

**FOREST CITY MUNICIPAL UTILITIES**  
**FOREST CITY, IOWA**



Interconnection Standards for  
Parallel Installation and Operation of  
Customer-Owned  
Electric Generating Facilities

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## PROGRAM REVIEW

1. **ELIGIBILITY:** Interconnection to the electric system shall be granted only to new or existing customers in good standing under FCMU's electric service schedules. The Interconnection Agreement shall be between the Customer and FCMU and will not include third parties.

The Interconnection Standards are intended for customer-owned generation with a rated output of 60,000 watts (60 kW) or less, and which meet the definition of a Qualifying Facility under the Public Utilities Regulatory Policies Act ("PURPA"). Typical installations include, but are not limited to, solar panels and wind turbines. Systems rated for more than 60 kW will be handled under a different process and may involve the local control area and regional transmission organization.

2. **REQUEST:** The Customer shall make a request by completing the attached document entitled "Application for Interconnection." FCMU may require additional details or clarifications as needed to properly evaluate the population.
3. **SYSTEM EFFECTS:** FCMU will analyze the overall impact of the proposed Generating Facility on the Distribution System. Such analysis will be based on Good Utility Practice to determine thermal effects, voltage ranges, power quality, system stability, etc. Any cost associated with such analysis shall be recoverable by FCMU from the Customer as part of the Interconnection Costs.
4. **SYSTEM UPGRADES:** As a result of the above analysis, FCMU will provide the Customer with a cost estimate and projected timeframe for any system, upgrades or additional facilities that may be necessary to accommodate the Generating Facility.
5. **AGREEMENT:** Once the Customer and FCMU have identified and mutually agreed in writing on the scope of the overall project, including the Generating Facility, system upgrades and estimated costs, the Customer and FCMU shall execute the attached document entitled "Interconnection and Power Purchase Agreement."
6. **CODES AND PERMITS:**
  - a. The Customer shall be responsible for procuring all building, operating and environmental permits that are required by any Governmental Authority having jurisdiction for the type of Generating Facility and for the necessary ancillary structures to be installed.
  - b. The equipment shall meet the standards listed in the attached document entitled "National Certification Codes and Standards."
  - c. The construction and facilities shall meet all local building and electrical codes.
  - d. The Customer shall comply with acceptable standards for interconnection, safety, and operating reliability as set forth in 199 IAC 15.10, as it may be amended from time to time.
  - e. The Customer shall be responsible for furnishing FCMU with sufficient data to verify that the foregoing conditions have been met. FCMU approval is required before interconnection in permitted.

7. **NET BILLING:** FCMU has adopted a Net Billing schedule, allowing the Customer to net the price to be paid for the energy delivered to FCMU from the Customer's Generating Facility with the price

that the Customer must pay for the energy delivered to the Customer by FCMU over a specified period of time as set out in the Net Billing schedule. The Customer shall complete the necessary Net Billing service schedule documentation to permit the bi-directional flow of electricity and the financial treatment of the deliveries to and from FCMU.

8. **CERTIFICATE OF COMPLETION:** Upon completion of the Generating Facility and prior to normal operation, the Customer shall provide a signed copy of the attached document entitled "Certificate of Completion."
9. **NORMAL OPERATION:** The Customer may begin normal operation of the Generating Facility upon completion of all documentation and receipt of written approval from FCMU.
10. **DEFINITIONS:** All capitalized terms and phrases throughout this set of standards shall be defined as indicated in the attached Glossary of Terms.

