

CORE Credit & Interconnection Agreement

Revised May 1, 2016

1. Consumer-Owned Renewable Energy ("CORE") Credit and Interconnection Agreement

CUSTOMER SUPPLIED INFORMATION:

1.1 CORE Customer Information

1.1A Billing Information

Name: _____

PO Box _____, Grand Cayman KY1- _____

Street Address: _____

District: _____

Telephone: Work: _____ Mobile: _____

Home: _____ Email: _____

CUC Account #: _____

1.1B Physical CORE Location

Street Address: _____

District: _____

Block & Parcel: _____

1.2 CORE Generator Information

Total Installed Gross CORE Generation CAPACITY (kW DC&AC): _____

Make and Model and no. of Generating units (panels/turbines, etc.): _____

Total Name Plate Capacity Rating and quantity of each PV/Wind Generator(s)

_____ kW DC:

Type: Wind Turbine ☐ Photovoltaic (Solar) ☐ Biomass ☐

Other (please specify): _____

Connection Type Requested: "Customer Tie" Type A ☐ "Grid Tie" Type B ☐

Inverter utilized: Yes ☐ No ☐ Inverter is UL 1741 & IEEE 1547 certified: Yes ☐ No ☐

Make and Model and no. of Inverters: _____

Total Name Plate Capacity Rating of Inverter(s) _____ kW DC: _____ kW AC:

Main Service Voltage: ☐ existing ☐ proposed

☐ 120/240 (single phase) ☐ 120/208 (three phase) ☐ 277/480 (three phase)

Inverter Voltage: ☐ 120/240 (single phase) ☐ 120/208 (three phase) ☐ 277/480 (three phase)

Battery storage installed: Yes ☐ No ☐

Name Plate Capacity Rating of Storage (when fully charged) _____ kWh AC _____ kW AC

Make and Model of Storage: _____

Is the System capable of generating firm power for the premises: Yes ☐ No ☐

System to be installed by (name of Electrical Contractor): _____

Contact Person's Name: _____

PO Box _____, Grand Cayman KY1- _____

Telephone: Work: _____ Mobile: _____

Other: _____ E-mail: _____

Is there any existing Electric Generating Equipment at this location? Yes ☐ No ☐

If "Yes", please provide details (e.g., is this backup diesel generation; what is its size; when was it installed; date of initial main CUC service connection, how often has it been used):

1.3 Additional Information

CUC reserves the right to require additional information, if considered necessary, to adequately serve the CORE generator.

This CORE Credit Agreement, with the approval of the ERA, may be subject to changes from time to time.

The CORE Credit Agreement when completed by customer shall be e-mailed to CORE@cuc.ky. CUC shall only accept applications that have all of the information listed above fully completed and have all of the information listed below attached as follows:

- a.) Single Line diagram (that shows how the CORE system is to be connected)
- b.) Inverter certification for proposed inverter (UL 1741 & IEEE 1547)
- c.) Verification that load applied for is less than peak load and less than the load allowed for the relevant rate class
- d.) Verification that CORE Credit Agreement is signed by the account holder (and account is in good standing or new)
- e.) Payment attached for the application fee as outlined in section 2.3.

CORE System Connection Notes:

- a) 0-50 kW systems may be single or 3-phase
- b) >50 kW systems must be 3-Phase
- c) 1-phase systems cannot be connected to a 3-phase service
- d) 3-phase systems must be connected to CUC system through a Wye grounded transformer.

Customer's active account shall be in good standing before CORE can be connected by CUC. (Only CUC can install a CORE Meter).

2. CORE Tariff

2.1 Applicability

This tariff provides for the sale and exchange of electric energy between Caribbean Utilities Company, Ltd. ("CUC") and a residential or commercial customer with a Consumer-Owned Renewable Energy ("CORE") generator on their premises for the purposes of serving a portion of their own electricity requirements while helping to reduce their electric utility cost and, subject to the limitations herein, providing any available net excess energy to the CUC T&D System. For the purposes of this Agreement, a "commercial customer" shall be either a General Commercial Customer or a Large Commercial Customer as defined in the Customer Service Code, as may be amended from time to time (see <https://www.cuc-cayman.com/terms-of-service>). A "residential customer" shall be any customer other than a commercial customer. A Consumer-Owned Renewable Energy ("CORE") generator shall not be linked with a temporary service.

