Orange & Rockland
a conEdison, inc. company

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February 19, 2009

Honorable Jaclyn A. Brilling
Secretary
State of New York
Public Service Commission
Three Empire State Plaza
Albany, New York 12223

RE: Case No. 08-E-1307 – Tariff Filings to Effectuate Amendments to Public Service Law §66-j (Net Energy Metering for Residential Solar, Farm Waste and Non-Residential Solar Electric Generating Systems) and §66-l (Net Metering for Residential Farm Service and Non-Residential Wind Electric Generating Systems).

Case No. 08-E-1018 – In the Matter of the Rates, Charges, Rules, and Regulations Related to the Interconnection and Operation of Customer-Owned Generation.

Dear Secretary Brilling:

Orange and Rockland Utilities, Inc. ("O&R" or the "Company") hereby submits for filing five copies of the tariff leaves listed below reflecting revisions to its Schedule for Electric Service, P.S.C. No. 2 – ELECTRICITY ("Electric Tariff").

5th	Revised Leaf No.	18E	4th	Revised Leaf No.	22L-31
1st	Revised Leaf No.	18F	1st	Revised Leaf No.	22L-31-1
4th	Revised Leaf No.	22L-23	3rd	Revised Leaf No.	22L-32
2nd	Revised Leaf No.	22L-23A	3rd	Revised Leaf No.	22L-33
3rd	Revised Leaf No.	22L-24	2nd	Revised Leaf No.	22L-34
3rd	Revised Leaf No.	22L-25	3rd	Revised Leaf No.	22L-35
3rd	Revised Leaf No.	22L-26	2nd	Revised Leaf No.	22L-36
6th	Revised Leaf No.	22L-27	2nd	Revised Leaf No.	22L-37
6th	Revised Leaf No.	22L-29	3rd	Revised Leaf No.	22L-38
5th	Revised Leaf No.	22L-30			

The Company also hereby submits for filing Supplement No. 188 and a revised addendum, Addendum - SIR-7, to its Electric Tariff.

The tariff leaves, Supplement No. 188 and Addendum - SIR-7 are issued February 20, 2009 to become effective February 27, 2009. This filing is made in compliance with the Commission's Order Modifying and Authorizing Net Metering Tariffs, issued February 13, 2009 in Case No. 08-E-1307 ("Net Metering Order") and Order Modifying Standard Interconnection Requirements, issued February 13, 2009 in Case No. 08-E-1018 ("SIR Order").

Reason for Filing

On November 4, 2008, the Company made a filing with the Commission proposing changes to its Electric Tariff to comply with Chapters 452, 480, and 483 of the 2008 Laws of New York ("November 2008 Filing"). The leaves had an issue date of November 5, 2008 and an effective date of February 5, 2009. At the request of the Staff of the Department of Public Service, the Company postponed the effective date of the tariff leaves to February 27, 2009. In the Net Metering Order, the Commission directed the Company to make certain revisions to the pending tariff leaves.

Summary of Proposed Changes

Tariff Amendments

In compliance with the Net Metering Order, the Company has made the following changes to Rider N, Net Metering for Customer-Generators, of the Electric Tariff:

1. In Section A, Farm Waste and Non-Residential Solar Electric Generator Service, and in Section C, Residential, Farm, and Non-Residential Wind Electric Generator Service, the method of crediting demand billed customers for excess generation has been changed to the "dollar method", as described in pages 4 through 6 of the Net Metering Order. In its November 2008 Filing, the Company proposed that any kWh of net energy provided to the Company by a customer, including demand billed customers, be applied as a credit to the customer's next bill.

2. Sections A and C have been modified to provide that any excess generation credit remaining at the end of an annual period for non-residential solar and wind customers will be carried over to the next year, as specified on page 6 of the Net Metering Order.

3. Sections A and C have been modified to include the language specified on pages 7 and 8 of the Net Metering Order. This language clarifies the customer's right to petition the Commission if the customer does not agree with the Company's analysis of rated capacity. Also, a maximum generation capacity of 5 kW has been established for the Company's non-demand billed customers. This is the threshold for demand metering under Service Classification No. 2 of the Electric Tariff. These changes have also been made in General Information Section No. 8A, Interconnection of Non-Company Generating Equipment.

4. Sections A, B and C have been modified to state, in accordance with the discussion on pages 10 and 11 of the Net Metering Order, that where the Company requires a second meter, it will be installed at the Company's cost, even for time of use customers. If, however, a customer requests metering equipment that is not required by the Company, such metering equipment will be installed at the customer's expense. In addition, due to advances in available metering technology, the time of use allocation factors in Sections A, B and C have been eliminated. Any net sales by time of use customers will be metered on a time of use basis, so the allocation factors are no longer necessary.

5. Sections A and C have been modified to incorporate the customers' maximum contributions to the cost of dedicated transformers as approved in the SIR Order.

Supplement No. 188

In its November 2008 Filing, the Company requested that the Commission defer establishing the effective date for net metering for customers to be served under Rider N in conjunction with Rider G – NYPA – EDP Delivery Service, Rider J – NYPA Power for Jobs, Rider M – Voluntary Day Ahead Hourly Pricing, or customers subject to mandatory day-ahead hourly pricing ("MDAHP"). In the Net Metering Order, the Commission denied this request. Supplement No. 188 cancels proposed tariff amendments stating that net metering service cannot be taken in conjunction with Riders G, J and M and MDAHP.

Addendum – SIR-7

Addendum - SIR-7 incorporates verbatim the revised text of the revised "Standardized Interconnection Requirements and Application Process for New Distributed Generators 2 MW or Less Connected in Parallel with Utility Distribution Systems," as described in the SIR Order.

Conclusion and Notice

The newspaper publication requirements of §66(12)(b) of the Public Service Law are waived pursuant to ordering clause 3 of the Net Metering Order.

Please date and time-stamp the enclosed extra copy of this letter and return it to me in the envelope provided. Questions regarding this filing can be directed to me at (212) 460-3308.

Very truly yours,

William A. Atzl, Jr.
Director – O&R Rates

GENERAL INFORMATION

8A. INTERCONNECTION OF NON-COMPANY GENERATING EQUIPMENT (Continued)

A. GENERATORS OPERATED IN PARALLEL WITH THE COMPANY'S DISTRIBUTION SYSTEM (Continued)

(4) Non-Residential Solar Electric Generator

Any non-residential customer taking service under Service Classification Nos. 2, 3, 9, 20, 21 or 22 and operating a qualifying solar electric generator, with a generating capacity of not more than the lesser of 2 MW or such customer's peak load as measured over the prior twelve month period, located and used at the customer's premises in compliance with the provisions of Section 66-j of the New York State Public Service Law, is eligible for interconnection and net metering in accordance with Rider N. If such twelve month data is not available, the Company shall estimate the customer's peak load based on the Company's analysis of comparable facilities and information supplied by the customer. The customer may accept the Company's analysis of rated capacity, or may petition the Commission for a determination of the rated capacity that may be installed. For non-demand metered customers, the total rated capacity of the solar electric generating equipment shall not exceed 5 kW.

(5) Farm Waste Electric Generator

Any customer taking service under Service Classification No. 2, 3, 9, 20, 21, or 22 and operating a qualifying farm waste electric generator, with a generating capacity of 500 kW or less, located and used at the customer's "farm operation", as that term is defined in New York Agriculture and Marketing Law § 301(11), in compliance with the provisions of Section 66-j of the New York State Public Service Law, is eligible for interconnection and net metering in accordance with Rider N.

(6) Wind Electric Generating Equipment

Any residential customer taking service under Service Classification Nos. 1 or 19, and any farm service customer taking service under Service Classification Nos. 2, 3, 9, 20, 21, or 22 who owns or operates wind electric generating equipment located and used at his or her primary residence with a generating capacity of 25 kW or less in the case of a residential customer and 500 kW or less in the case of a farm service customer, in compliance with the provisions of Section 66-l of the New York State Public Service Law, is eligible for interconnection and net metering in accordance with Section (C) of Rider N of this Rate Schedule.

(Continued)

GENERAL INFORMATION

8A. INTERCONNECTION OF NON-COMPANY GENERATING EQUIPMENT (Continued)

A. GENERATORS OPERATED IN PARALLEL WITH THE COMPANY'S DISTRIBUTION SYSTEM (Continued)

(6) Wind Electric Generating Equipment (Continued)

Any non-residential customer taking service under Service Classification Nos. 2, 3, 9, 20, 21, or 22 who owns or operates wind electric generating equipment, which includes one or more wind generators, located and used at the customer's premises with a total rated capacity of not more than the lesser of 2 MW or the customer-generator's peak load as measured over the prior 12 month period is eligible for interconnection and net metering in accordance with Rider N. If such twelve month data is not available, the Company shall estimate the customer's peak load based on the Company's analysis of comparable facilities and information supplied by the customer. The customer may accept the Company's analysis of rated capacity, or may petition the Commission for a determination of the rated capacity that may be installed. For non-demand metered customers, the total rated capacity of the wind electric generating equipment shall not exceed 5 kW.