## TECHNICAL REQUIREMENTS

1. **CHARACTER OF SERVICE:** The electrical service shall be designed to operate on a sixty cycle per second alternating current (AC) electrical system at supply voltages and number of phases that apply under FCMU's rate schedules.
2. **CODE REQUIREMENTS:** The Generating Facility shall meet all applicable requirements established by the National Electrical Code (NEC), National Electrical Safety Code (NESC), Institute of Electrical and Electronics Engineers (IEEE), and Underwriters Laboratories (UL). Specific codes are listed on the attached document entitled "National Certification Codes and Standards."
3. **GENERATING FACILITY PARAMETERS:** The control system of the Generating Facility shall comply with the IEEE specifications and standards for parallel operation with FCMU, and in particular, as follows:
  - a. Power output control system shall automatically disconnect from FCMU source upon loss of FCMU voltage and not reconnect until FCMU voltage has been restored.
  - b. Power output control system shall automatically disconnect from FCMU source if FCMU voltage fluctuates beyond plus or minus five percent (5%).
  - c. Power output control system shall automatically disconnect from FCMU source if frequency fluctuates plus or minus two (2) cycles (Hertz).
  - d. Inverter output distortion shall meet IEEE requirements.
  - e. The Generating Facility shall meet the applicable IEEE standards concerning impacts to the Distribution System regarding harmonic distortion, voltage flicker, power factor, direct current injection and electromagnetic interference.
4. **FAULT CURRENT CONTRIBUTION:** The Generating Facility shall be equipped with protective equipment designed to automatically disconnect during fault current conditions and remain disconnected until the voltage and frequency have stabilized.
5. **RECLOSING COORDINATION:** The Generating Facility shall be coordinated with the Distribution System reclosing devices by disconnecting from the system during the initial de-energized operation and shall remain disconnected until the voltage and frequency have stabilized.
6. **DISCONNECT DEVICE:** A safety disconnect switch shall be installed that is easily visible, mounted separately from the metering equipment and readily accessible by FCMU personnel. FCMU will coordinate and approve the location of the disconnect switch. The switch shall then be capable of being locked in the open position with an FCMU lock and shall prevent the generator from supplying power to the Distribution System. FCMU may open the disconnect switch thereby isolating the customer-owned generating equipment from FCMU's electric system for reasons including, but not limited to: maintenance or emergency work, causing adverse affect to other customers or to nearby communication systems or circuits, failure to comply with standards and codes/regulations, and creating hazardous or unsafe conditions.

## APPLICATION FOR INTERCONNECTION

This Application is considered complete when it provides all applicable and correct information required below. Additional information or clarification to evaluate the Application may be requested by FCMU.

### Customer

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

Contact Person: \_\_\_\_\_ Account Number: \_\_\_\_\_

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

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone (Day): \_\_\_\_\_ (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

### Contact (if different than Customer)

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

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

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone (Day): \_\_\_\_\_ (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ EMail Address: \_\_\_\_\_

### Generating Facility Information

Location (if different than above): \_\_\_\_\_

Account Number (if different than Customer): \_\_\_\_\_

Inverter Manufacturer: \_\_\_\_\_

Model: \_\_\_\_\_

Nameplate Rating: (kW): \_\_\_\_\_ (kVA): \_\_\_\_\_

(AC Volts) Single Phase: \_\_\_\_\_ Three Phase \_\_\_\_\_

Rated Output: \_\_\_\_\_ A Rated VARS: \_\_\_\_\_ VARS

Rated Frequency: \_\_\_\_\_ Hertz Power Factor: \_\_\_\_\_

Efficiency: \_\_\_\_\_ % Rated Voltage: \_\_\_\_\_ Volts

Rated Current: \_\_\_\_\_ Amps Max Fault Current: \_\_\_\_\_ Amps

System Design Capacity: \_\_\_\_\_ (kW) \_\_\_\_\_ (kVA)

Prime Mover: Photovoltaic  Reciprocating Engine  Fuel Cell  Turbine  Other

If other, please describe: \_\_\_\_\_

Energy Source: Solar  Wind  Hydro  Diesel  Natural Gas  Fuel Oil  Other

If other, please describe: \_\_\_\_\_

Meets all applicable Standards and Codes (IEEE, NEC, UL, etc.) Yes \_\_\_\_\_ No \_\_\_\_\_

(If Yes, attach manufacturer's cut-sheet showing UL1741 listing)

Estimated Installation Date: \_\_\_\_\_ Estimated In-Service Date: \_\_\_\_\_

List components of the Small Generating Facility equipment package that are currently certified:

Equipment Type	Certifying Entity
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____

**Customer Signature:**

I hereby certify that, to the best of my knowledge, the information provided in this Application is true. I agree to abide by the terms and conditions of FCMU's Interconnection Standard and will return the Certificate of Completion when the Generating Facility has been installed.

Signed: \_\_\_\_\_

Title: \_\_\_\_\_ Date: \_\_\_\_\_

**Contingent Approval to Interconnect the Generating Facility:**

Interconnection of the Generating Facility is approved, contingent upon the terms and conditions of FCMU's Interconnection Standard and upon return of the Certificate of Completion.