For any CUC customer interested in self-generating electrical energy to fully supply his or her own premises utilizing a renewable or alternative energy generator, Section 7(6) in the General Regulatory Principles of the Electricity Regulatory Authority Law (2010 Revision) will apply which allows generation for self-supply by consumers without licensing by the Authority.¹ A consumer who self-generates electrical energy to fully meet his or her own demand will be doing so outside the terms and conditions of the CUC CORE Program.

¹ A customer who self-supplies may require back-up electricity supply from the T&D Licensee at times when they are temporarily unable to satisfy their system demand with the generation resources normally available to them. Section 61 of the Electricity Regulatory Authority Law (2010 Revision) outlines the terms for back-up connection to the CUC T&D System for the self-supplying customer.

2.2 Limitations

Residential customers on this tariff will be allowed to install a renewable or alternative energy generator no greater than CUC's estimate of the customer's peak load or 20 kilowatts alternating current ("kW AC") capacity, whichever is less. Commercial customers on this tariff will be allowed to install a renewable or alternative energy generator of up to CUC's estimate of the customer's peak load or 100 kW AC capacity, whichever is less. CUC will use industry best practices to estimate the CORE Customer's peak load and justify its estimate to the CORE Customer and the ERA.

A maximum aggregate of 6,000 kilowatts AC ("KW-AC") capacity of renewable and/or alternative energy generation will be allowed to connect to the CUC T&D System from commercial and residential customers. A maximum aggregate of 3,000 kilowatts ("KW-AC") capacity of renewable and/or alternative energy generation will be allowed to connect to the CUC T&D System from commercial customers. A maximum aggregate of 3,000 kilowatts ("KW-AC") capacity of renewable and/or alternative energy generation will be allowed to connect to the CUC T&D System from residential customers. CUC and the ERA will review the parameters of the CORE programme including this capacity limit from time to time.

The CORE Customer must be capable of receiving all of his or her electric load requirements from the CUC T&D System. The CORE Customer will be required to make application for such service and comply with CUC's technical and interconnection guidelines including, but not limited to, those set out in CUC's Transmission & Distribution (T&D) Code, as may be amended from time to time (see <https://www.cuc-cayman.com/terms-of-service>) ("T&D Code"), and those otherwise referred to in this Agreement. If the proposed CORE generator is greater than the capacity limits allowed by this agreement, the CORE Customer will be required to downsize his or her CORE generator prior to submittal and approval. CUC shall have the right to inspect an existing customer's CORE generating system upon providing adequate notice if CUC suspects that the customer has increased their approved CORE generating capacity.

2.3 Application Fee

CORE Connection applications must be accompanied by a CI\$250 fee. This fee covers the cost of reviewing the application and site inspections as well as the administration of setting up the account. This fee is non-refundable.

2.4 Monthly Consumer Charges and Credits

Monthly Charges to the CORE Customer will incorporate all components of the existing CUC retail rate (see <https://www.cuc-cayman.com/billing-rates>). The current monthly retail rate to the CORE Customer includes a basic facilities charge, an energy charge, a fuel charge and a charge for Licence and Regulatory Fees (if applicable).

The monthly charges and credits to the CORE Customer will consist of the following:

- Charges are derived from the CUC retail rate and established by the CORE Customer's Monthly Energy Consumption (as if no CORE generator existed). The CORE customer will be billed a second Facilities Charge to cover the costs associated with the second service. Subtracted from this amount will be the CORE Credit, as defined below;
- The CORE Credit is determined by the Monthly Generation Output from the CORE generator, as defined on the attached CORE Interconnection Specification sheet. It consists of Monthly Generation Output from the CORE generator times the CORE rate. The CORE rate for both residential and commercial customers shall depend on the kW AC size of the installation and be in accordance with the following: 0-5 kW – CI\$0.30 per kWh, 5-10 kW – CI\$0.28 per kWh, 10-20 kW – CI\$0.26 per kWh, 20-100 kW – CI\$0.21 per kWh;

- In the event that the CORE Credit from Monthly Generation Output exceeds Monthly Charges, the difference will be shown as a credit on the CORE Customer's account this credit will be banked for future months usage. At the end of each calendar year any remaining CORE credit balance on the customer's account will be refunded to the Fuel Factor and not refunded to the customer;

Regardless of the CORE Interconnection Specification sheet, the intent of the CUC CORE Program is for the CORE Customer to be paid a CORE Credit for 100 percent of his or her Monthly Generation Output.

