satisfy the preceding requirements: acts of war, public disorder, insurrection or rebellion; floods, hurricanes, earthquakes, lighting, storms, and other natural calamities; explosions or fires; strikes, work stoppages, or labor disputes; embargoes ; and sabotage. If a Force Majeure Event prevents a party from fulfilling any obligations under this Agreement, such party will promptly notify the other party in writing, and will keep the other party informed on a continuing basis of the scope and duration of the Force Majeure Event. The affected party will specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the affected party is taking to mitigate the effects of the event on its performance. The affected part will be entitled to suspend or modify its performance of obligations under this Agreement, other than the obligation to make payments then due or becoming due under this Agreement, but only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of reasonable efforts. The affected party will use reasonable efforts to resume its performance as soon as possible.

26. **Good Engineering Practice**.

    (a) Each party agrees to install, operate and maintain its respective equipment and facilities and to perform all obligations required to be performed by such party under this Agreement in accordance with good engineering practice in the electric industry and with applicable laws, rules, orders and tariffs.

    (b) Wherever in this Agreement and the attached Exhibits the Company has the right to give specifications, determinations or approvals, such specifications, determinations and/or approvals shall be given in accordance with the Company's standard practices, policies and procedures, which may include the Company's Electric Service Installation Manual, the Company's Engineering Standard Practice Manual and the IEEE Guides and Standards for Protective Relaying Systems.

27. **Insurance**. The following insurance provisions are only applicable to Generating Facilities with a Total Rated Capacity greater than 16 kW:

The Customer-Generator shall, at its own expense and during the term of the Agreement and any other time that the Generating Facility is interconnected with the Company's system, maintain in effect with a responsible insurance company authorized to do insurance business in Hawaii, the following insurance or its equivalent at Company's discretion that will protect the Customer-Generator and the Company with respect to the Generating Facility, the Generating Facility's operations, and the Generating Facility's interconnection with the Company's system:

A commercial general liability policy, covering bodily injury and property damage combined single limit of at least the following amounts based on the Total Rated Capacity of the generator (for solar systems—Total Rated Capacity of the generator or inverter, whichever is lower, can be used with appropriate technical documentation on inverter, if not higher Total Rated Capacity will be used), for any occurrence. Generating Facilities less than or equal to 16kW are exempt and are not required to have a commercial general liability policy.

| Commercial General Liability (or equivalent) Coverage Amount | Total Rated Capacity of the Generating Facility |
|---|---|
| $5,000,000 | Greater than 1 MW |
| $2,000,000 | Greater than 250 kW and less than or equal to 1 MW |
| $1,000,000 | Greater than 30 kW and less than or equal to 250 kW |
| $500,000 | Greater than 16 kW and less than or equal to 30 kW |
| $0 | Less than or equal to 16kW |

The Customer-Generator has responsibility to determine if higher limits are desired and purchased. Said insurance shall name the Company, its directors, officers, agents, and employees as additional insureds, shall include contractual liability coverage for written Agreements and agreements including this Agreement, and shall include provisions stating that the insurance will respond to claims or suits by additional insureds against the Customer-Generator or any other insured thereunder. Customer-Generator shall immediately provide written notice to the Company should the required insurance be cancelled, limited in scope, or not renewed upon expiration. "Claims made" policies are not acceptable, unless the Customer-Generator agrees to maintain coverage in full effect at all times during the term of this Agreement and for THREE (3) years thereafter. The adequacy of the coverage afforded by the required insurance shall be subject to review by the Company from time to time, and if it appears in such review that risk exposures require an increase in the coverages and/or limits of this insurance, the Customer-Generator shall make such increase to that extent and any increased costs shall be borne by the Customer-Generator. The insurance required hereunder shall provide that it is primary with respect to the Customer-Generator and the Company. Initially, certificates of insurance must be provided to the Company prior to executing the Agreement and any parallel interconnection. Receipt of any evidence of insurance showing less coverage than requested is not a waiver of the Customer-Generator's obligations to fulfill this provision. The Customer-Generator's indemnity and other obligations shall not be limited by the foregoing insurance requirements. Any deductible shall be the responsibility of the Customer-Generator.

Alternatively, where the Customer-Generator is a governmental entity, Customer Generator may elect to be self-insured for the amounts set forth above in lieu of obtaining insurance coverage to those levels from an insurance company.

28. **Miscellaneous.**

(a) **Disconnection and Survival of Obligations.** Upon termination of this Agreement, the Generating Facility shall be disconnected from the Company's system. The termination of this Agreement shall not relieve the Parties of their respective liabilities and obligations, owed or continuing at the time of termination.