FCMU Signature: \_\_\_\_\_

Title: \_\_\_\_\_ Date: \_\_\_\_\_

Application ID Number: \_\_\_\_\_

FCMU waives inspection/witness test? Yes \_\_\_\_\_ No \_\_\_\_\_

## INTERCONNECTION AND POWER PURCHASE AGREEMENT

This Agreement, ("**Agreement**") is entered into by and between **Forest City Municipal Utilities ("FCMU")**, and \_\_\_\_\_, ("**Customer**"). Customer and FCMU are referenced in this Agreement collectively as "**Parties**" and individually as "**Party.**"

### RECITALS

WHEREAS FCMU is a publicly owned electric utility engaged in the retail sale of electricity in the State of Iowa;

WHEREAS Customer owns or desires to install, own and operate an electric Generating Facility and to interconnect said Generating Facility to the electric Distribution System of FCMU and sell any excess output from said Generating Facility to FCMU under the terms and conditions as set forth herein.

### AGREEMENT

NOW, THEREFORE, in consideration of the covenants and promises herein, the Parties mutually agree as follows:

1. **SCOPE OF AGREEMENT:** This Agreement governs the terms and conditions under which the Customer's Generating Facility will interconnect with, and operate in parallel with, FCMU's electrical system, and FCMU shall purchase any excess output from said Generating Facility.
2. **PARALLEL OPERATION:** Customer shall not commence parallel operation of the Generating Facility until written approval of the interconnection facilities has been given by FCMU. Such approval shall not be unreasonably withheld. FCMU shall have the right to have representatives present at the initial testing of the Customer's protective apparatus.
3. **INTERCONNECTION COSTS:** FCMU has estimated the costs, including overheads, for the purchase and construction of necessary System Upgrades to its Distribution System and has provided a detailed itemization of such costs on the attached document entitled "System Upgrade Estimated Costs." The Customer agrees to pay the costs reflected in the System Upgrade Estimated Costs upon receipt of FCMU's invoice within the timeframe indicated on the invoice.
4. **GENERATING FACILITY COSTS, PERMITS, MAINTENANCE:** Customer shall be solely responsible for the costs, design, purchase, construction, permitting, operation, and maintenance of the Generating Facility. This includes but is not limited to the responsibility to obtain and maintain any and all governmental authorizations and permits required for the construction and operation of the Generating Facility.

Customer shall maintain all Generating Facilities in a safe and prudent manner and in conformance with all laws and regulations. In addition, the Generating Facilities shall at all times



meet the standards listed in the attached document entitled "National Certification Codes and Standards," which may be supplemented or modified at FCMU's sole discretion from time to time.

5. **PURCHASES FROM CUSTOMER/NET BILLING:** FCMU shall purchase from the Customer the excess energy delivered by the Customer's Generating Facility to the FCMU Distribution System. To the extent the Customer is eligible for and elects to utilize the Net Billing schedule, such purchases shall be accounted for pursuant to said schedule. In the event the Customer is not eligible for the Net Billing schedule or elects not to utilize said schedule, then the purchases shall be made at FCMU's Avoided Cost as defined under PURPA, pursuant to the PURPA purchase schedule.
6. **METERING:** Metering will be installed at the point of service to the Customer's Generating Facility of one of the following types:
  - a. Metering capable of measuring and recording energy flows, on a kWh basis, from FCMU to the Customer and from the Customer's Generating Facility to FCMU, with each directional energy flow recorded independently.
  - b. Metering capable of measuring power flows in each direction on an hourly or other real-time basis.

FCMU shall have the right to collect all reasonable cost of metering necessary to allow for sales to FCMU from the Customer.