2.5 Determination of the CORE Customer's Monthly Generation Output

CUC will install a meter on all AC energy outputs (in kWh) for the CORE Customer as illustrated in the attached diagram titled: CORE Interconnection Specification sheet. CUC will have the right to secure the meters and to inspect the interconnection(s) at any time. These meters will be read by CUC either visually or remotely on the normal meter reading schedule. The total kWh output reading on the meter attached to the CORE generator will constitute the Monthly Generation Output.

2.6 Determination of the CORE Customer's Monthly Energy Consumption

Monthly Energy Consumption (in kWh) for a Type A Connection² is determined as follows:

"Net energy into the CORE Customer's premises through the CUC main meter plus the output reading on the meter attached to the CORE generator."

Monthly Energy Consumption (in kWh) for a Type B Connection³ is determined as follows:

"Net energy into the CORE Customer's premises through the CUC main meter."

3. General Terms and Conditions

3.1 Compliance

The parties to this CORE Credit Agreement shall ensure that the generating and interconnection systems are compliant with the practices, methods and equipment, as set out in this Agreement, and as may be changed from time to time subject to ERA approval, to ensure the safe and dependable operation of the electrical equipment, and that such systems comply with the Electricity Law (2008 Revision), Electricity Regulations (2005 Revision), the T&D Code, the National Electric Code ("NEC"), IEEE Standard 1547 and UL Standard 1741.

3.2 Term of the CORE Credit Agreement

The term of the CORE Credit Agreement is 25 years. The term of this Agreement shall start on the signature date of the approved Agreement by the CUC, Manager Customer Services or his or her alternate. Residential and Commercial customers approved under this tariff will receive the Core rate as defined in section 2.4 of this agreement for every kWh of CORE generator output. If the CORE rate increases or decreases from the afore-stated rate, the CORE Customer under this Agreement will receive the new CORE rate for each kWh of CORE generator output until either (i) the next CORE rate change or (ii) the completion of the CORE Credit Agreement subject to the limitations described in the remainder of this paragraph. Future changes to the CORE rate can either increase or decrease, at the determination of CUC and the ERA, but cannot decrease below the 2016 CORE as defined in section 2.4 of this agreement. CORE Customers signed up prior to May 1, 2016 shall not be subject to the terms and rates within this Agreement.

3.3 Installation of the Disconnect

The design, installation, operation and maintenance of the CORE generator shall comply with CUC approved control and protection equipment and a manual load-break disconnect device lockable in the open position and

² See the CORE Interconnection Specification sheet.

³ See the CORE Interconnection Specification sheet.

accessible by CUC as a means of electrically isolating the CORE generator from the CUC T&D System, and to establish working clearance for maintenance and repair work in accordance with accepted electrical practice. The load-break disconnect device shall be furnished and installed by the CORE Customer and is to be connected between the CORE generator and the CUC T&D System. The disconnect device shall be located in the immediate vicinity of the electric meter at the main service entrance or, with prior approval by CUC, may be located at an alternate location which is accessible by CUC personnel on a 24-hour basis. The disconnect device shall be clearly labeled "CORE System Disconnect". With reasonable notice given to the CORE Customer, CUC shall have the right to inspect the CORE generator. Specifications for the CUC approved "manual load-break disconnect lockable switch" shall be available of CUC website at www.cuc-cayman.com

3.4 Notice

The CORE Customer shall provide CUC with at least thirty (30) calendar days advance written notice and require CUC approval for the following:

- Any proposed changes to the CORE generator that may materially affect its interaction with the CUC T&D System;
- Any change in ownership of the premises; or
- Any increase in the total capacity of the CORE generator. N.B. As per 3.5 below this requires a new application.

