

# CORE Credit Agreement

## Revised May 26, 2011

### 1. Consumer-Owned Renewable Energy (CORE) Generator Information

#### 1.1 Customer Information

Name: \_\_\_\_\_

PO Box \_\_\_\_\_, Grand Cayman KY1- \_\_\_\_\_

Street Address: \_\_\_\_\_

District: \_\_\_\_\_

Telephone: Work: \_\_\_\_\_ Mobile: \_\_\_\_\_

Home: \_\_\_\_\_ Other: \_\_\_\_\_

CUC Account #: \_\_\_\_\_

#### 1.2 Facility Information

Name Plate Rating of each CORE Generator System: \_\_\_\_\_ kW AC

Total Installed Generation: \_\_\_\_\_ kW AC

Type: Wind Turbine  Photovoltaic (Solar)  Biomass

Other (please specify): \_\_\_\_\_

\_\_\_\_\_

Inverter utilised: Yes  No

Make and Model of Inverter: \_\_\_\_\_

Battery storage installed: Yes  No

Off-Grid output capable: Yes  No

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

\_\_\_\_\_

Contact Name: \_\_\_\_\_

PO Box \_\_\_\_\_, Grand Cayman KY1- \_\_\_\_\_

Telephone: Work: \_\_\_\_\_ Mobile: \_\_\_\_\_

Other: \_\_\_\_\_

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

If "Yes", please provide details: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### 1.3 Additional Information

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

Note: This CORE Credit Agreement, with the approval of the ERA is subject to changes from time to time

## **2. Consumer-Owned Renewable Energy Tariff**

### **2.1 Applicability**

This tariff provides for the sale and exchange of electric energy between Caribbean Utilities Company, Ltd. (CUC) and residential or commercial customers with Consumer-Owned Renewable Energy (CORE) generating facilities on their premises for purposes of serving their own electricity requirements and, subject to the limitations herein, providing any available net energy to CUC through the distribution network.

The CUC CORE program is expected to evolve over time, therefore future changes to the CORE Agreement following approval from the Electricity Regulatory Authority (ERA), may be applied to existing CORE program participants. The customer hereby agrees to abide by future changes to the program, if any.

### **2.2 Limitations**

This tariff is being offered by CUC with the approval of the ERA on a trial basis. CUC will evaluate this tariff for the period ended January 31, 2012 and may in consultation with, and with the written approval of the ERA make changes as deemed appropriate. Residential customers on this tariff will be allowed to install generating capacity no greater than CUC's estimate of the customer's peak load or 20 kW AC, whichever is less. Commercial customers on this tariff will be allowed to install generating capacity of up to 50 kW AC, or CUC's estimate of their peak load, whichever is less. In the absence of available demand readings, CUC will estimate the customer's peak load. A maximum limit of 1 MW of renewable energy systems will be allowed to sign up during the pilot program.

Customers receiving electricity service under this tariff must be capable of receiving all of their electric load requirements, assuming no output from owned generation, from the normal distribution network and transformation facilities appropriate for such a customer without regard for the on-site generation capability. The customer will be required to make application for such service and comply with CUC's technical and interconnection guidelines. If the proposed CORE facility is greater than the capacity limits allowed by CUC, the customer will be required to downsize their renewable system prior to submittal and approval.

### **2.3 Monthly Charges**

Monthly Charges under this tariff will incorporate all components of the "Base Rates" - the approved rate tariff and billing provisions applicable to such customer if not for the on-site generation capability. The Full Retail Rate includes a basic facilities charge, an energy charge, a fuel charge and a charge for Licence and Regulatory Fees.

The Monthly Charges under this tariff will consist of the following:

- Charges determined under the Base Rates based on the Monthly Energy Consumption, as defined below on the CORE Interconnection Specification sheet; net of
- Any CORE Credit for consumer-owned generating output, which will be based on the Monthly Generation Output, as defined below on the CORE Interconnection Specification sheet, times C1\$0.37 per kWh. In the event that the CORE credit for Monthly Generation Output exceeds Monthly Energy Consumption charges the difference will be shown as a credit on the Customer's account and CUC will refund any credit balance remaining at the end of each calendar quarter.