7. **INTERRUPTION OR REDUCTION OF DELIVERIES:** FCMU may require Customer to interrupt or reduce deliveries when FCMU determines, in its sole discretion, that curtailment, interruption or reduction is necessary because of personnel safety, emergencies, Force Majeure or compliance with Good Utility Practices.
8. **ADVERSE OPERATING EFFECTS:** The interconnection of the Generating Facility shall not reduce the reliability and quality of the Distribution System. This includes, but is not limited to, high levels of harmonics, abnormal voltage fluctuations and excessive frequency deviations. FCMU shall notify the Customer as soon as practicable if, based on Good Utility Practice, operation of the Generating Facility may cause disruption or deterioration of service to other customers served from the same electric system, or if operating the Generating Facility could cause damage to FCMU's Distribution System. FCMU may disconnect the Customer's Generating Facility upon any of the following conditions, and shall reconnect the Generating Facility once the condition has been cured:
  - a. For scheduled outages, provided the Customer is treated in the same manner as FCMU's other Customers.
  - b. For unscheduled outages or emergency conditions.
  - c. If the Generating Facility does not operate in the manner consistent with this Agreement or the applicable Codes and Standards.
  - d. Improper installation or failure to pass the initial testing.
  - e. If the Generating Facility is creating a safety, reliability, or power quality problem.
  - f. The interconnection equipment utilized by the Customer that was lab certified at the time of interconnection is de-listed by the Nationally Recognized Testing Laboratory that provided the listing at the time the interconnection was approved.
  - g. Unauthorized modification of the interconnection facilities or the General Facility.
  - h. Unauthorized connection to FCMU's Distribution System.

Notice of Disconnection shall be provided in advance when possible and as soon after disconnection as possible in those instances when advance notice is not reasonably possible. Such notice shall specify the reason for disconnection and the Customer shall have an opportunity to cure any breach of the terms of this Agreement. FCMU shall have the right to terminate this Agreement upon Customer's failure to cure any breach within thirty (30) days of notice of the breach.

9. **ACCESS TO PREMISES:** FCMU shall have access to the Customer's premises or property as permitted in the Service Policies: (i) to inspect Customer's system, (ii) to read and to replace meters, (iii) to open the load-break disconnect switch, and (iv) to disconnect the interconnection facilities at FCMU's meter or transformer.
10. **INDEMNITY AND LIABILITY:** The Parties shall at all times indemnify, defend, and hold the other Party and the directors, officers, employees and agents for said Party, harmless from any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or failure to meet its obligations under this Agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the Indemnified Party.
11. **CONSEQUENTIAL DAMAGES:** Other than as expressly provided for in this Agreement, neither Party shall be liable under any provision of this Agreement for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to the other Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.
12. **INSURANCE:** The Customer shall provide FCMU with proof that it has currently in force all risk property insurance and comprehensive personal liability insurance, and Customer agrees that it will maintain such insurance in force for the duration of this Agreement in no less amounts than those currently in effect. FCMU shall have the right to inspect or obtain a copy of the original policy or policies of insurance prior to commencing operation. Such insurance shall, by endorsement to the policy or policies, provide for thirty (30) calendar days written notice to FCMU prior to cancellation, termination, alteration, or material change of such insurance.
13. **ASSIGNMENT:** Customer shall not voluntarily assign its rights nor delegate its duties under this Agreement without the express written consent of FCMU. Any assignment or delegation Customer makes without FCMU's express written consent shall not be valid. FCMU shall not unreasonably withhold its consent to Customer's assignment of this Agreement.
14. **NON-WAIVER:** Failure by either Party to this Agreement to insist upon strict compliance with any of the terms, covenants or conditions herein shall not be deemed to be a waiver of such terms, covenants, or conditions, nor shall any waiver or relinquishment of any right or power hereunder at any time be deemed a waiver or relinquishment of any further such rights or powers. No waiver shall be valid unless in writing and signed by a duly authorized officer of the respective party.

15. **SEVERABILITY:** Should any term or provision of this Agreement, or the application thereof to any person or circumstance, to any extent be invalid or unenforceable, the remainder of this Agreement or the application of such term or provision to persons or circumstances other than those to which it is held invalid or unenforceable, shall not be affected thereby, and each remaining term and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by Law.
16. **GOVERNING LAW:** This Agreement shall be interpreted and governed under the laws of the State of Iowa. Venue of any action arising hereunder or related to this Agreement shall lie in Winnebago or Hancock County, Iowa.
17. **DOCUMENTS:** The Agreement includes the following documents, which are attached and incorporated by reference:
  - a. Application for Interconnection.
  - b. Net Billing Purchase Schedule.
  - c. Certificate of Completion and,
  - d. Other documents of FCMU’s Interconnection Standards for Parallel Operation and Net Billing of Customer-Owned Electric Generating Facilities.
18. **GLOSSARY OF TERMS:** Capitalized terms used herein shall have the meanings specified in the attached document entitled “Glossary of Terms.”
19. **NOTICES:** All written notices shall be directed as follows:

<b>FCMU:</b>	Forest City Municipal Utilities PO Box 346 Forest City, IA 50436
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<b>CUSTOMER:</b>	Name _____
	Address _____
	City _____

20. **TERMS OF AGREEMENT:** This Agreement shall be in effect when signed by the Customer and FCMU and shall remain in effect thereafter month to month unless terminated by either Party on thirty (30) days prior written notice and in accordance with the Service Policies.
21. **ENTIRE AGREEMENT:** This Agreement, together with its attached exhibits, contains the entire agreement between the Parties with respect to the subject matter hereof, and any prior or contemporaneous agreements, discussions, or understandings, written or oral, are superseded by this Agreement and shall be of no force or effect. No addition or modification of any term or provision of this Agreement shall be effective unless set forth in writing and signed by each of the Parties.

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 last date set forth below:

**Customer**

**Forest City Municipal Utilities**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

## CERTIFICATE OF COMPLETION

Is the Generating Facility installed, tested and ready for operation? Yes \_\_\_\_\_ No \_\_\_\_\_

**Customer:** \_\_\_\_\_

Contact Person: \_\_\_\_\_

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

Location of the Generating Facility (if different than above): \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone (Day): \_\_\_\_\_ (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ Email Address: \_\_\_\_\_

**Electrician/Service Company:** \_\_\_\_\_

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

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone (Day): \_\_\_\_\_ (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ Email Address: \_\_\_\_\_

License Number: \_\_\_\_\_

Date of Approval by FCMU Install Generating Facility: \_\_\_\_\_

Application ID Number: \_\_\_\_\_

**INSPECTION:** The Generating Facility has been installed and inspected in compliance with the local building and electrical codes of: \_\_\_\_\_

\_\_\_\_\_  
Signature (Local electrical wiring inspector must sign or a copy of the electrical inspection must be attached)

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

As a condition of interconnection, you are required to send/fax a copy of this form along with a copy of the signed electrical permit to:

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

Company: \_\_\_\_\_

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

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Fax: \_\_\_\_\_

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**APPROVAL TO ENERGIZE THE GENERATING FACILITY:** Approval is hereby given to energize the Generating Facility is hereby approved:

\_\_\_\_\_  
FCMU Signature

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

## GLOSSARY OF TERMS

**Applicable Laws and Regulations:** All duly promulgated applicable federal, state, and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.

**Avoided Cost:** Avoided Cost shall mean the incremental cost to FCMU of electric energy or capacity or both which, but for the purchase from the Customer's Generating Facility, FCMU would generate itself or purchase from another source. FCMU purchases all wholesale power from Dairyland Power Cooperative. FCMU's avoided cost shall equal those of Dairyland Power Cooperative and Dairyland Power Cooperative shall therefore be responsible for calculating FCMU's avoided cost. The Avoided Cost shall be made available upon request.

**Distribution System:** FCMU's facilities and equipment used to transmit electricity to ultimate usage points such as homes and industries directly from nearby generators or from interchanges with higher voltage transmission networks which transport bulk power over longer distances.

**Force Majeure:** A Force Majeure event shall mean "any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control." A Force Majeure event does not include an act of negligence or intentional wrongdoing.

**Generating Facility:** The Customer's device to produce electricity identified in the Interconnection Application.

**Good Utility Practice:** Any of the practices, methods and acts engaged in or approved by a significant portion of the electric industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

**Governmental Authority:** Any federal, state, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include the Customer or any Affiliate thereof.

**Interconnection Application:** The Customer's request to interconnect a new Generating Facility, or to increase the capacity of, or make a material modification to the operating characteristics of, an existing Generating Facility that is interconnected with FCMU's electrical system.

**Inverter:** Equipment that converts Customer's system's operating voltage to FCMU's operating voltage. Basically, any static power converter with control, protection and filtering functions used to interface an electric energy source with an electric utility system. (IEEE 929-2000, IEEE 1549, UL1741)

**Net Billing:** "Net Billing" refers to the process whereby the Customer and FCMU shall have the ability to net the purchase price for the energy delivered by the Customer to the FCMU Distribution System against the Customer's bill for deliveries of energy by FCMU to the customer over a specified period of time as set forth in the Net Billing schedule adopted by FCMU.