The CORE Customer shall notify CUC and provide proof within at least (10) calendar days of the following events occurring once the CORE Agreement has been approved by CUC and the CORE Customer advised.

- a) Receipt of all necessary approvals from the Central Planning Authority's Building Control Unit's ("BCU") including, but not limited to, the Alternative Energy Permit ("AE Permit") as required for the CORE generating system under this Agreement;
- b) Receipt of a BCU's electrical inspection permit and any other required approvals from the BCU confirming to CUC that the CORE installation system under this Agreement has passed inspection as required to connect to the CUC electrical system.

3.5 Changes to CORE Customer Account

- The CORE credits shall remain associated with the electric service account of the original premises on which the system was installed. If the holder of the electric service account of the premises changes, the new owner / tenant shall receive the CORE credits under the terms of this agreement. Notice of any such changes in ownership or tenancy shall be provided in advance in accordance with section 3.4 of this agreement;
- If the customer wishes to increase the total capacity of their CORE system the customer shall submit a new application indicating total capacity. The CORE Credit rate applied to the total system will be the rate at the time of the new application.

3.6 Permits and Licences

The CORE Customer shall obtain, at his or her expense, any and all authorizations, permits and licences which may be required for the construction and operation of the CORE generator.

3.7 Metering

CUC shall supply, own, maintain and read all necessary meters utilized for monthly charges and credits. The CORE Customer shall supply, at no expense to CUC, a suitable location for meters.

The CORE Program requires two meters in one of two suggested configurations (see the CORE Interconnection Specification sheet and accompanying notes). For ease of understanding, these two configurations are referred to as "Customer Tie" and "Grid Tie".

"Customer Tie" (Type A Connection) – Under this configuration, the output of the CORE generator is metered and connected to the CORE Customer's premises at some point "downstream" of his or her main meter. Therefore, the main meter reading is net of the CORE generator output. For billing purposes, the usage is calculated by adding both the electricity supplied from the CUC T&D System and the electricity supplied from the CORE generating system while subtracting the electricity exported to the CUC T&D System.

"Grid Tie" (Type B Connection) – Under this configuration, the output from the CORE generator is metered and fed directly into the CUC T&D System "upstream" of the main meter serving the CORE Customer. The CORE Customer's main meter measures the gross consumption of his or her premises while the CORE meter measures the output of the CORE generator. This is the simpler approach and reflects the basic concept of a "feed-in" to the CUC T&D System.

Customers may also apply to CUC for alternative grid connections not set out in this Agreement but otherwise in compliance with the other terms of section 3.1 of this agreement (e.g. a connection that would permit the CORE generator to supply ONLY specified circuits within the Customer's premises with or without supply from the CUC grid).

3.8 Indemnification

Each party shall hold harmless and indemnify the other party and the directors, officers, authorized agents, and employees of the other party against and from any and all loss and liability for injuries to persons including employees and authorized agents of either party, and damages, including property of either party, resulting from or arising out of (i) the engineering, design, construction, maintenance, or operation of, or (ii) the making of replacements, additions, or betterments to the facilities which are required for the interconnection and parallel operation of the CORE generator with the CUC T&D System. Neither party shall be indemnified for liability or loss resulting from its sole negligence or willful misconduct. Each of the third parties who are identified in this clause may in his or her own right enforce the indemnity set out in this clause.

3.9 Continuity of Service

Although CUC will use industry best practices to provide continuous service, there may be occasions requiring the interruption of service to the CORE Customer. Continuity of service may be interrupted under the following conditions:

- 1) Notification will be given whenever CUC requires the CORE Customer to temporarily curtail, interrupt or reduce deliveries of electrical energy when necessary in order for CUC to construct, install, maintain, repair, replace, remove, investigate or inspect any of CUC's equipment or any part of its T&D System affected by the planned undertakings. CUC will plan work at a time, if at all practical, which will cause the least inconvenience to those customers who may be affected, and;
- 2) No notification will be given in those instances in which CUC determines that such curtailment, interruption or reduction is necessary because of system emergencies, forced outage, or compliance with standard electrical practice. The CORE Customer shall not be entitled to any priority for restoration of service after a power outage.