B. GENERATORS OPERATED SEPARATELY FROM THE COMPANY'S DISTRIBUTION SYSTEM

A customer planning to install generating equipment that does not operate in parallel with the Company's system shall submit to the Company, prior to installation, equipment specifications which demonstrate that the customer's generating equipment cannot be operated in parallel with the Company's system.

GENERAL INFORMATION

SERVICE CLASSIFICATION RIDERS

RIDER N

Net Metering for Customer-Generators (Continued)

A. Farm Waste and Non-Residential Solar Electric Generator Service (Continued)

Applicability: (Continued)

(2) Non-Residential Solar Electric Generator Service (Continued)

Customer's generator shall have a rated capacity of not more than the lesser of 2 MW or such customer's peak load as measured over the prior twelve month period, or in the case that such twelve month period of measurement is not available, the Company's estimate of the customer's peak load based on the Company's analysis of comparable facilities and information supplied by the customer. The customer may accept the Company's analysis of rated capacity, or may petition the Commission for a determination of the rated capacity that may be installed. For non-demand metered customers, the total rated capacity of the solar electric generating equipment shall not exceed 5 kW.

This service will be offered, on a first come, first served basis, to a limited level of participation. The total of the rated generating capacity of all the farm waste, residential solar and non-residential solar electric generators in the Company's service area shall not exceed 10.4 MW, or 1.0% of the Company's 2005 system peak demand.

Metering:

At the discretion of the Company, one or two meters will be used to separately meter the flow of energy in each direction. If the customer requests metering equipment that is not required by the Company, such metering equipment shall be installed at the customer's expense.

(Continued)

GENERAL INFORMATION

SERVICE CLASSIFICATION RIDERS

RIDER N

Net Metering for Customer-Generators (Continued)

A. Farm Waste and Non-Residential Solar Electric Generator Service (Continued)

Metering: (Continued)

Meter Upgrades shall be made in accordance with General Information Section 7.C.(5). Customer Meter Ownership and Competitive Metering Services are available as described in General Information Section Nos. 7.C.(3) and 7.C.(4), respectively. Customers selecting Competitive Metering Services must obtain Competitive Metering Services for all meters on the account.

Billing:

The Company will employ net energy metering to measure and charge for the net energy supplied and/or delivered by the Company as follows:

(1) Service Classification Nos. 2 and 3

(a) If the amount of energy supplied and/or delivered by the Company exceeds the amount of energy supplied to the Company (net purchase by customer) in a billing period, the customer will be billed for such net purchase, including demand charges where applicable, at the rates specified in Service Classification No. 2 or 3 as applicable.

(b) If during a billing period the amount of energy supplied to the Company exceeds the amount of energy supplied and/or delivered by the Company (net sale by customer), the following procedures shall apply.

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GENERAL INFORMATION

SERVICE CLASSIFICATION RIDERS

RIDER N

Net Metering for Customer-Generators (Continued)

A. Farm Waste and Non-Residential Solar Electric Generator Service (Continued)

Billing: (Continued)

(1) Service Classification Nos. 2 and 3 (Continued)

(b) (Continued)

(i) Non-Demand Billed Customers:

The net sale amount in kWh will be transferred to the next billing period and added to any kWh net sales by the customer in that billing period.

(ii) Demand Billed Customers:

The net sale amount shall be converted to its equivalent monetary value at the applicable tariff rate per kWh and applied as a direct monetary credit to the customer's current utility bill for any outstanding energy, customer, demand, or other charges. If the customer's current month's energy production credits exceed the current bill, the remaining credits shall be converted back to kWh values and carried forward to the succeeding billing month.

At year end for farm waste electric generators, any cumulative net sale by the customer will be purchased by the Company at the rate specified in Special Provision F of Service Classification No. 15. A monetary refund will be issued to the customer for the amount resulting from such net sale. At year end, any cumulative net sale for non-residential solar electric generators will be carried over to the next year.

(c) The requirement that the billing demand for the billing months of October through May inclusive shall not be less than 70% of the highest metered demand for the preceding billing months of June through September inclusive as contained in Service Classification Nos. 2 and 3, "Determination of Demand", shall not apply to farm operation or non-residential solar customer-generators taking service under this Rider.

(d) The minimum billing demand requirement contained in Service Classification No. 3, "Determination of Demand" shall not apply to farm operation or non-residential solar customer-generators taking service under this Rider.

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GENERAL INFORMATION

SERVICE CLASSIFICATION RIDERS

RIDER N

Net Metering for Customer-Generators (Continued)

A. Farm Waste and Non-Residential Solar Electric Generator Service (Continued)

Billing: (Continued)

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GENERAL INFORMATION

SERVICE CLASSIFICATION RIDERS

RIDER N

Net Metering for Customer-Generators (Continued)

A. Farm Waste and Non-Residential Solar Electric Generator Service (Continued)

Billing: (Continued)

(2) Service Classification Nos. 9, 20, 21 and 22

(a) If the amount of energy supplied and/or delivered by the Company exceeds the amount of energy supplied to the Company in a time-of-use rating period (net purchase by customer), the customer will be billed for such net purchase, including demand charges, at the rates specified in the applicable Service Classification.

(b) If the amount of energy supplied to the Company exceeds the amount of energy supplied and/or delivered by the Company in a time-of-use rating period (net sale by customer) the following procedures shall apply.

(i) Non-Demand Billed Customers:

The net sale amount will be transferred to the next billing period and added to any sales by the customer in that billing period for the corresponding time-of-use rating period.

(ii) Demand Billed Customers:

The net sale amount shall be converted to its equivalent monetary value at the applicable tariff rate per kWh and applied as a direct monetary credit to the customer's current utility bill for any outstanding energy, customer, demand, or other charges. If the customer's current month's energy production credits exceed the current bill, the remaining credits shall be converted back to kWh values and carried forward to the succeeding billing month.

At year end, for farm waste electric generators, any cumulative net sale by the customer will be purchased by the Company at the rate specified in Special Provision F of Service Classification No. 15. A monetary refund will be issued to the customer for the amount resulting from such net sale.

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GENERAL INFORMATION

SERVICE CLASSIFICATION RIDERS

RIDER N

Net Metering for Customer-Generators (Continued)

A. Farm Waste and Non-Residential Solar Electric Generator Service (Continued)

Interconnection and Other Technical Requirements:

(1) The generating equipment must be designed, installed, interconnected, tested, and operated in accordance with applicable government, industry, and Company standards.

(2) A customer taking service under this Rider and interconnecting with the Company's distribution system must operate its facility in accordance with the Addendum - SIR.

(3) The customer shall notify the Company of all changes in the customer's generating equipment prior to making such changes and shall allow the Company's representatives access to those facilities at reasonable times.

(4) Dedicated Transformer(s) or Other Equipment — The Company will notify the customer if a dedicated service transformer, transformers or other equipment is required. Where a dedicated transformer or other equipment is required, customer taking service under this Rider shall pay for the actual costs of installing such transformer(s) or other equipment up to a maximum amount of $5,000.

(5) In the event that the total rated generating capacity of farm waste and wind electric generating equipment or non-residential solar and non-residential wind electric generating equipment that provides electricity to the Company through the same local feeder line exceeds 20 percent of the rated capacity of the local feeder line, each customer-generator connected to such feeder may be required to comply with reasonable measures to ensure the safety of the local feeder line.

(6) The Customer is solely responsible for providing adequate protection for customer's facilities operating in parallel with the Company's system. Except where caused by the Company's negligence, the Company will not be liable for, and the customer shall indemnify and hold the Company harmless for damages to the property of the Company or others or injuries to persons arising out of any occurrence related to the customer's ownership, use or operation of the customer's facilities.

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GENERAL INFORMATION

SERVICE CLASSIFICATION RIDERS

RIDER N

Net Metering for Customer-Generators (Continued)

B. Small Residential Electric Solar Generator Service (Continued)

Applicability: (Continued)

In the event that the Company determines that it is necessary to install a dedicated transformer, transformers or other equipment to protect the safety and adequacy of electric service provided to other customers, the Company will provide to the customer, in writing, an explanation of the Company's decision to install the transformer, and the customer shall be responsible for the total cost of such installation up to a maximum of $350, except in the case where the customer also has a wind electric generating system located and used at its primary residence. In such cases, the customer's cost responsibility for the installation of a dedicated transformer or other equipment deemed necessary by the Company shall instead be as set forth in subparagraph (4) (a) of the provision "Interconnection and Other Technical Requirements" under Section C "Residential, Farm, and Non-Residential Wind Electric Generator Service" of this Rider.

Residential Customers applying for service under this Rider for solar electric generating equipment must authorize the Company to enter their property, without notice when necessary, in the event the Customer's solar generation equipment malfunctions and entry is necessary to protect the public safety or preserve system reliability.

Metering :

At the discretion of the Company, one or two meters will be used to separately meter the flow of energy in each direction. If the customer requests metering equipment that is not required by the Company, such metering equipment shall be installed at the customer's expense.