(b) **Governing Law and Regulatory Authority.** This Agreement was executed in the State of Hawaii and must in all respects be interpreted, governed, and construed under the laws of the State

of Hawaii. This Agreement is subject to, and the parties' obligations hereunder include, operating in full compliance with all valid, applicable federal, state, and local laws or ordinances, and all applicable rules, regulations, orders of, and tariffs approved by, duly constituted regulatory authorities having jurisdiction.

(c) **Amendment, Modifications, or Waiver**. This Agreement may not be altered or modified by either of the Parties, except by an instrument in writing executed by each of them. None of the provisions of this Agreement shall be considered waived by a Party unless such waiver is given in writing. The failure of a Party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishment of any such rights for the future, but the same shall continue and remain in full force and effect. This Agreement contains the entire agreement and understanding between the Parties, their agents, and employees as to the subject matter of this Agreement. Each party also represents that in entering into this Agreement, it has not relied on any promise, inducement, representation, warranty, agreement or other statement not set forth in this Agreement.

(d) **Termination of Existing Agreement**. This Agreement shall supersede any existing agreement, if any, under which Customer-Generator is currently operating the Generating Facility and any such agreement shall be deemed terminated as of the date this Agreement becomes effective.

(e) **Assignment.** This Agreement may not be assigned by either Party without the prior written consent of the other party. Such consent shall not be unreasonably withheld. The foregoing restriction on assignment shall not apply to the automatic and unconditional assumption of this Agreement, in accordance with Rule 14H, in the event the premises where the Generating Facility is located is sold or otherwise transferred.

(f) **Binding Effect.** This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors, legal representatives, and permitted assigns.

(g) **Relationship of Parties**. Nothing in this Agreement shall be deemed to constitute any Party hereto as partner, agent or representative of the other party or to create any fiduciary relationship between the Parties.

(h) **Limitations**. Nothing in this Agreement shall limit the Company's ability to exercise its rights or expand or diminish its liability with respect to the provision of electrical service pursuant to the Company's tariffs as filed with the Commission, or the Commission's Standards for Electric Utility Service in the State of Hawaii, which currently are included in the Commission's General Order Number 7, as either may be amended from time to time.

(i) **Execution of Agreement; Multiple Counterparts**. This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument binding all Parties notwithstanding that all of the Parties are not signatories to the same counterparts. Signatures may be provided in original ("wet") form or by other means intended to preserve the original graphic and pictorial appearance of the signature, such as a photocopy. A copy of a Party's signature shall be considered an "original" signature for purposes of this Agreement.

29. **Generator/Equipment Certification**

Generating Facilities that utilize inverter technology must be compliant with *Institute of Electrical and Electronics Engineers IEEE Std 1547* and *Underwriters Laboratories UL 1703* and *UL 1741* in effect at the time this Agreement is executed. Generating systems that use a rotating machine must be compliant with applicable National Electrical Code, Underwriters Laboratories, and Institute of Electrical and Electronics Engineers standards and rules and orders of the Public Utilities Commission of the State of Hawaii in effect at the time this Agreement is executed. By signing below, the Applicant certifies that the installed generating equipment will meet the appropriate preceding requirement(s) and can supply documentation that confirms compliance, including a certification of the same from the Installing Electrical Contractor upon request by the Company.

[Signature page follows]

**IN WITNESS WHEREOF,** the Parties hereto have caused two originals of this Agreement to be executed by their duly authorized representatives. This Agreement is effective as of the date first set forth above.

**CUSTOMER-GENERATOR**

By: _____ _____
Signature Date

Name (Print): _____

Company Name (if applicable): _____

Title (if applicable): _____

**OWNER/OPERATOR**
**(if different from Customer-Generator)** ☐ Not Applicable

By: _____ _____
Signature Date

Name (Print): _____

Company Name (if applicable): _____

Title (if applicable): _____

**HAWAIIAN ELECTRIC COMPANY**

By: To be filled out by the Company To be filled out by the Company
Signature Date

Name (Print): To be filled out by the Company

Title: To be filled out by the Company

**Contact us by mail or email:**

**Hawaiian Electric**
connect@hawaiianelectric.com
Customer Energy Resources
P.O. Box 2750, AL18-SE
Honolulu, HI 96840

**EXHIBIT A**

**DESCRIPTION OF GENERATING FACILITY**

Under no circumstances shall a Customer-Generator interconnect and operate a generating facility in parallel with the Company's electric system without prior written approval by the Company in the form of a fully executed Agreement. Generating facilities that incorporate the use of an energy storage device, e.g., battery storage, regardless of whether such energy storage device is intended to operate in parallel with the Company's transmission and/or distribution facilities, shall obtain an interconnection review by the Company pursuant to this Agreement. Energy storage systems that are intended to be installed by an Eligible Customer-Generator after Company's execution of an Agreement shall constitute a material change and addition to a generating facility and shall require interconnection review pursuant to this Rule prior to installation.