3.10 Additional Equipment

CUC is not required to install any additional distribution equipment for the CORE Customer that would not normally be afforded to other customers in a similar rate class and at a similar location. If the CORE Customer requests any such additional distribution equipment to be installed, the full cost of these additions shall be at the expense of the CORE Customer, which will be billed by CUC to the CORE Customer at cost.

3.11 Safety

If at any time CUC determines that the continued operation of the CORE generator may endanger any person or property or the CUC T&D System, or have an adverse effect on the safety or power quality of other CUC customers, CUC shall have the right to disconnect the CORE generator from the CUC T&D System and the CORE Customer will be promptly informed in writing of the action taken and the reasons for such action. The CORE generator shall remain disconnected until such time as CUC and the Government Electrical Inspector are satisfied that the endangering or power quality conditions have been corrected and CUC shall not be obligated to accept any electrical energy from the CORE Customer during such period. CUC shall not be liable directly or indirectly for the acts or omissions of the CORE Customer that result in loss or injury, including death, to any third party. It is the responsibility of the CORE Customer to protect his or her generator from voltage imbalances from the CUC T&D System or reclosing operations after a power interruption.

3.12 Power Factor

The CORE generator will be designed to operate at a power factor of at least 0.90 lagging. The CORE Customer is encouraged to consult with CUC during the design stage to ensure his or her generator will operate at the required power factor.

3.13 Grid Disturbance Ride Through Criteria

The CORE generator shall be configured to remain in operation during normal system disturbances. Disconnection of embedded generation during normal disturbances reduces system stability and has contributed to island wide blackouts in other jurisdictions. Table 1 and Table 2 below show CUC's voltage and frequency disturbance ride through criteria and these are based on settings already available in most inverters under "HECO" settings, designed and approved for use in Hawaii.

Table 1 – Full Frequency Ride Through Criteria

Operating Region	System Frequency Default Settings (Hz)	Minimum Range of Adjustability	Ride-Through Until	Operating Mode	Maximum Trip Time
Over-Frequency 2 (OFR2)	$f > 64.0$	60.1 - 65	No Ride Through	Permissive Operation (Freq-Watt)	0.16 seconds
Over-Frequency 1 (OFR1)	$64.0 \geq f > 63.0$	60.1 - 65	20 seconds	Mandatory Operation (Freq-Watt)	21 seconds
Normal Operation High (NORH)	$63.0 \geq f > 60.0$	Not Applicable	Indefinite	Continuous Operation (Freq-Watt)	Not Applicable
Normal Operation Low (NORL)	$60.0 \geq f \geq 57.0$	Not Applicable	Indefinite	Continuous Operation	Not Applicable
Under-Frequency 1 (UFR1)	$57.0 > f \geq 56.0$	57 - 59.9	20 seconds	Mandatory Operation	21 seconds
Under-Frequency 2 (UFR2)	$56.0 > f$	53 - 57	No Ride Through	Permissive Operation	0.16 seconds

May be adjusted within these ranges at manufacturer's discretion

Table 2 – Full Voltage Ride Through Criteria

Operating Region	Voltage at Point of Interconnection (% Nominal Voltage)	Ride-Through Until	Operating Mode	Maximum Trip Time	Return To Service - Trip Criteria (V) Time Delay (s)	
Over-Voltage 2 (OVR2)	$V > 120$	No Ride Through	Cease to Energize	0.16** seconds	$110 \geq V \geq 88$	300 - 600*
Over-Voltage 1 (OVR1)	$120 \geq V > 110$	0.92 seconds	Mandatory Operation	1 second	$110 \geq V \geq 88$	300 - 600*
Normal Operation High (NORH)	$110 \geq V > 100$	Indefinite	Continuous Operation (Volt-Watt)	Indefinite	Not Applicable	Not Applicable
Normal Operation Low (NORL)	$100 > V \geq 88$	Indefinite	Continuous Operation	Indefinite	Not Applicable	Not Applicable
Under-Voltage 1 (UVR1)	$88 > V \geq 70$	20 seconds	Mandatory Operation	21 seconds	$110 \geq V \geq 88$	300 - 600*
Under-Voltage 2 (UVR2)	$70 > V \geq 50$	10-20* seconds	Mandatory Operation	11-21* seconds	$110 \geq V \geq 88$	300 - 600*
Under-Voltage 3 (UVR3)	$50 > V$	No Ride Through	Permissive Operation	0.5 seconds	$110 \geq V \geq 88$	300 - 600*

*May be adjusted within these ranges at manufacturer's discretion

**Must trip under steady state condition.

3.14 Distribution Transformer & CORE System Voltage

Single-phase sources: A customer's single-phase source can only be connected to a CUC distribution transformer with the primary connected phase-to-ground and not part of a three-phase bank.