### **2.4 Determination of Monthly Generation Output**

CUC will install a meter on all AC energy outputs of the consumer's generation (in kWh) as illustrated in the attached diagram titled: CORE Interconnection Specification. CUC will have the right to secure the meter(s) and to inspect the interconnection(s) at any time. These meter(s) may be read by CUC visually or remotely on the same schedule as the distribution system meter for measuring the customer's consumption. The total kWh output reading on the meter attached to the consumer's CORE generation will constitute the Monthly Generation Output.

## **2.5 Determination of the Monthly Energy Consumption**

Monthly Energy Consumption (in kWh) shall be determined as follows:

- The sum of all energy entering the customer's distribution panel(s);
- Minus the sum of all energy exported to the grid through the utility 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 prescribed by CUC at the time of signing this Agreement, and as may be changed from time to time 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 National Electric Code (NEC), IEEE Standard 1547, UL Standard 1741 as amended from time to time.

### **3.2 Term**

Customers approved under this tariff are guaranteed to receive at least C1\$0.37 per kWh for 20 years.

### **3.3 Installation of the Disconnect**

The design, installation, operation and maintenance of the CORE generator's facility shall include CUC approved control and protection equipment and a manual load-break disconnect device lockable in the open position and accessible by CUC as a means of electrically isolating the CORE generator's system from CUC's 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's system and CUC's distribution 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 alternative location which is accessible to CUC's personnel on a 24-hour basis. The disconnect device shall be clearly labeled "CORE System Disconnect". Upon reasonable notice to the CORE generator, CUC shall have the right to inspect the CORE generating system.

### **3.4 Notice**

A CORE generator shall provide CUC with thirty (30) days advance written notice for the following:

- A) Any proposed changes to the CORE that affects its interaction with CUC;
- B) Any change in ownership of the premises, and
- C) Any increase in electrical generating capacity.

If the ownership of a CORE generator changes through a change of ownership of the premises where the CORE equipment is located, CUC may require the new owner to have the system re-inspected and a new CORE agreement signed.

### **3.5 Permits and Licences**

The CORE generator shall obtain, at its expense, any and all authorisations, permits and licences required (if any) for the construction and operation of its CORE generating system.

### **3.6 Metering**

CUC shall supply, own, maintain and read all necessary meters utilised for billing. The CORE generator shall supply, at no expense to CUC, a suitable location for meters utilised for billing on the exterior of the premises.

The CORE program requires two meters in one of two possible configurations. For ease of understanding, these two configurations are referred to herein as "Grid Tie" and "Customer Tie".

Customer Tie (Type A Connection) – Under this configuration, the output of the CORE is metered and tied into the customer's premises at some point "downstream" of or behind the main meter serving the

customer. Therefore, the main meter reading is net of the CORE output. For billing purposes, the usage is calculated by adding both the electricity supplied from the grid and that of the renewable generation source whilst subtracting the electricity exported to the grid. The CORE generation on the other hand is the IM1 reading of the CORE meter. The potential advantage of this arrangement is the use of CORE to supply the customer during system outages.

Grid Tie (Type B Connection) – Under this configuration, the output of the CORE is metered and tied directly to the CUC distribution system “upstream” of or before the main meter serving the customer. Therefore, the main meter measures the gross consumption of the customer and the CORE meter measures the gross output of the CORE generation. This is the simpler approach and reflects the basic concept of a “feed-in” to the grid.

### **3.7 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 authorised 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’s system with CUC’s distribution system and the generation of energy by the CORE generator. Neither party shall be indemnified for liability or loss resulting from its sole negligence or willful misconduct. 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.

