EXCELSIOR EMC

DISTRIBUTED GENERATION INTERCONNECTION AGREEMENT

This Agreement made _____, 20___, between Excelsior EMC (hereinafter called "Cooperative"), and _____ (hereinafter called the "DG Customer"),

W I T N E S S E T H:

WHEREAS, the Cooperative is a non-profit electric membership corporation providing retail electric service; and

WHEREAS, the DG Customer is a member of the Cooperative; and

WHEREAS, the DG Customer desires to install, own or lease, operate and maintain a distributed generation facility primarily intended to offset all or part of the DG Customer's requirements for electricity; and

WHEREAS, the DG Customer desires to interconnect with the electric distribution system (hereinafter called "System") of the Cooperative in accordance with the Interconnection Application Form; and

WHEREAS, the DG Customer desires to operate its generation equipment in parallel with the Cooperative's System.

NOW THEREFORE, it is understood and agreed that the Cooperative shall permit the DG Customer to connect its distributed generation facility to the System and to operate its generation equipment in parallel with the System subject to the following terms and conditions:

1. COST OF INTERCONNECTION AND PROTECTIVE EQUIPMENT:

The DG Customer shall be responsible for all costs of installing, operating and maintaining protective equipment and/or electrical facilities required to interconnect with the Cooperative's System. The DG Customer may be charged for the direct and indirect costs incurred by the Cooperative as a result of the interconnection of the distributed generation facility.

2. OPERATING LIMITS:

Operation of DG Customer's parallel generating equipment shall not compromise the quality of electric service to other members on the System. The DG Customer's parallel generating equipment shall meet the following minimum requirements:

a) Voltage

The DG Customer shall be capable of operating its generating equipment at a voltage level of plus/minus 6% of nominal system voltage (120 volts ac). Utility grade negative sequence/under-voltage relaying shall be used to trip the equipment off the line for negative excursions exceeding 8.25% of nominal for a maximum duration of six electrical cycles. Positive excursions exceeding 10% of nominal voltage shall cause the equipment to trip off line. Voltage regulating equipment shall maintain stable excitation levels with negligible hunting (less than 2% of nominal phase current).

b) Flicker

Parallel operation of the generating equipment shall not cause voltage flicker in excess of 2% of nominal line voltage (120 volts ac) as measured at the primary terminals of the DG Customer's generator interface transformer.

c) Frequency

While operating in parallel with the System, the DG Customer must provide a utility grade precision over/under frequency relay calibrated to trip for frequency excursions exceeding plus/minus 0.25 Hz for greater than 10 electrical cycles on a 60 Hz base.

d) Power Factor

DG Customer's generating equipment shall employ automatic means of reactive power regulation while operating in parallel with the System. The DG Customer's generating equipment shall be capable of operation within the range of 0.9 lagging to 0.9 leading power factor as required by the Cooperative.

e) Harmonics

Total current harmonic distortion shall not exceed 5.0%. Total voltage harmonic distortion shall not exceed 5.0%, with a limit of 3.0% on any individual harmonic. Special consideration will be given to regenerative drive systems and inverters reviewed on an individual case-by-case basis.

f) Stability

While operating in parallel with the System, the DG Customer's generating equipment shall maintain a stable output level with no noticeable hunting exhibited. In the event a system instability condition arises due to DG Customer's generating equipment, it is the DG Customer's responsibility to take measures to rectify the source of instability.

3. GENERATOR INTERFACE TRANSFORMER:

The generator interface transformer is intended to provide isolation of the DG Customer's generating equipment from the System. The inherent impedance of the transformer will minimize the impact on the System due to faults originating at the DG Customer's generating equipment. This transformer may consist of an existing transformer serving the DG Customer's load or a dedicated transformer dictated by generator or prevailing system characteristics. Interface transformer specifications are determined by the Cooperative and determination of ownership of said transformer shall be at the Cooperative's option.

4. GENERATOR PARALLELING BREAKER:

It is required that a generator-paralleling breaker be of draw-out construction, electrically operated, and rated as a five electrical cycle device for fault clearing or tripping.

5. SYNCHRONIZATION:

It is the DG Customer's responsibility to provide proper synchronizing of its parallel generating equipment. The Cooperative assumes no liability for any DG Customer's generating equipment and assumes that the DG Customer operates its equipment at its own risk. Synchronizing equipment shall be capable of matching frequency within plus/minus 0.05 Hz and plus/minus 10 electrical degrees phase angle prior to paralleling breaker closure. Voltage shall be matched within plus/minus 4%.

6. SAFETY:

a) Operation of DG Customer's generating equipment shall not present a safety hazard to the Cooperative's employees or other members connected to the System or the public at large. Under no circumstances shall the DG Customer's generating equipment be used or be capable of energizing a dead System circuit. A positive means of disconnecting and locking out the DG Customer's generating equipment with visible air-gap shall be provided to ensure safety of Cooperative operating personnel during line maintenance. This disconnecting means may be via a lockable air-break disconnect or by a lockable drawout circuit breaker. Each power interruption or line maintenance event requiring Cooperative personnel to utilize the disconnecting means, may result in a charge to the DG Customer. This charge shall be equal to the

applicable Trip Fee as listed in Schedule A of the Cooperative's Service Rules and Regulations. Islanding of the DG Customer's generating equipment (a situation whereby the DG Customer's load and generation remains connected to the bus) shall be prevented by protective relaying verified by the Cooperative based on individual review of the DG Customer's proposed generating system.

b) It is not the intent of this document to specify protection of the DG Customer's generator. Protection of the DG Customer's generating equipment is the responsibility of the DG Customer and the Cooperative assumes no liability for damage or failure of the DG Customer's generating equipment.

c) The DG Customer shall provide all equipment necessary to meet applicable safety, power quality and interconnection requirements established, from time to time, by the National Electrical Code, National Electric Safety Code, the Institute of Electrical and Electronic Engineers and Underwriters Laboratories.

d) In the case of static or non-static inverter-connected distributed generators, the DG Customer must interconnect in accordance with this Agreement and the Cooperative may verify all protective equipment settings. The Cooperative may impose a fee equal to the applicable Trip Fee as listed in Schedule A of the Cooperative's Service Rules and Regulations on the DG Customer for such inspection.

7. TESTING:

The DG Customer shall verify proper tripping and lockout of the generator system for all defined faults as determined by the Cooperative during final review of system relay requirements. Under no circumstances shall parallel generating equipment be operated with inoperative or defective protective relays. Testing and maintenance of the intertie package may be performed by the Cooperative at the expense of the DG Customer.

8. COMPLIANCE PROCEDURE:

The Cooperative reserves the right to automatically or manually disconnect the DG Customer's generation equipment without prior notice whenever, at the Cooperative's sole discretion, the DG Customer is deemed by the Cooperative to not be in compliance with the interconnection requirements as specified in this Agreement. The interconnection will remain open until corrective action is taken and suitable testing is completed.

9. APPLICABLE RATE AND RIDER:

The DG Customer shall pay the Cooperative in accordance with its applicable retail rate and may receive a credit in accordance with the "Distributed Generation Rider".

10. TERM:

This Agreement shall become effective on the date first above written and shall remain in effect until five (5) years following the start of the initial billing period. Thereafter, either party may terminate by giving three (3) months' notice in writing to the other party; provided, however, the Cooperative may terminate this Agreement prior to the expiration of the term hereof upon any breach of this Agreement by the DG Customer.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement all as of the day and year first above written.

ATTEST:

DG Customer

_____ By: _____

_____

ATTEST:

Excelsior EMC

_____ By: _____

_____
Title