**1. Customer-Generator Information**

Name (print): _____

**Property Address:** _____

City: _____ State: _____ Zip: _____

Active Electric
Service Account #: _____ Meter #: _____ TMK: _____

Phone: _____ Cell: _____ Email: _____

☐ Mailing Address is the same as the Property Address

**Mailing Address:** _____

City: _____ State: _____ Zip: _____

**2. Owner-Operator Information** ☐ Not Applicable

Name (print): _____

Company:
(If applicable) _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Cell: _____ Email: _____

**3. Electrical Contractor**

Electrical Contractor: _____ Hawai`i License #: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Cell: _____ Email: _____

Supply certification that the generating system will be installed and inspected in compliance with the local Building/Electrical code of the County of: ☐ Honolulu ☐ Maui ☐ Hawai`i

Generating System Building Permit # (to be filled out by the Company upon the Company's approval and execution of Agreement): To be filled out by the Company

**4. Insurance** ☐ Not Applicable (less than or equal to 16 kW)

Insurance Carrier: _____

**5. General Technical Information (Attached)**

☐ **Single Line Diagram** ☐ **Three Line Diagram** (if the Generating Facility's capacity is greater than or equal to 30 kW) ☐ **Relay List and Trip Scheme** (if applicable)

**6. Generator Qualifications**

Generator Type:

☐ Photovoltaic with Inverter

☐ Other renewable with Inverter (renewable energy source as defined in Hawaii Revised Statutes, Chapter 269, Part V)

☐ Fossil Fuel with Inverter (including hydrogen made from non-renewable energy; skip Section 8, include Exhibit A-1)

☐ Non-inverter Renewable (synchronous or induction generator producing or generating energy from a renewable energy source; Skip section 8, include Exhibit A-1)

☐ Non-inverter Fossil Fuel (Skip section 8, include Exhibit A-1)

What is the system's Maximum Export capability?

☐ Less than 30 kW

Technical System Size: _____ kW Maximum Export: _____ kW

**Interconnecting Equipment Technical Data**

**7.** Generator Disconnect Information:

Manufacturer: _____ Catalog #: _____

Type: _____ Rated Amps: _____ Rated Volts: _____

☐ Fused *or* ☐ Non-Fused | ☐ Single Phase *or* ☐ Three Phase (include Exhibit A-1) | ☐ Uses multiple disconnects

Mounting Location: _____

Will an interposing transformer be used between the generator and the point of interconnection?

☐ No ☐ Yes (include Exhibit A-1)

**8. Generator Technical Information**

System Information:

| Micro Inverter | Central/String Inverter | Inverter Manufacturer | Model | Qty. | Nominal AC Output Rating (kW)* | Qty x Nominal AC Output Rating (kW) |
|---|---|---|---|---|---|---|
| ☐ 1 | ☐ 1 | | | | | |
| ☐ 2 | ☐ 2 | | | | | |
| ☐ 3 | ☐ 3 | | | | | |
| ☐ 4 | ☐ 4 | | | | | |
| ☐ 5 | ☐ 5 | | | | | |
| | | | | | Total Inverter Size (kW): | |

| Inverter | DC Generator Manufacturer | Model | Qty. | Rating (kW)* | Quantity x Rating (kW) |
|---|---|---|---|---|---|
| ☐ 1 | | | | | |
| ☐ 2 | | | | | |
| ☐ 3 | | | | | |
| ☐ 4 | | | | | |
| ☐ 5 | | | | | |
| | | | | Total DC Capacity (kW): | |

| Total Capacity of Inverter #: | 1: | 2: | 3: | 4: | 5: |
|---|---|---|---|---|---|

**Program System Size (kW):**

Program System Size is the combined sums of the lesser of the AC or DC capacities per inverter.
*All equipment ratings must match those listed on their manufacturer's specification sheets.