### **3.8 Continuity of Service**

Although CUC will use reasonable diligence to provide continuous service, there will be occasions requiring the interruption of service. Continuity of service may be interrupted under the following conditions:

1. With notification, where CUC requires the CORE generator 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 its equipment or any part of its system. CUC will plan the work at a time, if at all practical, which will cause the least inconvenience to those customers who may be affected, and;
2. Without notice if CUC determines that such curtailment, interruption or reduction is necessary because of a system emergency, forced outage, or compliance with accepted electrical practice. A CORE generator shall not be entitled to any priority for restoration of service after a power outage.

If CUC determines that the customer’s installation presents a safety hazard, CUC may disconnect the main service to the premises without notice until the hazard is addressed and certified safe to reconnect by a Government Electrical Inspector.

### **3.9 Additional Equipment**

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

### **3.10 Personnel and System Safety**

If at any time CUC determines that the continued operation of the CORE system may endanger any person or property or CUC’s distribution system, or have an adverse effect on the safety or power quality of other customers of CUC, CUC shall have the right to disconnect the CORE generator’s system from the distribution system and the CORE generator will be promptly informed of the action taken and the reasons for such action. The CORE generator’s system shall remain disconnected until such time as CUC is 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 generator during such period. CUC shall not be liable directly or indirectly

for permitting or continuing to allow an attachment of a CORE generating system or for the acts or omissions of the CORE generator that results in loss or injury, including death, to any third party. It is the responsibility of the CORE generator to protect its system from voltage imbalances within CUC's distribution system or reclosing operations after a power interruption.

**3.11 Power Factor**

The CORE generator shall ensure that its system operates at a power factor of at least 0.90 lagging. In the event that the CORE generator does not operate at this power factor, the customer will be required to install necessary equipment to correct the deficiency.

**3.12 Termination of Agreement**

The CORE generator may terminate this CORE Credit Agreement at any time by giving written notice of a minimum of five business days to CUC that specifies the date and reasons for termination. CUC may give the CORE generator five business days notice of termination of this CORE Credit Agreement at any time if the CORE generator 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 and generally accepted electrical utility practice, and the CORE generator or his appointed electrical contractor fails to correct such violation within the time period of five business days or earlier after being informed in writing of the violation. The customer acknowledges that upon termination of the CORE agreement it would be a violation of the *Electricity Law (2008 Revision)* to operate the CORE generation whilst being interconnected to CUC's grid and any such operation shall be considered an unauthorized connection of service and CUC will seek appropriate fines or other penalties. This does not apply to stand-alone systems which are not interconnected to CUC's grid.

CUC may terminate this CORE Credit Agreement if the undersigned (Customer) fails to achieve any of the following:

- A. Receive Planning Approval for the premises that will contain the CORE generation equipment within four (4) months of this application being approved
- B. Start construction on the premises that will contain the CORE generation equipment within four (4) months following receipt of the Planning Approval referred to in item A of this Section.
- C. Receive a Certificate of Occupancy within twelve (12) months following the Start of construction for residences and eighteen (24) months for commercial buildings

Customers may apply for an extension, which must be accompanied with proof of progress. CUC will review each application for extension on a case by case basis and will approve those that demonstrate reasonable progress.

IN WITNESS WHEREOF the parties have executed this Agreement:

Customer:

By: \_\_\_\_\_ Date: \_\_\_\_\_

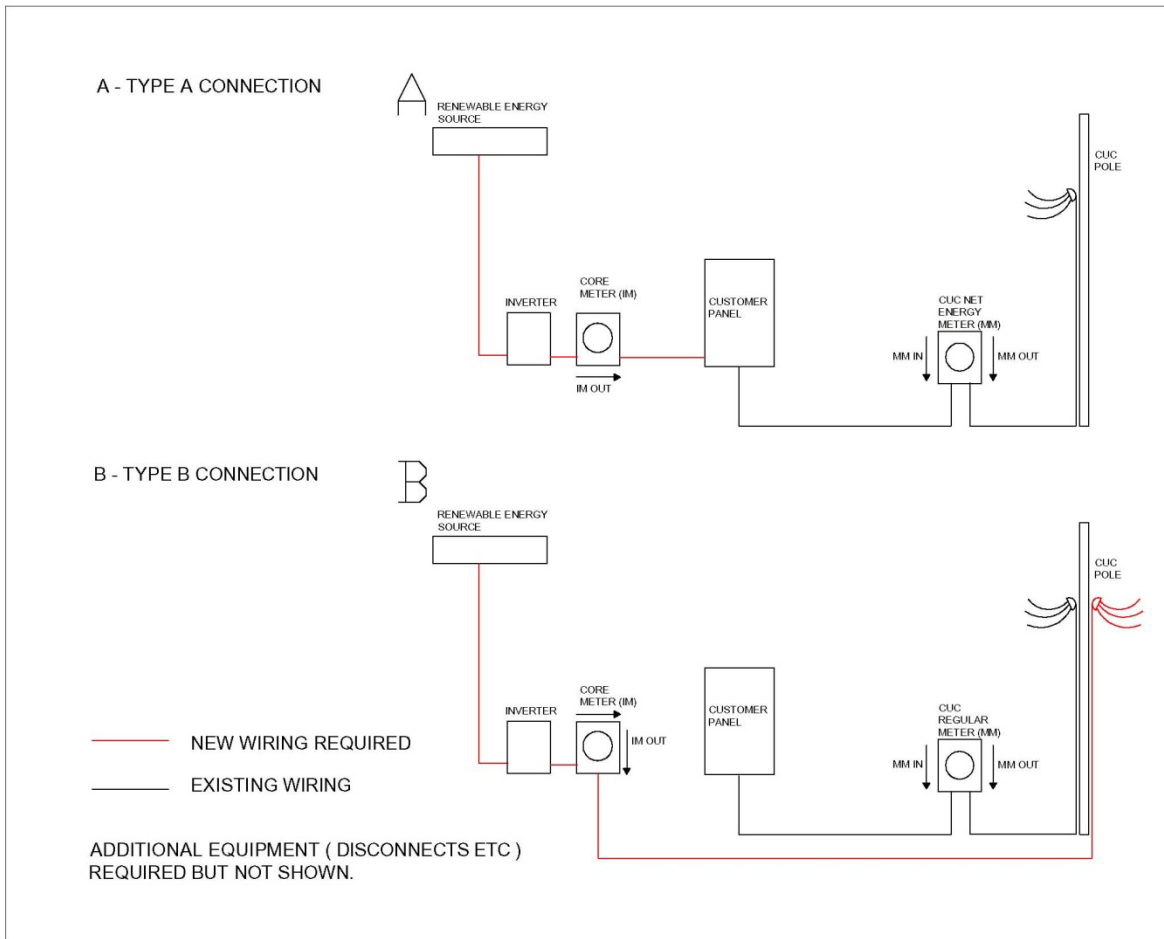
Caribbean Utilities Company, Ltd.:

By: \_\_\_\_\_ Date: \_\_\_\_\_

**Andrew E. Small**  
Vice-President Transmission & Distribution  
Caribbean Utilities Company, Ltd.

Agreement Supplied to ERA on (Date): \_\_\_\_\_

# CORE Interconnection Specification \*



## Calculations used in Monthly Billing:

### Monthly Energy Consumption

$$\begin{aligned} \text{Consumption for Type A Connection} &= \text{MM in} - \text{MM out} + \text{IM1 out} \\ \text{Consumption for Type B Connection} &= \text{MM in} - \text{MM out} \end{aligned}$$

### Monthly CORE Generation

$$\begin{aligned} \text{CORE Generation for Type A Connection} &= \text{IM1 out} \\ \text{CORE Generation for Type B Connection} &= \text{IM1 out} \end{aligned}$$

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 if their system design varies from the above diagram to agree on any additional system requirements.