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GENERAL INFORMATION

SERVICE CLASSIFICATION RIDERS

RIDER N

Net Metering for Customer-Generators (Continued)

B. Small Residential Electric Solar Generator Service (Continued)

Billing:

The Company will employ net energy metering to measure and charge for the net energy supplied and/or delivered by the Company as follows:

(1) Service Classification No. 1

(a) If the amount of energy supplied and/or delivered by the Company exceeds the amount of energy supplied to the Company (net purchase by customer) in a billing period, the customer will be billed for such net purchase at the rates specified in Service Classification No. 1.

(b) If during a billing period the amount of energy supplied to the Company exceeds the amount of energy supplied and/or delivered by the Company (net sale by customer), that amount will be transferred to the next billing period and added to any sales by the customer in that billing period. At the end of each twelve month period, any cumulative net sale by the customer will be purchased by the Company at the rate specified in Special Provision F of Service Classification No. 15. A credit voucher will be issued to the customer for the amount resulting from such net sale. This credit shall be used to offset electric or gas bills issued to the customer following the date the credit is issued.

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GENERAL INFORMATION

SERVICE CLASSIFICATION RIDERS

RIDER N

Net Metering for Customer-Generators (Continued)

B. Small Residential Electric Solar Generator Service (Continued)

Billing: (Continued)

(2) Service Classification No. 19:

(a) If the amount of energy supplied and/or delivered by the Company exceeds the amount of energy supplied to the Company in a time-of-use rating period (net purchase by customer), the customer will be billed for such net purchase at the rates specified in Service Classification No. 19.

(b) If the amount of energy supplied to the Company exceeds the amount of energy supplied and/or delivered by the Company in a time-of-use rating period (net sale by customer), that amount will be transferred to the next billing period and added to any sales by the customer in that billing period for the corresponding time-of-use rating period. At the end of each twelve month period, any cumulative net sale by the customer will be purchased by the Company at the rate specified in Special Provision F of Service Classification No. 15. A credit voucher will be issued to the customer for the amount resulting from such net sale. This credit shall be used to offset electric or gas bills issued to the customer following the date the credit is issued.

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GENERAL INFORMATION

SERVICE CLASSIFICATION RIDERS

RIDER N

Net Metering for Customer-Generators (Continued)

B. Small Residential Electric Solar Generator Service (Continued)

Billing: (Continued)

(3) Service Classification No. 1 and Service Classification No. 19 Customers with Both Solar Electric Generating Equipment and Wind Electric Generating Equipment Located at their Primary Residence

(i) In cases where the wind generating equipment has a rated capacity of 10 kilowatts or less, the Company will treat the net sale amount for Service Classification No. 1 customers in accordance with Section 1 (b) above and for Classification No. 19 customers in accordance with Section 2 (b) above.

(ii) In cases where the wind generating equipment has a rated capacity of greater than 10 kilowatts, the Company will purchase each month the net sale amount in accordance with Special Provision F of Service Classification No. 15. The amount of such purchase shall be applied as a credit to the current month's bill. Any credit amount remaining from the current month shall be carried forward and applied as a credit to the succeeding month's bill.

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GENERAL INFORMATION

SERVICE CLASSIFICATION RIDERS

RIDER N

Net Metering for Customer-Generators (Continued)

C. Residential, Farm and Non-Residential Wind Electric Generator Service

(Residential Wind Electric Generator Service - Applicable to Service Classification Nos. 1 and 19)

(Farm and Non-Residential Wind Electric Generator Service - Applicable To Service Classification Nos. 2, 3, 9, 20, 21, and 22)

Applicability:

Section 66-l of the New York State Public Service Law provides for net energy metering for residential, farm, and non-residential wind electric generating systems. The net metering law applies to (1) residential customers that own or operate wind electric generating equipment, which includes one or more wind generators, located and used at the customer's primary residence, (2) a farm service customer-generator that owns and operates wind electric generating equipment located and used in agricultural production at the customer's farm operation (as defined in Subdivision 11 of Section 301 of the New York State Agricultural and Markets Law), and which is also used at the location of the customer's primary residence, and (3) a non-residential customer that owns or operates wind electric generating equipment, which includes one or more wind generators, located and used at the customer's premises. This section is applicable to residential wind electric generating equipment with a total rated capacity of not more than 25 kW, to farm wind electric generating equipment with a total rated capacity of not more than 500 kW, and to non-residential wind electric generating equipment with a total rated capacity of not more than the lesser of 2 MW or the customer-generator's peak load as measured over the prior 12 month period, or in the case that such 12 month data is not available, the Company's estimate of the customer's peak load based on the Company's analysis of comparable facilities and information supplied by the customer. The customer may accept the Company's analysis of rated capacity, or may petition the Commission for a determination of the rated capacity that may be installed. For non-demand metered customers, the total rated capacity of the wind electric generating equipment shall not exceed 5 kW. For residential customers, farm service, and non-residential customers who own and operate wind electric generating equipment with a total rated capacity that exceeds these thresholds are required to take service under Service Classification No. 25 of this Rate Schedule.

This service will be offered, on a first come, first served basis, to a limited level of participation. The total of the rated generating capacity of all residential, non-residential and farm wind electric generators in the Company's service area shall not exceed 3.1 MW.

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GENERAL INFORMATION

SERVICE CLASSIFICATION RIDERS

RIDER N

Net Metering for Customer-Generators (Continued)

C. Residential, Farm, and Non-Residential Wind Electric Generator Service (Continued)

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GENERAL INFORMATION

SERVICE CLASSIFICATION RIDERS

RIDER N

Net Metering for Customer-Generators (Continued)

C. Residential, Farm, and Non-Residential Wind Electric Generator Service (Continued)

Metering:

At the discretion of the Company, one or two meters will be used to separately meter the flow of energy in each direction. If the customer requests metering equipment that is not required by the Company, such metering equipment shall be installed at the customer's expense.

Meter Upgrades shall be made in accordance with General Information Section 7.C. (5). Customer Meter Ownership and Competitive Metering Services are available as described in General Information Section Nos. 7.C. (3) and 7.C. (4), respectively. Eligible customers selecting Competitive Metering Services must obtain Competitive Metering Services for all meters on the account.

Billing:

The Company will employ net energy metering to measure and charge for the net energy supplied and/or delivered by the Company as follows:

(1) If the amount of energy supplied and/or delivered by the Company exceeds the amount of energy supplied to the Company (net purchase by customer), in a billing period in the case of Service Classification Nos. 1, 2, and 3, or in a time-of-use rating period in the case of Service Classification Nos. 9, 19, 20, 21, and 22, the customer will be billed for such net purchase at the rates specified in the customer's otherwise applicable Service Classification, including applicable demand charges.

(2) If during a billing period the amount of energy supplied to the Company exceeds the amount of energy supplied and/or delivered by the Company (net sale by customer), in a billing period in the case of Service Classification Nos. 1, 2, and 3, or in a time-of-use rating period in the case of Service Classification Nos. 9, 19, 20, 21, and 22, the following rules shall apply:

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GENERAL INFORMATION

SERVICE CLASSIFICATION RIDERS

RIDER N

Net Metering for Customer-Generators (Continued)

C. Residential, Farm, and Non-Residential Wind Electric Generator Service (Continued)

Billing: (Continued)

(2) (Continued)

(a) Non-Demand Billed Customers:

The net sale amount shall be transferred to the next billing period, and time-of-use rating period if applicable, and added to any sales by the customer in that billing period.

(b) Demand Billed Customers:

The net sale amount shall be converted to its equivalent monetary value at the applicable tariff rate per kWh and applied as a direct monetary credit to the customer's current utility bill for any outstanding energy, customer, demand, or other charges. If the customer's current month's energy production credits exceed the current bill, the remaining credits shall be converted back to kWh values and carried forward to the succeeding billing month.

At the end of each calendar year, any remaining cumulative net sale by the residential or farm wind customer will be purchased by the Company at the average of the monthly rates for such calendar year in accordance with in Special Provision F of Service Classification No. 15. The Company shall make a payment to the customer for such purchase. At year end, any cumulative net sale for non-residential wind generators will be carried over to the next year.

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GENERAL INFORMATION

SERVICE CLASSIFICATION RIDERS

RIDER N

Net Metering for Customer-Generators (Continued)

C. Residential, Farm, and Non-Residential Wind Electric Generator Service (Continued)

Billing: (Continued)

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GENERAL INFORMATION

SERVICE CLASSIFICATION RIDERS

RIDER N

Net Metering for Customer-Generators (Continued)

C. Residential, Farm, and Non-Residential Wind Electric Generator Service (Continued)

Billing: (Continued)

(3) The requirement that the billing demand for the billing months of October through May, inclusive, shall not be less than 70% of the highest metered demand for the preceding billing months of June through September inclusive as contained in Service Classification Nos. 2 and 3, "Determination of Demand", shall not apply to customers taking service under this Rider.

(4) The minimum billing demand requirement contained in Service Classification Nos. 3 and 20, "Determination of Demand" shall not apply to customers taking service under this Rider.