**9. Energy Storage System Information** ☐ Not Applicable

*Specification sheets must be provided for all equipment listed in the section below*

| | Energy Storage System Manufacturer | Model | Qty. | Size kW | Usable Capacity kWh | Rated kW Charge | Qty. x Size kW |
|---|---|---|---|---|---|---|---|
| ☐ 1 | | | | | | | |
| ☐ 2 | | | | | | | |
| ☐ 3 | | | | | | | |
| ☐ 4 | | | | | | | |
| ☐ 5 | | | | | | | |
| Total Energy Storage System Size (kW) | | | | | | | |

Description of Energy Storage System Operations:

What is the energy storage operation type? (check all that apply)
☐ Self-consumption
☐ Emergency Backup
☐ Scheduled Dispatch
☐ Remote Dispatch
☐ Emergency Dispatch
☐ Other

Describe mode(s) of operation (e.g., charge and discharge timing; does the system match the load with PV and battery?)

Will the distribution grid be used to charge the storage device?
☐ No ☐ Yes, charging periods: _____

Will power be exported to the grid?
☐ No ☐ Yes, maximum export to the grid: _____

**EXHIBIT A-1**

**DESCRIPTION OF GENERATING FACILITY – ADDITIONAL INFORMATION**

**[ADDITIONAL INFORMATION FOR GENERATING FACILITIES THAT: (1) INCLUDE SYNCHRONOUS AND INDUCTION GENERATORS; OR (2) HAVE A PROGRAM SYSTEM SIZE GREATER THAN 30 KW OR THREE-PHASE ELECTRICAL SERVICE]**

☐ Not Applicable

*Specification sheets must be provided for all equipment referenced in the section below*

Number of starts per day: _____ Maximum Starting kVA: _____ Generator Operating Power Factor: _____

Generator Grounding Method (check all that apply):

☐ Effectively Grounded ☐ Resonant Grounded ☐ Low-Inductance Grounded ☐ Low-Resistance Grounded ☐ High-Resistance Grounded ☐ Ungrounded

* Not needed if Generator Nameplate and Manufacturer's Specification Sheet are provided.

Direct Axis Synchronous Reactance, $X_d$: _____ P.U. Direct Axis Transient Reactance, $X'_d$: _____ P.U.

Direct Axis Subtransient Reactance, $X''_d$: _____ P.U. Inertia Constant, H: _____ P.U. Excitation Response Ratio: _____

Direct Axis Open-Circuit Transient Time Constant, $X_d$: _____ Seconds Direct Axis Open-Circuit Subtransient Time Constant, $T''_d$: _____ Seconds

2. Interconnecting Equipment Technical Data

Transformer Data ☐ Not Applicable

*A copy of transformer Nameplate and Manufacturer's Test Report may be substituted*

Transformer Primary (Volts): _____ Transformer Secondary (Volts): _____

☐ Delta ☐ Wye ☐ Wye Grounded ☐ Delta ☐ Wye ☐ Wye Grounded

Size: _____ KVA Transformer Impedance: _____ % on _____ KVA Base

Transformer Fuse Data ☐ Not Applicable

*Attach fuse manufacturer's Minimum Melt & Total Clearing Time-Current Curves*

☐ At Primary Voltage ☐ At Secondary Voltage

Manufacturer: _____ Type: _____ Size: _____ Speed: _____

Transformer Protection (if not fuse) ☐ Not Applicable

Please describe: _____

Generator Main Circuit Breaker ☐ Not Applicable

*A copy of circuit breaker's Nameplate and Specification Sheet may be substituted*

Manufacturer: _____ Type: _____

Continuous Load Rating (Amps): _____ Interrupting Rating (Amps): _____ Trip Speed (Cycles): _____

Feeder Circuit Breaker ☐ Not Applicable

*Attach copy of any proposed Time-Overcurrent Coordination Curves*

| Manufacturer | Type | Style/Catalog No. | Proposed Setting |
|---|---|---|---|
| | | | |

| | | | |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

Current Transformer Data ☐ Not Applicable

*Attach copy of Manufacturer's Excitation & Ratio Correction Curves*

| Manufacturer | Type | Accuracy Class | Proposed Ration Connection |
|---|---|---|---|
| | | | /5 |
| | | | /5 |
| | | | /5 |
| | | | /5 |
| | | | /5 |

# EXHIBIT B

**CUSTOMER-GENERATOR-OWNED GENERATING FACILITY**

**AND INTERCONNECTION FACILITIES**

**[THIS EXHIBIT IS ONLY APPLICABLE TO GENERATING FACILITIES EQUAL TO OR GREATER THAN 30 kW OR WITH THREE-PHASE ELECTRICAL SERVICE.]**