**Reasonable Efforts:** With respect to an action required to be attempted or taken by a Party under the Interconnection Agreement, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

**System Upgrades:** The additions, modifications, and upgrades to FCMU's Distribution System at or beyond the point of interconnection to facilitate interconnection of the Generating Facility and render the transmission service necessary to affect the Interconnection Customer's wholesale sale of electricity in interstate commerce. Distribution Upgrades do not include Interconnection Facilities.

## NATIONAL CERTIFICATION CODES AND STANDARDS

1. **IEEE 1547:** Standard for Interconnecting Distributed Resources with Electric Power Systems (including use of IEEE 1547.1 testing protocols to establish conformity).
2. **UL 1741:** Inverters, Converters, and Controllers for Use in Independent Power Systems.
3. **IEEE Std 929-2000:** IEEE Recommended Practice for City Interface of Photovoltaic (PV) Systems.
4. **NFPA 70 (2002):** National Electrical Code.
5. **IEEE Std C37.90.1-1989 (R1994):** IEEE Standard Surge Withstand Capability (SWC) Tests for Protective Relays and Relay Systems.
6. **IEEE Std C37.90.2 (1995):** IEEE Standard Withstand Capability of Relay Systems to Radiated Electromagnetic Interferences from Transceivers.
7. **IEEE Std C37.108-1989 (R2002):** IEEE Guide for the Protection of Network Transformers.
8. **IEEE Std C57.12.44-2000:** IEEE Standard Requirements for Secondary Network Protectors.
9. **IEEE Std C62.41.2-2002:** IEEE Recommended Practice on Characterization of Surges in Low Voltage (1000V and Less) AC Power Circuits.
10. **IEEE Std C62.45-1992 (R2002):** IEEE Recommended Practice on Surge Testing for Equipment Connected to Low-Voltage (1000V and Less) AC Power Circuits.
11. **ANSI C84.1-1995:** Electric Power Systems and Equipment – Voltage Ratings (60 Hertz).
12. **IEEE Std 100-2000:** IEEE Standard Dictionary of Electrical and Electronic Terms.
13. **NEMA MG 1-1998:** Motors and Small Resources, Revision 3.
14. **IEEE Std 519-1992:** IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems.
15. **NEMA MG 1-2003 (Rev 2004):** Motors and Generators, Revision 1.



## **AVOIDED COST PURCHASE SCHEDULE**

The Customer may elect to sell all excess output to FCMU pursuant to FCMU's Avoided Cost. In the event said election is made, then metering shall be installed that is capable of measuring the total energy in kWh delivered to FCMU's Distribution System from the Customer's Generating Facility. FCMU shall pay for such deliveries at FCMU's Avoided Cost rate in effect at the time of the delivery. Payment will be made monthly from FCMU to Customer. FCMU shall have the right to offset the amounts owed by Customer to FCMU against amounts owed to Customer from FCMU and shall provide Customer with notice of any such offset.

## **NET BILLING PURCHASE SCHEDULE**

Generating Facilities with a nameplate capacity rating of less than 60 kW shall be eligible for service under this Net Billing Schedule.

### **Calculation of the Customer's Bill under the Net Billing Schedule:**

FCMU shall, for each monthly billing period, determine the number of kWh delivered by the Customer's Generating Facility to the FCMU Distribution System and the number of kWh delivered from FCMU to the Customer.

FCMU shall calculate the Customer's bill based upon the Customer's applicable rate schedule and the number of kWh delivered by FCMU to the Customer (Customer's Obligation.) FCMU shall also calculate the amount owed by FCMU to the Customer for the kWh delivered to FCMU by the Customer's Generating Facility based upon FCMU's Avoided Cost (FCMU's Obligation). If the Customer's Obligation exceeds FCMU's Obligation, the Customer shall be given a credit against the Customer's Obligation equal to FCMU's Obligation and shall be billed for the net difference. If FCMU's Obligation exceeds the Customer's Obligation, then the Customer shall be given a credit for the difference, which credit may be applied against the Customer's billing in future months.