(5) Customers will be required to pay the applicable customer charge of the applicable service classification regardless whether the amount of electricity generated by the customer is less than, equal to, or greater than the amount of electricity used by the customer.

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GENERAL INFORMATION

SERVICE CLASSIFICATION RIDERS

RIDER N

Net Metering for Customer-Generators (Continued)

C. Residential, Farm, and Non-Residential Wind Electric Generator Service (Continued)

Interconnection and Other Technical Requirements:

(1) The generating equipment must be designed, installed, interconnected, tested, and operated in accordance with applicable government, industry, and Company standards.

(2) A customer who operates wind electric generating equipment with a total nameplate rating of 500 kW or less and interconnecting in parallel with the Company's distribution system must interconnect with the Company's system and operate its facility in accordance with the SIR.

(3) The customer shall notify the Company of all changes in the customer's generating equipment prior to making such changes and shall allow the Company's representatives access to those facilities at reasonable times.

(4) Dedicated Transformer(s) or Other Equipment - The Company will notify the customer if one or more dedicated service transformers or other equipment is required. Where such dedicated transformer(s) or other equipment is required, customers taking service under this Section (C) shall be responsible for the actual costs of installing such equipment up to a maximum of: (a) $750 in the case of a residential customer who owns or operates wind electric generating equipment with a rated capacity up to 25 kW; and (b) $5,000 in the case of a farm service customer who owns or operates wind electric generating equipment with a rated capacity greater than 25 kW and no greater than 500 kW or a non-residential wind customer.

(5) In the event that the total rated generating capacity of the farm waste and wind electric generating equipment that provides electricity to the Company through the same local feeder line exceeds 20 percent of the rated capacity of the local feeder line, customer-generator connected to such feeder may be required to comply with reasonable measures to ensure the safety of the local feeder line.

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New York State
Standardized Interconnection Requirements and Application Process for New Distributed Generators 2 MW or Less Connected in Parallel with Utility Distribution Systems

New York State
Public Service Commission

February 2009

Table of Contents

Section I. Application Process

New York State
Standardized Interconnection Requirements and Application Process for New Distributed Generators 2 MW or Less Connected in Parallel with Utility Distribution Systems

A. Introduction

This section provides a framework for processing applications to:

- interconnect new distributed generation facilities with a nameplate rating of 2 MW or less [aggregated on the customer side of the point of common coupling (PCC)], and

- review any modifications affecting the interface at the PCC to existing distributed generation facilities with a nameplate rating of 2 MW or less (aggregated on the customer side of the PCC) that have been interconnected to the utility distribution system and where an existing contract between the applicant and the utility is in place.

Generation neither designed to operate, nor operating, in parallel with the utility's electrical system is not subject to these requirements. This section will ensure that applicants are aware of the technical interconnection requirements and utility interconnection policies and practices. This section will also provide applicants with an understanding of the process and information required to allow utilities to review and accept the applicants' equipment for interconnection in a reasonable and expeditious manner.

The time required to complete the process will reflect the complexity of the proposed project. Projects using previously submitted designs certified per the requirements of Section II.H will move through the process more quickly, and several steps may be satisfied with an initial application depending on the detail and completeness of the application and supporting documentation submitted by the applicant. Applicants submitting systems utilizing certified equipment however, are not exempt from providing utilities with complete design packages necessary for the utilities to verify the electrical characteristics of the generator systems, the interconnecting facilities, and the impacts of the applicants' equipment on the utilities' systems.

The application process and the attendant services must be offered on a non-discriminatory basis. The utilities must clearly identify their costs related to the applicants' interconnections, specifically those costs the utilities would not have incurred but for the applicants' interconnections. The utilities will keep a log of all applications, milestones met, and justifications for application-specific requirements. The applicants are to be responsible for payment of the utilities' costs, as provided for herein.

Staff of the Department of Public Service (Staff) will monitor the application process to ensure that applications are addressed in a timely manner. To perform this monitoring function, Staff will meet periodically with utility and applicant representatives.

B. Application Process Steps for Systems 25 kW or Less

STEP 1: Initial Communication from the Potential Applicant

Communication could range from a general inquiry to a completed application.

STEP 2: The Inquiry is Reviewed by the Utility to Determine the Nature of the Project

Technical staff from the utility discusses the scope of the interconnection with the potential applicant (either by phone or in person) to determine what specific information and documents (such as an application, contract, technical requirements, specifications, listing of qualified type-tested equipment/systems, applicable rate schedules, and metering requirements) will be provided to the potential applicant. The preliminary technical feasibility of the project at the proposed location may also be discussed at this time. All such information and a copy of the standardized interconnection requirements (SIR) must be sent to the applicant within three (3) business days following the initial communication from the potential applicant, unless the potential applicant indicates otherwise. A utility representative will be designated to serve as the single point of contact for the applicant (unless the utility informs the applicant otherwise) in coordinating the potential applicant's project with the utility.

STEP 3: Potential Applicant Files an Application

The potential applicant submits an application package to the utility. A complete application package will consist of (1) a letter of authorization by the customer (if the applicant is an agent for the customer), (2) the standard single page application form completed and signed by the applicant, (3) a signed copy of the standardized contract, (4) a three line diagram for the system identifying the manufacturer and model number of the equipment(s), (5) a copy of the manufacturer's data sheet for the equipment(s), (6) a copy of the manufacturers verification test procedure(s) and (7) a copy of the equipment(s) certification to UL 1741 (November 2005 revision) if applicable. The equipment(s) will be considered acceptable by the utility if they meet the requirements of Section II.H. If the application is not complete, then within five (5) business days of receipt of the application package the utility will notify the applicant by email, fax, or other form of written communication, and explain the deficiencies. If the proposed system meets the SIR technical requirements the utility will return a signed and executed standardized contract to the applicant within ten (10) business days of receiving the application and the applicant may proceed with the installation. If the proposed system does not meet the SIR technical requirements, then the utility will so notify the applicant within ten (10) business days of receiving the application by email, fax, or other form of written communication and explain the technical issues or problems.

STEP 4: System Installation

The applicant will install the system according to the utility accepted design and the equipment manufacturer's requirements. All inverter based systems will be allowed to interconnect to the utility system for a period not to exceed two hours, for the sole purpose of assuring proper operation of the installed equipment.
For net metered systems as defined in Section II.A.6, any modifications related to existing metering configurations to allow for net metering shall be completed by the utility prior to Step 5. The utility shall complete the necessary metering changes within ten (10) business days of receiving request from the applicant.

STEP 5: The Applicant's Facility is Tested in Accordance with the Standardized Interconnection Requirements.

Verification testing will be performed by the applicant in accordance with the written verification test procedure provided by the equipment manufacturer. The verification testing will be conducted within ten (10) business days of system installation at a mutually agreeable time, and the utility shall be given the opportunity to witness the tests. If the utility opts not to witness the test, the applicant will send the utility within five (5) days of the test a written notification, certifying that the system has been installed and tested in compliance with the SIR, the utility-accepted design and the equipment manufacturer's instructions. The applicant's facility will be allowed to commence parallel operation upon satisfactory completion of the tests in Step 5. The applicant must have complied with and must continue to comply with all contractual and technical requirements.

STEP 6: Final Acceptance

Within five (5) business days of receiving the written test notification from Step 5, the utility will either issue to the applicant a formal letter of acceptance for interconnection, or will request that the applicant and utility set a date and time for an on-site verification and witness operation of the system. This joint on-site verification must be completed within ten (10) business days after being requested. Within five (5) business days of the completion of the on-site verification, the utility will issue to the applicant either a formal letter of acceptance for interconnection or a detailed explanation of the deficiencies in the system..

C. Application Process Steps for Systems above 25 KW up to 2 MW

Exception: For inverter based systems above 25 kW up to 200 kW, applicants may follow the expedited application process outlined under Section I. B. of the SIR, as long as the inverter-based system has been certified and tested in accordance with UL 1741 (November 2005 revision) and the utility has approved the project accordingly. The utility has fifteen (15) business days from original application submittal to determine and notify the applicant in writing of its findings. If the utility determines that the inverter-based system is not eligible for the fast track or expedited application process, the applicant can:

1) Proceed with the remaining steps of Section I.C of the SIR (Systems above 25 kW up to 2 MW); or

2) Request a review by the Department of Public Service.

For non-inverter based systems and those inverter based systems not certified and tested in accordance with UL 1741 above 25 kW up to 200 kW, the potential applicants and utilities are encouraged to use expedited application process (Section I. B.), but only in circumstances where the utility deems it to be appropriate.

STEP 1: Initial Communication from the Potential Applicant.

Communication could range from a general inquiry to a completed application.

STEP 2: The Inquiry is Reviewed by the Utility to Determine the Nature of the Project.