**1. Generating Facility**

a. Compliance with laws and standards. The Generating Facility, Generating Facility design, and Generating Facility drawings shall meet all applicable national, state, and local laws, rules, regulations, orders, construction and safety codes, and shall satisfy the Company's Distributed Generating Facility Interconnection Standards, Technical Requirements ("Interconnection Standards"), as set forth in Rule 14, Paragraph H.1 of the Company's tariff.

b. Avoidance of adverse system conditions. The Generating Facility shall be designed, installed, operated and maintained so as to prevent or protect against adverse conditions on the Company's system that can cause electric service degradation, equipment damage, or harm to persons, such as:

- Unintended islanding.
- Inadvertent and unwanted re-energization of a Company dead line or bus.
- Interconnection while out of synchronization.
- Overcurrent.
- Voltage imbalance.
- Ground faults.
- Generated alternating current frequency outside of permitted safe limits.
- Voltage outside permitted limits.
- Poor power factor or reactive power outside permitted limits.
- Abnormal waveforms.

c. Specification of protection, synchronizing and control requirements. The Customer-Generator shall provide the design drawings, operating manuals, manufacturer's brochures/instruction manual and technical specifications, manufacturer's test reports, bill of material, protection and synchronizing relays and settings, and protection, synchronizing, and control schemes for the Generating Facility to the Company for its review, and the Company shall have the right to specify the protection and synchronizing relays and settings, and protection, synchronizing and control schemes that affect the reliability and safety of operation and power quality of the Company's system with which the Generating Facility is interconnected ("Facility Protection Devices/Schemes").

d. Generating Facility protection. The Customer-Generator is solely responsible for providing adequate protection for the Generating Facility.

e. Customer-Generator Interconnection Facilities.

(i) The Customer-Generator shall furnish, install, operate and maintain interconnection facilities (such as circuit breakers, relays, switches, synchronizing equipment, monitoring equipment, and control and protective devices and schemes) designated by or acceptable to the Company as suitable for parallel operation of the Generating Facility with the Company's system ("Customer-Generator Interconnection Facilities"). Such facilities shall be accessible at all times to authorized Company personnel.

(ii) The Customer-Generator shall comply with the Company's Interconnection Standards.

(iii) 1) Single-line diagram of the Generating Facility, 2) relay list, trip scheme and settings of the Generating Facility, 3) Generating Facility Equipment List, and 4) three-line diagram

(if the Generating Facility's capacity is greater than or equal to 30 kW), which identify the circuit breakers, relays, switches, synchronizing equipment, monitoring equipment, and control and protective devices and schemes, shall, after having obtained prior written consent from the Company, be attached to Exhibit A and made a part hereof at the time the Agreement is signed. The single-line diagram shall include pertinent information regarding operation, protection, synchronizing, control, monitoring, and alarm requirements. The single-line diagram and three-line diagram shall expressly identify the point of interconnection of the Generating Facility to the Company's system. The relay list, trip scheme and settings shall include all protection, synchronizing and auxiliary relays that are required to operate the Generating Facility in a safe and reliable manner. The three-line diagram shall show potential transformer and current transformer ratios, and details of the Generating Facility's configuration, including relays, meters, and test switches.

f. Approval of Design Drawings. If the Generating Facility's capacity is greater than or equal to 30 kW, the single-line diagram, relay list, trip scheme and settings of the Generating Facility, and three-line diagram shall be approved by a Professional Electrical Engineer registered in the State of Hawaii prior to being submitted to the Company. Such approval shall be indicated by the engineer's professional seal on all drawings and documents.

**2. Verification Testing.**

a. Upon initial parallel operation of the Generating Facility, or any time interface hardware or software is changed, a verification test shall be performed. A licensed professional engineer or otherwise qualified individual shall perform verification testing in accordance with the manufacturer's published test procedure. Qualified individuals include professional engineers, factory trained and certified technicians, and licensed electricians with experience in testing protective equipment. The Company reserves the right to witness verification testing or require written certification that the testing was performed.

b. Verification testing shall also be performed every four years. The Company reserves the right to perform, at its expense, additional verification testing. All verification tests prescribed by the manufacturer shall be performed. If wires must be removed to perform certain tests, each wire and each terminal shall be clearly and permanently marked. The Customer-Generator shall maintain verification test reports for inspection by the Company.

c. Inverters shall be verified once per year as follows: once per year the Customer-Generator shall operate the customer generator system disconnect switch and verify the Generating Facility automatically shuts down and does not reconnect with the Company's system until the Company's system continuous normal voltage and frequency have been maintained for a minimum of 5 minutes. The Customer-Generator shall maintain a log of these operations for inspection by the Company.

d. Any system that depends upon a battery for trip power shall be checked once per month for proper voltage. Once every four (4) years the battery shall either be replaced or have a discharge test performed. The Customer-Generator shall maintain a log of these operations for inspection by the Company.

e. Tests and battery replacements as specified in this section 2 of Exhibit B shall be at the Customer-Generator's expense.