Three-phase sources: A customer's three-phase source can only be connected to CUC's distribution system through a CUC wye grounded – wye grounded three phase pad-mounted transformer or overhead three-phase transformer bank.

3.15 Termination of Agreement

The CORE Customer may terminate this CORE Credit Agreement at any time by giving a minimum five (5) business days' written notice to both CUC and the ERA. The written notice must specify the date of termination and reasons for termination. CUC, subject to ERA approval, may at any time give the CORE Customer five (5) business days' written notice of termination of this CORE Credit Agreement if the CORE Customer violates the Electricity Law (2008 Revision), Electricity Regulations (2005 Revision), the National Electric Code ("NEC"), IEEE Standard 1547, UL Standard 1741, the terms of this CORE Credit Agreement or fails to correct any violation from Section 3.13 within the time period of five (5) business days of receiving written notification from CUC. The CORE Customer acknowledges that upon termination of the CORE Credit Agreement it would be a violation of the Electricity Regulatory Authority Law (2010 Revision), Section 60, to operate the CORE generator while being interconnected to the CUC T&D System and any such operation shall be considered an unauthorized connection of service and CUC will seek to apply appropriate fines or other prescribed penalties. This does not apply to stand-alone systems⁴ which are not interconnected to the CUC T&D System.

CUC may also terminate this CORE Credit Agreement if the CORE Customer fails to provide to CUC verification of any of the following:

- receipt of all necessary approvals from the Central Planning Authority's BCU including, but not limited to, the Alternative Energy Permit ("AE Permit") required for installation and operation of the CORE generating system under this Agreement within four (4) months of this CORE Credit Agreement being approved; and

⁴ Electric power systems independent of the CUC T&D System.

- b) receipt of the BCU's electrical inspection permit and any other required approvals from the BCU confirming to CUC that the CORE installation system under this Agreement has passed inspection as required to connect to the CUC electrical system within twelve (12) months of this CORE Credit Agreement being approved.

The CORE Customer may apply to CUC and the ERA for an extension to any of the above timeframes, which must be accompanied by proof of progress. CUC and the ERA will review each application for extension on a case-by-case basis and will approve applications that demonstrate reasonable progress.

*A copy of this agreement will be supplied to the ERA within one business day upon signature and submittal by the CORE Customer to CUC.

IN WITNESS WHEREOF the parties have executed this Agreement:

CORE Customer:

By: _____ Date: _____

Print Name: _____

CUC OFFICIAL USE ONLY:

CUC CORE Application No: _____

Total CUC Approved Installed Gross CORE Generation CAPACITY (kW DC&AC) as applied for under section 1.2 of this Agreement: _____