Technical staff from the utility discusses the scope of the interconnection with the potential applicant (either by phone or in person) to determine what specific information and documents (such as an application, contract, technical requirements, specifications, listing of qualified type-tested equipment/systems, application fee information, applicable rate schedules, and metering requirements) will be provided to the potential applicant. The preliminary technical feasibility of the project at the proposed location may also be discussed at this time. All such information and a copy of the standardized interconnection requirements must be sent to the applicant within three (3) business days following the initial communication from the potential applicant, unless the potential applicant indicates otherwise. A utility representative will be designated to serve as the single point of contact for the applicant (unless the utility informs the applicant otherwise) in coordinating the potential applicant's project with the utility.

STEP 3: Potential Applicant Files an Application.

The potential applicant submits an application to the utility. The submittal must include the completed standard application form, including a copy of equipment certification to UL 1741 (November 2005 revision) as applicable, a three line diagram specific to the proposed system, a letter of authorization (if applicant is agent for the customer), and payment of a non-refundable $350 application fee, except that the fee shall be refunded to net metering customer-generators unless applied toward the cost of installing a dedicated transformer. If the applicant proceeds with the project to completion, the application fee will be applied as a payment to the utility's total cost for interconnection, including the cost of processing the application. Within five (5) business days of receiving the application, the utility will notify the applicant of receipt and whether the application has been completed adequately. It is in the best interest of the applicant to provide the utility with all pertinent technical information as early as possible in the process. If the required documentation is presented in this step, it will allow the utility to perform the

required reviews and allow the process to proceed as expeditiously as possible.

STEP 4: Utility Conducts a Preliminary Review and Develops a Cost Estimate for the Coordinated Electric System Interconnection Review (CESIR).

The utility conducts a preliminary review of the proposed system interconnection. Upon completion of the preliminary review, the utility will inform the applicant as to whether the proposed interconnection is viable or not, and provide the applicant with an estimate of costs associated with the completion of the CESIR. The preliminary review shall be completed and a written response detailing the outcome of the preliminary review shall be sent to the applicant within fifteen (15) business days of the completion of Step 3. The utility's response to applicants proposing to interconnect aggregate DG systems above 25 kW and up to 2 MW, or proposing to interconnect to network systems will include preliminary comments on requirements for protective relaying, metering and telemetry.

STEP 5: Applicant Commits to the Completion of the CESIR

Prior to commencement of the CESIR, the applicant shall provide the following information to the utility:

- a complete detailed interconnection design package
- the name and phone number of the individual(s) responsible for addressing technical and contractual questions regarding the proposed system, and
- if applicable, advanced payment of the costs associated with the completion of the CESIR

The complete detailed interconnection design package shall include:

(1) Electrical schematic drawing(s) reflecting the complete proposed system design which are easily interpreted and of a quality necessary for a full interconnection. The drawings shall show all electrical components proposed for the installation, and their connections to the existing on-site electrical system from that point to the PCC.

(2) A complete listing of all interconnection devices proposed for use at the PCC. A set of specifications for this equipment shall be provided by the applicant upon request from the utility.

(3) The written verification test procedure provided by the equipment manufacturer, if such procedure is required by this document.

(4) Three (3) copies of the following information:

- Proposed three line diagram of the generation system showing the interconnection of major electrical components within the system. Proposed equipment ratings clearly needs to indicate:

1) Number, individual ratings, and type of units comprising the above rating;

2) General high voltage bus configuration and relay functions;

3) Proposed generator step-up transformer MVA ratings, impedances, tap settings and winding voltage ratings;

- Electrical studies as requested by the utility to demonstrate that the design is within acceptable limits, inclusive and limited to the following: system fault, relay coordination, flicker, voltage drop, and harmonics.

STEP 6: Utility Completes the CESIR

The CESIR will consist of two parts:

(1) a review of the impacts to the utility system associated with the interconnection of the proposed system, and

(2) a review of the proposed system's compliance with the applicable criteria set forth below.

A CESIR will be performed by the utility to determine if the proposed generation on the circuit results in any relay coordination, fault current, and/or voltage regulation problems. A full CESIR may not be needed if the aggregate generation is less than: 50 kW on a single-phase branch of a radial distribution circuit; or 150 kW on a single distribution feeder.

The CESIR shall be completed within sixty (60) business days of receipt of the information set forth in Step 5. For systems utilizing type-tested equipment, the time required to complete the CESIR may be reduced.

Upon completion of the CESIR, the utility will provide the following, in writing, to the applicant:

(1) utility system impacts, if any;

(2) notification of whether the proposed system meets the applicable criteria considered in the CESIR process;

(3) if applicable, a description of where the proposed system is not in compliance with these requirements;

(4) Subject to subsections (a) through (d) below, a good faith, detailed estimate of the total cost of completion of the interconnection of the proposed system and/or a statement of cost responsibility for a dedicated transformer(s) or other required interconnection equipment:

(a) with respect to an applicant that is not to be net-metered, an estimate shall be provided and shall include the costs associated with any required modifications to the utility system, administration, metering, and on-site verification testing;

(b) with respect to an applicant that is to be net-metered and that is either a Farm Wind or Non-Residential Wind applicant intending to install wind electric generating equipment with a rated capacity of more than 25 kW, an estimate shall be provided and (i) shall include the costs associated with any required modifications to the utility system, administration, metering, and on-site verification testing, and such applicant shall be informed that it is responsible for one-half of such costs, and (ii) shall include the applicant's responsibility for the actual cost of installing any dedicated transformer(s) and other safety equipment up to the maximum set forth in subsection (d) below;

(c) with respect to an applicant that is to be net-metered (but not a Farm Wind or Non-Residential Wind applicant covered in subsection (b) above) such applicant shall have no responsibility for the interconnection costs described in subsection (b)(i) above, and a statement shall be provided showing the applicant's responsibility for the actual cost of installing any dedicated transformer(s) and other safety equipment up to the maximum set forth in subsection (d) below and;

(d) with respect to an applicant that is to be net-metered, if the utility determines that it is necessary to install a dedicated transformer(s) or other equipment to protect the safety and adequacy of electric service provided to other customers, the applicant shall be informed of its responsibility for the actual costs for installing the dedicated transformer(s) and other safety equipment. The following table reflects the maximum responsibility each designated applicant shall have with respect to the actual cost of the dedicated transformer(s) and other safety equipment.

Maximum Expense for Dedicated Transformer and Other Safety Equipment for Net Metered Customers

Generator Type	Generator Size	Maximum Equipment Responsibility
Solar	Less than or equal to 25 kW	$350
Solar	Over 25 kW up to 2 MW	$5,000
Wind	Less than or equal to 25 kW	$750
Wind	Over 25 kW up to 2 MW	$5,000
Farm Wind	Over 25 kW up to 500 kW	$5,000
Farm Waste	Up to 500 kW	$5,000

STEP 7: Applicant Commits to Utility Construction of Utility's System Modifications.

The applicant and utility will execute a standardized contract for interconnection and the applicant will provide the utility with an advance payment for the utility's estimated costs as identified in Step 6 (estimated costs will be reconciled with actual costs in Step 11).

STEP 8: Project Construction.

The applicant will build the facility in accordance with the utility-accepted design. The utility will commence construction/installation of system modifications and metering requirements as identified in Step 6. Utility system modifications will vary in construction time depending on the extent of work and equipment required. The schedule for this work is to be discussed and agreed upon with the applicant in Step 6.

STEP 9: The Applicant's Facility is Tested in Accordance With the Standardized Interconnection Requirements.

The verification testing will be performed in accordance with the written test procedure provided in Step 5 and any site-specific requirements identified by the utility in Step 6. The final testing will be conducted within ten (10) business days of complete installation at a mutually agreeable time, and the utility shall be given the opportunity to witness the tests. If the utility opts not to witness the test, the applicant will send the utility within five (5) days of the test a written notification, certifying that the system has been installed and tested in compliance with the SIR, the utility-accepted design, and the equipment manufacturer's instructions.

STEP 10: Interconnection.

The applicant's facility will be allowed to commence parallel operation upon satisfactory

completion of the tests in Step 9. In addition, the applicant must have complied with and must continue to comply with the contractual and technical requirements.

STEP 11: Final Acceptance and Utility Cost Reconciliation.

If the utility witnessed the verification testing, then, within ten (10) business days of the test, the utility will issue to the applicant either a formal letter of acceptance for interconnection or a detailed explanation of the deficiencies in the system. If the utility did not witness the verification testing, then, within ten (10) business days of receiving the written test notification from Step 9, the utility will either issue to the applicant a formal letter of acceptance for interconnection, or will request that the applicant and utility set a date and time for an on-site verification and witness operation of the system. This joint on-site verification must be completed within twenty (20) business days after being requested. Within ten (10) business days of the completion of the on-site verification, the utility will issue to the applicant either a formal letter of acceptance for interconnection or a detailed explanation of the deficiencies in the system. At this time, the utility will also reconcile its actual costs related to the applicant's project against the application fee and advance payments made by the applicant. The applicant will receive either a bill for any balance due or a reimbursement for overpayment as determined by the utility's reconciliation, except that a net metering applicant may not be charged in excess of the cost of installing the dedicated transformer(s) or other safety equipment described above in Step 6. The applicant may contest the reconciliation with the utility. If the applicant is not satisfied, a formal complaint may be filed with the Commission.