**3. Inspection of the Generating Facility.**

a. The Company may, in its discretion and upon reasonable notice not to be less than 24 hours (unless otherwise agreed to by the Company and the Customer-Generator), observe the construction of the Generating Facility (including but not limited to relay settings and trip schemes) and the equipment to be installed therein.

b. Within fourteen days after receiving a written request from the Customer-Generator to begin producing electric energy in parallel with the Company's system, the Company may inspect the Generating Facility (including but not limited to relay settings and trip schemes) and observe the performance of the verification testing. The Company may accept or reject the request to begin producing electric energy based upon the inspection or verification test results.

c. If the Company does not perform an inspection of the Generating Facility (including but not limited to relay settings and trip schemes) and observe the performance of verification testing within the fourteen-day period, the Customer-Generator may begin to produce energy after certifying to the Company that the Generating Facility has been tested in accordance with the verification testing requirements and has successfully completed such tests. After receiving the certification, the Company may conduct an inspection of the Generating Facility (including but not limited to relay settings and trip schemes) and make reasonable inquiries of the Customer-Generator, but only for purposes of determining whether the verification tests were properly performed. The Customer-Generator shall not be required to perform the verification tests a second time, unless irregularities appear in the verification test report or there are other objective indications that the tests were not properly performed in the first instance.

d. The Company may, in its discretion and upon reasonable notice not to be less than 24 hours (unless an apparent safety or emergency situation exists which requires immediate inspection to resolve a known or suspected problem), inspect the Generating Facility (including but not limited to relay settings and trip schemes) and its operations (including but not limited to the operation of control, synchronizing, and protection schemes) after the Generating Facility commences operations.

**4. Operating Records and Procedures.**

a. The Company may require periodic reviews of the maintenance records, and available operating procedures and policies of the Generating Facility.

b. The Customer-Generator must separate the Generating Facility from the Company's system whenever requested to do so by the Company's System Operator pursuant to this Agreement. It is understood and agreed that at times it may not be possible for the Company to accept electric energy due to temporary operating conditions on the Company's system, and these periods shall be specified by the Company's System Operator. Notice shall be given in advance when these are scheduled operating conditions.

c. Logs shall be kept by the Customer-Generator for information on unit availability including reasons for planned and forced outages; circuit breaker trip operations, relay operations, including target initiation and other unusual events. The Company shall have the right to review these logs, especially in analyzing system disturbance.

**5. Changes to the Generating Facility, Operating Records, and Operating Procedures.**

a. The Customer-Generator agrees that no material changes or additions to the Generating Facility as reflected in the single-line diagram, relay list, trip scheme and settings of the Generating Facility, Generating Facility Equipment List, and three-line diagram (if the Generating Facility's capacity is greater than or equal to 30 kW), shall be made without having obtained prior written consent from the Company, which consent shall not be unreasonably withheld.

b. As a result of the observations and inspections of the Generating Facility (including but not limited to relay list, trip scheme and settings) and the performance of the verification tests, if any changes in or additions to the Generating Facility, operating records, and operating procedures and policies are required by the Company, the Company shall specify such changes or additions to the Customer-Generator in writing, and the Customer-Generator shall, as soon as practicable, but in no event later than thirty (30) days after receipt of such changes or additions, respond in writing, either noting agreement and action to be taken or reasons for disagreement. If the Customer-Generator disagrees with the Company, it shall note alternatives it will take to accomplish the same intent, or provide the Company with a reasonable explanation as to why no action is required by good engineering practice.

**6. Generating Facility Equipment List.**

The Generating Facility shall include the following equipment:
[Specific items to be attached as necessary. The Generating Facility Equipment List, together with the single-line diagram, relay list and trip scheme, and three-line diagram (if the Generating Facility's capacity is greater than or equal to 30 kW), should be attached to this Exhibit B.]