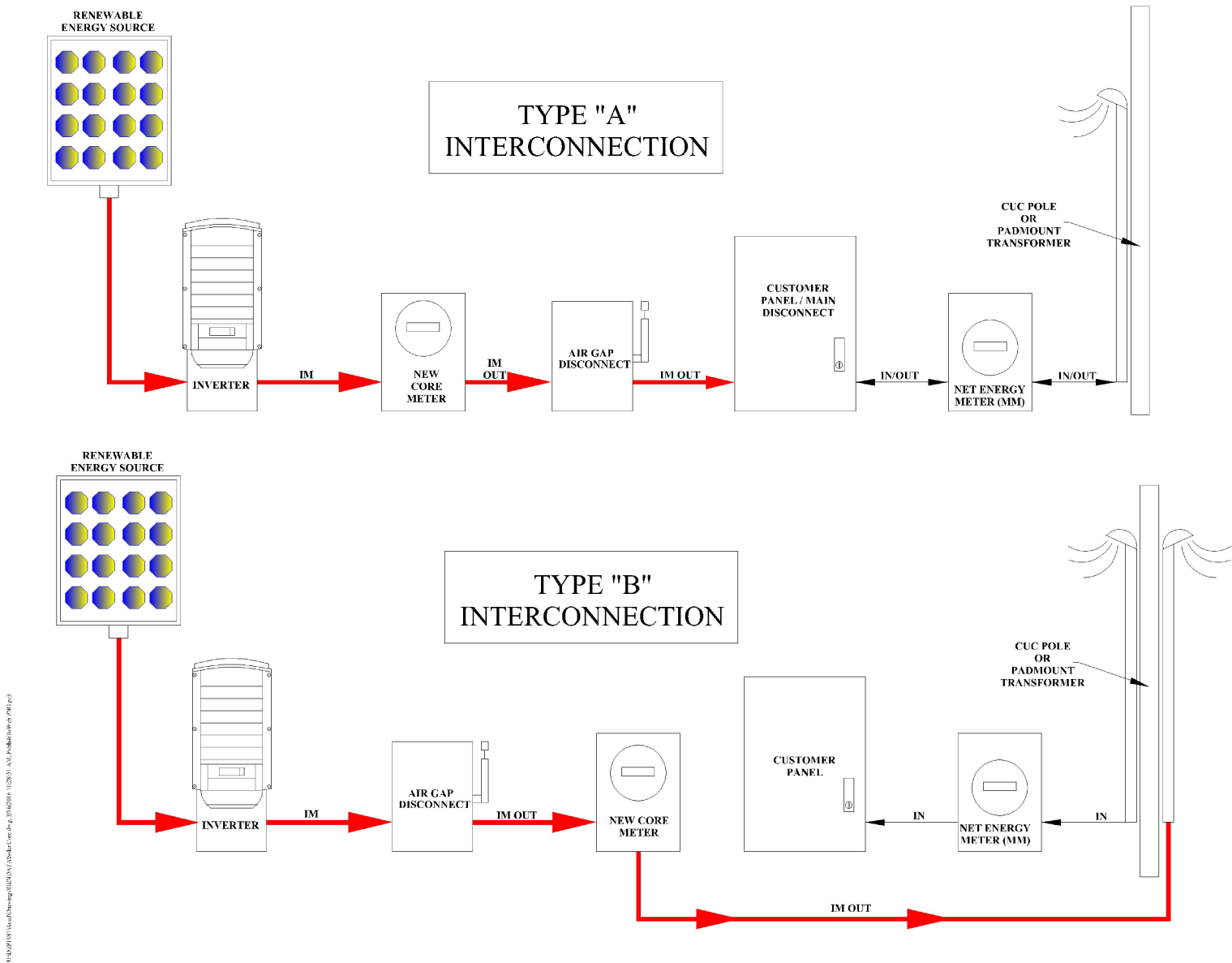
Caribbean Utilities Company, Ltd.:

By: _____ Date: _____

Manager, Customer Services
Caribbean Utilities Company, Ltd.

*Final signed agreement to be supplied by CUC to the ERA within 5 business days of CUC's approval.

CORE Interconnection Specification *



Note: See further detailed specifications in Section 3 regarding inverters and disconnect switches. Contact CUC at core@cuc.ky or www.cuc-cayman.com for further details.

Calculations used in Monthly Billing:

Monthly Energy Consumption	
Consumption for <u>Type A</u> Connection	= MM in – MM out + IM out
Consumption for <u>Type B</u> Connection	= MM in – MM out

Monthly CORE Generation

CORE Generation for Type A Connection = IM out

CORE Generation for Type B Connection = IM out

Note, the calculation for CORE Generation may be different if battery storage is included.

Note: CUC recognizes that there are several ways of configuring CORE generation systems. These are simplified diagrams and are not intended to represent the requirements for all possible situations. The customer should meet with a CUC representative to review specific requirements of their installations, email core@cuc.ky to arrange this meeting. Current standard drawings for CORE interconnection requirements are available on CUC's website www.cuc-cayman.com or at CUC Customer Service Centers.