D. Web-Based Standard Interconnection Requirements

Each utility shall implement and maintain a web-based system to provide customers and contractors current information regarding the status of their SIR application process. The system shall be customer specific and post the current status of the SIR process. At a minimum the following content shall be provided:

1. The applicant's name and project/application identification number.
2. Description of the project, including at a minimum, the project's type (energy source), size, metering, and location.
3. SIR project application status, including all the steps completed and to be completed, along with corresponding completion/deadline dates associated with each step.
    - If the next action is to be taken by the utility, the expected date that action will be completed,
    - If the next action is to be taken by the applicant, what exactly is required and a contact for more information,
4. Information regarding any outstanding information request made by the utility of the applicant, and
5. The status of all amounts paid and/or due to the utility by the applicant.

Access shall be available for the customer and their contractor, such that both can access the information. The web site must be, however, secure and private from unauthorized access.

The utility web site shall also provide the ability for applicants with systems 25 kW and less to submit their application for interconnection via the web. The web based application process must be consistent with Appendix B of the SIR and include the ability to attach associated documentation or drawings associated with each project.

Section II. Interconnection Requirements

A. Design Requirements

1. Common

The generator-owner shall provide appropriate protection and control equipment, including a protective device that utilizes an automatic disconnect device that will disconnect the generation in the event that the portion of the utility system that serves the generator is de-energized for any reason or for a fault in the generator-owner's system. The generator-owner's protection and control equipment shall be capable of automatically disconnecting the generation upon detection of an islanding condition and upon detection of a utility system fault.

The generator-owner's protection and control scheme shall be designed to ensure that the generation remains in operation when the frequency and voltage of the utility system is within the limits specified by the required operating ranges. Upon request from the utility, the generator-owner shall provide documentation detailing compliance with the requirements set forth in this document.

The specific design of the protection, control and grounding schemes will depend on the size and characteristics of the generator-owner's generation, as well the generator-owner's load level, in addition to the characteristics of the particular portion of the utility's system where the generator-owner is interconnecting.

The generator-owner shall have, as a minimum, an automatic disconnect device(s) sized to meet all applicable local, state, and federal codes and operated by over and under voltage and over and under frequency protection. For three-phase installations, the over and under voltage function should be included for each phase and the over and under frequency protection on at least one phase. All phases of a generator or inverter interface shall disconnect for voltage or frequency trip conditions sensed by the protective devices. Voltage protection shall be wired phase to ground for single phase installations and for applications using wye grounded-wye grounded service transformers.

The settings below are listed for single-phase and three-phase applications using wye grounded-wye grounded service transformers or wye grounded-wye grounded isolation transformers. For applications using other transformer connections, a site-specific review will be conducted by the utility and the revised settings identified in Step 6 of the Application Process.

The requirements set forth in this document are intended to be consistent with those contained in IEEE Std 1547, Standard for Interconnecting Distributed Resources with Electric Power Systems. The requirements in IEEE Std 1547 above and beyond those contained in this document shall be followed[1].

Voltage Response

The required operating range for the generators shall be from 88% to 110% of nominal voltage magnitude. For excursions outside these limits the protective device shall automatically initiate a disconnect sequence from the utility system as detailed in the most current version of IEEE Std 1547. Clearing time is defined as the time the range is initially exceeded until the generator-owner's equipment ceases to energize the PCC and includes detection and intentional time delay.

Frequency Response

The required operating range for the generators shall be from 59.3 Hz to 60.5 Hz. For generators greater than 30 kW the utility may request that the generator operate at frequency ranges below 59.3 Hz as defined in IEEE Std 1547. For excursions outside these limits the protective device shall automatically initiate a disconnect sequence from the utility system as detailed in the most current version of IEEE Std 1547. Clearing time is defined as the time the range is initially exceeded until the generator-owner's equipment ceases to energize the PCC and includes detection and intentional time delay.

If the generation facility is disconnected as a result of the operation of a protective device, the generator-owner's equipment shall remain disconnected until the utility's service voltage and frequency have recovered to acceptable voltage and frequency limits for a minimum of five (5) minutes. Systems greater than 25 kW that do not utilize inverter based interface equipment shall not have automatic recloser capability unless otherwise approved by the utility. If the utility determines that a facility must receive permission to reconnect, then any automatic reclosing functions must be disabled and verified to be disabled during verification testing.

2. Synchronous Generators

Synchronous generation shall require synchronizing facilities. These shall include automatic synchronizing equipment or manual synchronizing with relay supervision, voltage regulator, and power factor control.

For all synchronous generators sufficient reactive power capability shall be provided by the generator-owner to withstand normal voltage changes on the utility's system. The generator voltage VAR schedule, voltage regulator, and transformer ratio settings shall be jointly

[1] It is expected that IEEE Std 1547 will eventually supersede the need for explicit technical standards in New York State. However, until such time as all IEEE 1547 series of standards are complete and approved, this standard will take precedence.

determined by the utility and the generator-owner to ensure proper coordination of voltages and regulator action. Generator-owners shall have synchronous generator reactive power capability to withstand voltage changes up to 5% of the base voltage levels.
A voltage regulator must be provided and be capable of maintaining the generator voltage under steady state conditions within plus or minus 1.5% of any set point and within an operating range of plus or minus 5% of the rated voltage of the generator.

Generator-owners shall adopt one of the following grounding methods for synchronous generators:

a) Solid grounding

b) High- or low-resistance grounding

c) High- or low-reactance grounding

d) Ground fault neutralizer grounding

Synchronous generators shall not be permitted to connect to utility secondary network systems without the approval of the utility.

3. Induction Generators

Induction generation may be connected and brought up to synchronous speed (as an induction motor) if it can be demonstrated that the initial voltage drop measured at the PCC is acceptable based on current inrush limits. The same requirements also apply to induction generation connected at or near synchronous speed because a voltage dip is present due to an inrush of magnetizing current. The generator-owner shall submit the expected number of starts per specific time period and maximum starting kVA draw data to the utility to verify that the voltage dip due to starting is within the visible flicker limits as defined by IEEE Std 519, Recommended Practices and Requirements for Harmonic Control in Electric Power Systems.

Starting or rapid load fluctuations on induction generators can adversely impact the utility's system voltage. Corrective step-switched capacitors or other techniques may be necessary. These measures can, in turn, cause ferroresonance. If these measures (additional capacitors) are installed on the customer's side of the PCC, the utility will review these measures and may require the customer to install additional equipment.

4. Inverters

Direct current generation can only be installed in parallel with the utility's system using a synchronous inverter. The design shall be such as to disconnect this synchronous inverter upon a utility system interruption.

It is recommended that equipment be selected from the "Certified Equipment" list maintained by

the PSC. Interconnected Distributed Generating systems utilizing equipment not listed in the "Certified Equipment" list must meet all functional requirements of IEEE Std 1547 and be protected by utility grade relays (as defined in these requirements) using settings approved by the utility and verified in the field. The field verification test must demonstrate that the equipment meets the voltage and frequency requirements detailed in this section.

Synchronization or re-synchronization of an inverter to the utility system shall not result in a voltage deviation that exceeds the requirements contained in Section II.E, Power Quality. Only inverters designed to operate in parallel with the utility system shall be utilized for that purpose.

A line inverter can be used to isolate the customer from the utility system provided it can be demonstrated that the inverter isolates the customer from the utility system safely and reliably.

5. Minimum Protective Function Requirements

Protective system requirements for distributed generation facilities result from an assessment of many factors, including but not limited to:

- Type and size of the distributed generation facility
- Voltage level of the interconnection
- Location of the distributed generation facility on the circuit
- Distribution transformer
- Distribution system configuration
- Available fault current
- Load that can remain connected to the distributed generation facility under isolated conditions
- Amount of existing distributed generation on the local distribution system.

As a result, protection requirements can not be standardized according to any single criteria. Minimum protective function requirements shall be as detailed in the table below. ANSI C37.2, Electric Power System Device Function Numbers, are listed with each function.

Synchronous Generators	Induction Generators	Inverters
Over/Under Voltage (Function 27/59)	Over/Under Voltage (Function 27/59)	Over/Under Voltage (Function 27/59)
Over/Under Frequency (Function 81O/81U)	Over/Under Frequency (Function 81O/81U)	Over/Under Frequency (Function 81O/81U)
		Anti-Islanding Protection

The need for additional protective functions shall be determined by the utility on a case-by-case basis. If the utility determines a need for additional functions, it shall notify the generator-owner

in writing of the requirements. The notice shall include a description of the specific aspects of the utility system that necessitate the addition, and an explicit justification for the necessity of the enhanced capability. The utility shall specify and provide settings for those functions that the utility designates as being required to satisfy protection practices. Any protective equipment or setting specified by the utility shall not be changed or modified at any time by the generator-owner without written consent from the utility.