**EXHIBIT C**

**COMPANY-OWNED INTERCONNECTION FACILITIES**

**(To be filled out by Company)**

**1. Description of Company Interconnection Facilities**

The Company will purchase, construct, own, operate and maintain all interconnection facilities required to interconnect the Company's system with the Generating Facility at ___ volts, up to the point of interconnection.

The Company Interconnection Facilities, for which the Customer-Generator agrees to pay, include:

[Need to specify the interconnection facilities. If no interconnection facilities, state "None".]

**2. Customer-Generator Payment to Company for Company Interconnection Facilities, Review of Generating Facility, and Review of Verification Testing**

The Customer-Generator shall pay to the Company the total estimated interconnection cost to be incurred by the Company (Total Estimated Interconnection Cost), which is comprised of (i) the estimated cost of the Company Interconnection Facilities, (ii) the estimated engineering costs associated with a) developing the Company Interconnection Facilities and b) reviewing and specifying those portions of the Generating Facility which allow interconnected operation, and (iii) witnessing and reviewing the verification testing. The following summarizes the Total Estimated Interconnection Cost:

| **Description** | **Estimated Cost ($)**<br>[If no cost, state "None".] |
|---|---|
| | |
| **Total Estimated Interconnection Cost ($):** | |

The Total Estimated Interconnection Cost, which, except as otherwise provided herein, is non-refundable, shall be paid by the Customer-Generator fourteen (14) days after receipt of an invoice from the Company, which shall be provided not less than thirty (30) days prior to start of procurement of the Company Interconnection Facilities.

Within thirty (30) days of receipt of an invoice, which shall be provided within fourteen (14) days of the final accounting, which shall take place within sixty (60) days of completion of construction of the Company Interconnection Facilities, the Customer-Generator shall remit to the Company the difference between the Total Estimated Interconnection Cost paid to date and the total actual interconnection cost (Total Actual Interconnection Cost). The latter is comprised of (i) the total costs of the Company Interconnection Facilities, and (ii) the total engineering costs associated with a) developing the Company Interconnection Facilities and b) reviewing and specifying those portions of the Generating Facility which allow interconnected operations as such are described in Exhibit A, and (iii) reviewing the verification testing. If in fact the Total Actual Interconnection Cost is less than the payments received by the Company as the Total Estimated Interconnection Cost, the Company shall repay the difference to the Customer-Generator within thirty (30) days of the final accounting.

If the Agreement is terminated prior to the Customer-Generator's payment for the Total Actual Interconnection Cost (or the portion of this cost which has been incurred) or prior to the Company's

repayment of the over collected amount of the Total Estimated Interconnection Cost (or the portion of this cost which has been paid), such payments shall be made by the Customer-Generator or Company, as appropriate. If payment is due to the Company, the Customer-Generator shall pay within thirty (30) days of receipt of an invoice, which shall be provided within fourteen (14) days of the final accounting, which shall take place within sixty (60) days of the date the Agreement is terminated. If payment is due to the Customer-Generator, the Company shall pay within thirty (30) days of the final accounting.

All Company Interconnection Facilities shall be the property of the Company.

**3. Operation, Maintenance and Testing Costs**

The Company will bill the Customer-Generator monthly and the Customer-Generator will, within 30 days after the billing date, reimburse the Company for any costs incurred in operating, maintaining or testing the Company Interconnection Facilities. The Company's costs will be determined on the basis of outside service costs, direct labor costs, material costs, transportation costs, applicable overheads at time incurred and applicable taxes. Applicable overheads will include such costs as vacation, payroll taxes, non-productive wages, supervision, tools expense, employee benefits, engineering administration, corporate administration, and materials handling. Applicable taxes will include the Public Service Company Tax, and Public Utility Fee.

**4. Facility Parties Use of Company Interconnection Facilities Upon Termination**

Notwithstanding that all Company Interconnection Facilities are the property of the Company, upon termination of the Agreement, the Company shall identify any equipment paid for by the Facility Parties that can feasibly be returned to the Facility Parties. If Facility Parties desire such equipment, Facility Parties shall pay for the removal of the equipment and the restoration of the Company's system to the Company's satisfaction.

**APPENDIX II**

**TECHNICAL SPECIFICATIONS FOR NON-EXPORT SYSTEMS**

The following technical specifications are intended to provide guidelines to facilitate the interconnection and parallel operation of Non-export 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 14H.

**Technical Specifications** –

- **On-Site Load and BYOD Only**. The Generating Facility shall be sized and designed such that all of the Generating Facility's output is intended to offset all or part of the Eligible Customer-Generator's own electrical requirements.

- **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 3, including during emergency conditions where Generating Facility functions, including functions that result in energy export, shall be provided pursuant to Rule 14H and this Agreement. In any situation in which Rule 32 conflicts with Rule 14H regarding energy export, Rule 14H controls. In order to qualify as a Non-Export System under the Company's Non-Export rider, the Generating Facility must prevent the unpermitted reverse power flow, or Net Export, from the Customer's Generating Facility across the Point of Interconnection through the use of an internal transfer relay, Energy Management System, or other Company approved Customer Facility hardware or software system(s) meeting the following requirements:

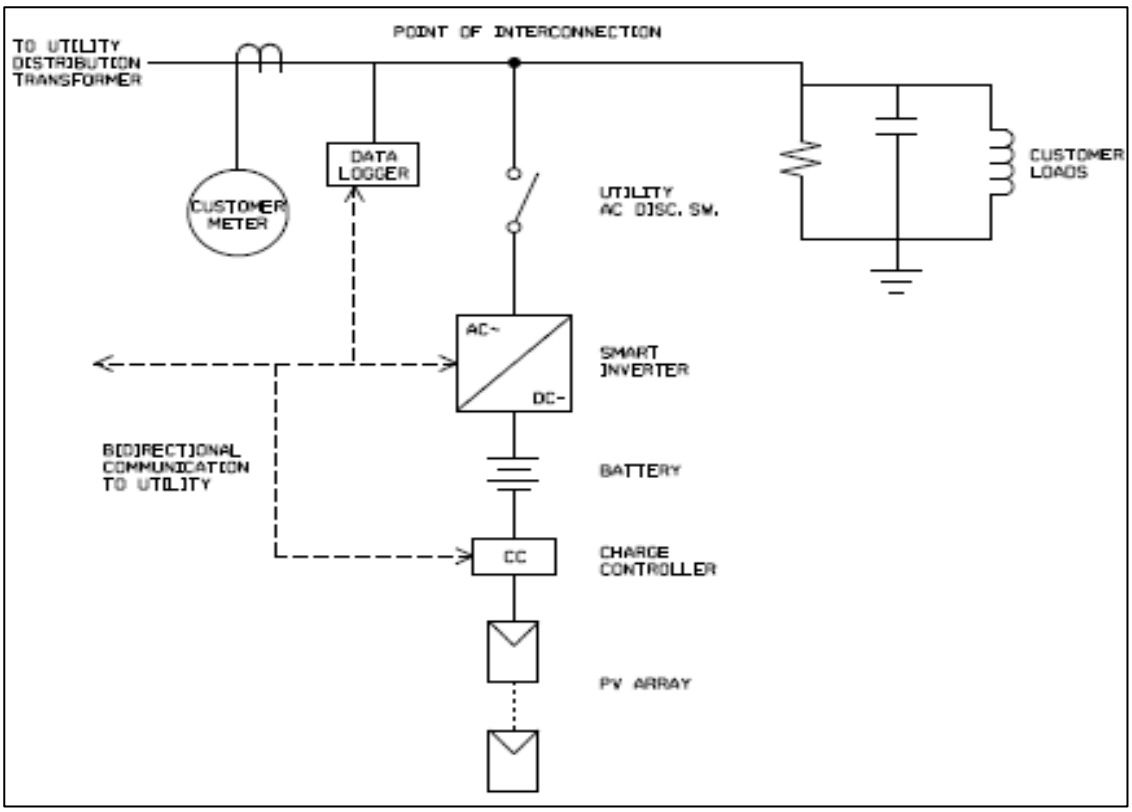
  1) Inadvertent Export: Inadvertent Export is the unpermitted, unscheduled, and uncompensated export or real power generated from a Customer's Generating Facility and delivered to the Company. The magnitude of Inadvertent Export shall be less than the Generating Facility's Nameplate Rating and the duration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

     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 or cessation of energy production from 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 Generating Facility functions, including functions that result in energy export, shall be provided pursuant to Rule 14H and this Agreement. In any situation in which Rule 32 conflicts with Rule 14H regarding energy export, Rule 14H controls. The event reconnection time limit will be a minimum of five (5) minutes, unless otherwise directed by the Company, pursuant to Rule 14, Paragraph H, Appendix I.

     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 reverse power 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 the control system for the real power output control of the Generating Facility.

  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 Smart Renewable Energy Program Interconnection Agreement for Non-Export Systems, and as depicted on the single-line diagram and three-line diagram.

3) 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.

- **Sample Single Line Diagram**