The generator-owner shall be responsible for ongoing compliance with all applicable local, state, and federal codes and standardized interconnection requirements as they pertain to the interconnection of the generating equipment. Protective devices shall utilize their own current transformers and potential transformers and not share electrical equipment associated with utility revenue metering.

A failure of the generator-owner's protective devices, including loss of control power, shall open the automatic disconnect device, thus disconnecting the generation from the utility system. A generator-owner's protection equipment shall utilize a non-volatile memory design such that a loss of internal or external control power, including batteries, will not cause a loss of interconnection protection functions or loss of protection set points.

All interface protection and control equipment shall operate as specified independent of the calendar date.

6. Metering

The need for additional revenue metering or modifications to existing metering will be reviewed on a case-by-case basis and shall be consistent with metering requirements adopted by the Commission.

Any incremental metering costs are included in interconnection costs that may be required of an applicant. (As described in Section C, Step 6, net metered Solar, Farm Waste, Farm Wind (25 kW or Less) and Residential-Wind customer-generators are only required to contribute to the cost of dedicated transformer(s) and other safety equipment, and Farm Wind and Non-Residential Wind customer-generators with systems of 25 kW and larger are only responsible for payment of one-half of interconnection costs other than dedicated transformer(s) and other safety equipment).

The following Table summarizes the New York Net Metering Rules

New York - Net Metering[2]

Incentive Type:	Net Metering Rules					
Eligible Renewable/Other Technologies:	Solar		Wind			Biogas
Applicable Sectors:	Residential	Non-Residential	Residential	Non-Residential	Farm-Service Wind	Farm-Waste
Limit on System Size:	25 kW	Up to 2MW[3]	25 kW	Up to 2MW[3]	500 kW	500 kW
Limit on Overall Enrollment:	1% of the total Solar and Farm Waste 2005 Demand per IOU		.3% of 2005 Demand per IOU		.3% of 2005 Demand per IOU	1% of the total Solar and Farm Waste 2005 Demand per IOU

B. Operating Requirements

The generator-owner shall provide a 24-hour telephone contact. This contact will be used by the utility to arrange access for repairs, inspection or emergencies. The utility will make such arrangements (except for emergencies) during normal business hours.

Voltage and frequency trip set point adjustments shall be accessible to service personnel only. Any changes to these settings must be reviewed and approved by the utility.

The generator-owner shall not supply power to the utility during any outages of the utility system that serves the PCC. The generator-owner's generation may be operated during such outages only with an open tie to the utility. Islanding will not be permitted. The generator-owner shall not energize a de-energized utility circuit for any reason.

The disconnect switch specified for system size larger than 25kW and non-inverter based systems of 25 kW or less in Section II.D, Disconnect Switch, may be opened by the utility at any time for any of the following reasons:

a. to eliminate conditions that constitute a potential hazard to utility personnel or the general public;

[2] Refer to specific utility tariff leaves for more detailed rules and regulations applicable to net metering.

[3] The lesser of 2MW or such customer's peak load as measured over the prior twelve month period, pursuant to New York State Public Service Law §66-j and §66-l.

b. pre-emergency or emergency conditions on the utility system;

c. a hazardous condition is revealed by a utility inspection;

d. protective device tampering;

e. parallel operation prior to utility approval to interconnect.

The disconnect switch may be opened by the utility for the following reasons, after notice to the responsible party has been delivered and a reasonable time to correct (consistent with the conditions) has elapsed:

a. A generator-owner has failed to make available records of verification tests and maintenance of its protective devices;

b. A generator-owner's system adversely impacts the operation of utility equipment or equipment belonging to other utility customers;

c. A generator-owner's system is found to adversely affect the quality of service to adjoining customers.

The utility will provide a name and telephone number so that the generator-owner can obtain information about the utility lock-out.

The generator-owner shall be allowed to disconnect from the utility without prior notice in order to self generate.

Under certain conditions a utility may require direct transfer trip (DTT). The utility shall provide detailed evidence as to the need for DTT.

If a generator-owner proposes any modification to the system that has an impact on the interface at the PCC after it has been installed and a contract between the utility and the generator-owner has already been executed, then any such modifications must be reviewed and approved by the utility before the modifications are made.

C. Dedicated Transformer

The utility reserves the right to require a power-producing facility to connect to the utility system through a dedicated transformer. The transformer shall either be provided by the connecting utility at the generator-owner's expense, purchased from the utility, or conform to the connecting utility's specifications. The transformer may be necessary to ensure conformance with utility safe work practices, to enhance service restoration operations or to prevent detrimental effects to other utility customers. The transformer that is part of the normal electrical service connection of a generator-owner's facility may meet this requirement if there are no other customers

supplied from it. A dedicated transformer is not required if the installation is designed and coordinated with the utility to protect the utility system and its customers adequately from potential detrimental net effects caused by the operation of the generator.

If the utility determines a need for a dedicated transformer, it shall notify the generator-owner in writing of the requirements. The notice shall include a description of the specific aspects of the utility system that necessitate the addition, the conditions under which the dedicated transformer is expected to enhance safety or prevent detrimental effects, and the expected response of a normal, shared transformer installation to such conditions.

D. Disconnect Switch

Generating equipment with system size larger than 25 kW and non-inverter based systems of 25 kW or less shall be capable of being isolated from the utility system by means of an external, manual, visible, gang-operated, load break disconnecting switch. The disconnect switch shall be installed, owned, and maintained by the customer-generator, and located between the generating equipment and its interconnection point with the utility system.

The disconnect switch must be rated for the voltage and current requirements of the installation.

The basic insulation level (BIL) of the disconnect switch shall be such that it will coordinate with that of the utility's equipment. Disconnect devices shall meet applicable UL, ANSI, and IEEE standards, and shall be installed to meet all applicable local, state, and federal codes. (New York City Building Code may require additional certification.)

The disconnect switch shall be clearly marked, "Generator Disconnect Switch," with permanent 3/8 inch or larger letters or larger.

The disconnect switch shall be located within 10 feet of the utility's external electric service meter. If such location is not possible, the customer-generator will propose, and the utility will approve, an alternate location. The location and nature of the disconnect switch shall be indicated in the immediate proximity of the electric service entrance. The disconnect switch shall be readily accessible for operation and locking by utility personnel in accordance with Section II.B, Operating Requirements. The disconnect switch must be lockable in the open position with a 3/8" shank utility padlock.

For installations above 600V or with a full load output of greater than 960A, a draw-out type circuit breaker with the provision for padlocking at the draw-out position can be considered a disconnect switch for the purposes of this requirement.

E. Power Quality

The maximum harmonic limits for electrical equipment shall be in accordance with IEEE 519 to limit the maximum individual frequency voltage harmonic to 3% of the fundamental frequency and the voltage Total Harmonic Distortion (THD) to 5% on the utility side of the PCC. In

addition, any voltage fluctuation resulting from the connection of the customer's energy producing equipment to the utility system must not exceed the limits defined by the maximum permissible voltage fluctuations border line of visibility curve identified in IEEE Std 519. This requirement is necessary to minimize the adverse voltage effect upon other customers on the utility system.

F. Power Factor

If the average power factor, as measured at the PCC, is less than 0.9 (leading or lagging), the method of power factor correction necessitated by the installation of the generator will be negotiated with the utility as a commercial item.

Induction power generators may be provided VAR capacity from the utility system at the generator-owner's expense. The installation of VAR correction equipment by the generator-owner on the generator-owner's side of the PCC must be reviewed and approved by the utility prior to installation.

G. Islanding

Generation interconnection systems must be designed and operated so that islanding is not sustained on utility distribution circuits. The requirements listed in this document are designed and intended to prevent islanding.

H. Equipment Certification

In order for the equipment to be acceptable for interconnection to the utility system without additional protective devices, the interface equipment must be equipped with the minimum protective function requirements listed in the table in Section II.A.5 and be tested by a Nationally Recognized Testing Laboratory (NRTL) recognized by the United States Occupational Safety and Health Administration (OSHA) in compliance with Underwriter's Laboratories (UL) 1741, Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources (November 7, 2005 revision).

For each interconnection application, documentation including the proposed equipment certification, stating compliance with UL 1741 by an NRTL, shall be provided by the applicant to the utility. Supporting information from an NRTL website or UL's website stating compliance is acceptable for documentation.

If an equipment manufacturer, vendor, or any other party desires, documentation indicating compliance as stated above may be submitted to the Department of Public Service Commission for listing under the "Certified Equipment" list on the Department's website (http://www.dps.state.ny.us/distgen.htm).

Certification information for equipment tested and certified to UL 1741 (November 2005 revision) by a non-NRTL shall be provided by the manufacturer, or vendor to the contacts listed

on the Public Service Commission's website (http://www.dps.state.ny.us/distgen.htm) for review before final approval and posting under the Public Service Commission's "Certified Equipment" list. Utilities are not responsible for reviewing and approving equipment tested and certified by a non-NRTL.

If an equipment is UL 1741 (November 2005 revision) certified by an NRTL and compliance documentation is submitted to the utility, the utility shall accept such equipment for interconnection in New York state. All equipment certified to UL 1741 (November 2005 revision) by an NRTL shall be deemed 'certified equipment' even if it does not appear on the Department of Public Service Commission's website.

Utility grade relays need not be certified per the requirements of this section.

I. Verification Testing

All interface equipment must include a verification test procedure as part of the documentation presented to the utility. Except for the case of small single-phase inverters as discussed later, the verification test must establish that the protection settings meet the SIR requirements. The verification testing may be site-specific and is conducted periodically to assure continued acceptable performance.

Upon initial parallel operation of a generating system, or any time interface hardware or software is changed, the verification test must be performed. A qualified individual must 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 utility reserves the right to witness verification testing or require written certification that the testing was successfully performed.

Verification testing shall be performed at least once every four years. All verification tests prescribed by the manufacturer shall be performed. If wires must be removed to perform certain tests, each wire and each terminal must be clearly and permanently marked. The generator-owner shall maintain verification test reports for inspection by the utility.

Single-phase inverters and inverter systems rated 25 kW and below shall be verified upon initial parallel operation and once every four years as follows: the generator-owner shall interrupt the utility source and verify that the equipment automatically disconnects and does not reconnect for at least five minutes after the utility source is reconnected. The owner shall maintain a log of these operations for inspection by the connecting utility. Any system that depends upon a battery for trip power shall be checked and logged at least annually for proper voltage. Once every four (4) years the battery must be either replaced or a discharge test performed.

J. Interconnection Inventory

To ensure applications are addressed in a timely manner and monitor the overall interconnection

activities, utilities shall submit an SIR inventory of projects to the Public Service Commission by January 31 and July 31 of each year. At a minimum the following information shall be provided in the inventory:

1. Company
2. Applicant Name
3. System Type
4. System Capacity
5. Net Metered (Yes/No)
6. Protective Equipment
7. Application Review Start and End date
8. Preliminary Review Start and End date
9. CESIR Start and End date
10. Verification Testing date
11. Final Letter of Acceptance date

Section III. Glossary of Terms

Automatic Disconnect Device: An electronic or mechanical switch used to isolate a circuit or piece of equipment from a source of power without the need for human intervention.

Cease to Energize: Cessation of energy flow capability

Coordinated Electric System Interconnection Review: Any studies performed by utilities to ensure that the safety and reliability of the electric grid with respect to the interconnection of distributed generation as discussed in this document.

Customer-Generator: A utility customer who owns or operates electric generating equipment located and used at the customer's premises, and/or the customer's agent.

Dedicated Transformer: A transformer with a secondary winding that serves only one customer.

Direct Transfer Trip: Remote operation of a circuit breaker by means of a communication channel.

Disconnect (verb): To isolate a circuit or equipment from a source of power. If isolation is accomplished with a solid-state device, "Disconnect" shall mean to cease the transfer of power.

Disconnect Switch: A mechanical device used for isolating a circuit or equipment from a source of power.

Draw-out Type Circuit Breaker: Circuit breakers that are disconnected by physically separating, or racking, the breaker assembly away from the switchgear bus.

Farm Waste, Net Meter, Farm Applicant: A farm applicant who is proposing to install a farm waste anaerobic digester generating system, not to exceed 500 kW, at a farm, per the requirements of New York State Public Service Law §66-j.

Generator-Owner: An applicant to operate on-site power generation equipment in parallel with the utility grid per the requirements of this document.

Islanding: A condition in which a portion of the utility system that contains both load and distributed generation is isolated from the remainder of the utility system. (Adopted from IEEE 929.)

Point of Common Coupling : The point at which the interconnection between the electric utility and the customer interface occurs. Typically, this is the customer side of the utility revenue meter.

Preliminary Review: A review of the generator-owner's proposed system capacity, location on the utility system, system characteristics, and general system regulation to determine if the interconnection is viable.

Protective Device: A device that continuously monitors a designated parameter related to the operation of the generation system that operates if preset limits are exceeded

Required Operating Range: The range of magnitudes of the utility system voltage or frequency where the generator-owner's equipment, if operating, is required to remain in operation for the purposes of compliance with UL 1741. Excursions outside these ranges must result in the automatic disconnection of the generation within the prescribed time limits

Solar, Net Meter, Residential Applicant: A residential applicant who is proposing to install a photovoltaic generating system, not to exceed 25 kW, in an owner occupied residence per the requirements of New York State Public Service Law §66-j.

Solar, Net Meter, Non-Residential Applicant: A non-residential applicant who is proposing to install a solar generating system located and used at the applicant's premises, not to exceed the customer's peak load as measured over the prior 12 month period or 2 MW, whichever is less, pursuant to New York State Public Service Law §66-j.

Utility Grade Relay: A relay that is constructed to comply with, as a minimum, the most current version of the following standards for non-nuclear facilities:

Standard	Conditions Covered
ANSI/IEEE C37.90	Usual Service Condition Ratings - Current and Voltage Maximum design for all relay

	AC and DC auxiliary relays Make and carry ratings for tripping contacts Tripping contacts duty cycle Dielectric tests by manufacturer Dielectric tests by user
ANSI/IEEE C37.90.1	Surge Withstand Capability (SWC) Fast Transient Test
IEEE C37.90.2	Radio Frequency Interference
IEEE C37.98	Seismic Testing (fragility) of Protective and Auxiliary Relays
ANSI C37.2	Electric Power System Device Function Numbers
IEC 255-21-1	Vibration
IEC 255-22-2	Electrostatic Discharge
IEC 255-5	Insulation (Impulse Voltage Withstand)

Verification Test: A test performed upon initial installation and repeated periodically to determine that there is continued acceptable performance.

Wind, Net Meter, Residential Applicant: A residential applicant who is proposing to install a wind electric generating system, not to exceed a combined rated capacity of 25 kW, located and used at the applicant's primary residence, per the requirements of New York State Public Service Law §66-1.

Wind, Net Meter, Non-Residential Applicant: A non-residential applicant who is proposing to install a wind electric generating system located and used at the applicant's premises, not to exceed the customer's peak load as measured over the prior 12-month period or 2 MW, whichever is less, pursuant to New York State Public Service Law §66-1.

Wind, Net Meter, Farm Applicant: A farm applicant who is proposing to install a wind electric generating system, not to exceed a combined rated capacity of 500 kW, located and used at the applicant's primary residence, per the requirements of New York State Public Service Law §66-1.

APPENDIX A

NEW YORK STATE
STANDARDIZED CONTRACT
FOR INTERCONNECTION OF NEW DISTRIBUTED GENERATION UNITS WITH CAPACITY OF 2 MW OR LESS CONNECTED IN PARALLEL WITH UTILITY DISTRIBUTION SYSTEMS

Customer Information:	**Company Information:**
Name: _____	Name: _____
Address: _____	Address: _____
Telephone: _____	Telephone: _____
Fax: _____	Fax: _____
Email: _____	Email: _____

Unit Application/File No. _____

DEFINITIONS

Dedicated Facilities means the equipment and facilities on the Company's system necessary to permit operation of the Unit in parallel with the Company's system.

Delivery Service means the services the Company may provide to deliver capacity or energy generated by Customer to a buyer to a delivery point(s), including related ancillary services.

"Net energy metering" means the use of a net energy meter to measure, during the billing period applicable to a customer-generator, the net amount of electricity supplied by an electric corporation and provided to the corporation by a customer-generator.

"SIR" means the New York State Standardized Interconnection Requirements for new distributed generation units with a nameplate capacity of 2 MW or less connected in parallel with the Company's distribution system

"Unit" means the distributed generation Unit with a nameplate capacity of 2 MW or less located on the Customer's premises at the time the company approves such Unit for operation in parallel with the Company's system. This Agreement relates only to such Unit, but a new agreement shall not be required if the customer makes physical alterations to the Unit that do not result in an increase in its nameplate generating capacity. The nameplate generating capacity of the Unit shall not exceed 2 MW.

I. TERM AND TERMINATION

1.1 Term: This Agreement shall become effective when executed by both Parties and shall continue in effect until terminated.

1.2 Termination: This Agreement may be terminated as follows:

a. The Customer may terminate this Agreement at any time, by giving the Company sixty (60) days' written notice.

b. Failure by the Customer to seek final acceptance by the Company within twelve (12) months after completion of the utility construction process described in the SIR shall automatically terminate this Agreement.

c. Either Party may, by giving the other Party at least sixty (60) days' prior written notice, terminate this Agreement in the event that the other Party is in default of any of the material terms and conditions of this Agreement. The terminating Party shall specify in the notice the basis for the termination and shall provide a reasonable opportunity to cure the default.

d. The Company may, by giving the customer at least sixty (60) days' prior written notice, terminate this Agreement for cause. The Customer's non-compliance with an upgrade to the SIR, unless the Customer's installation is "grandfathered," shall constitute good cause.

1.3 Disconnection and Survival of Obligations: Upon termination of this Agreement the Unit will be disconnected from the Company's electric system. The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of the termination.

1.4 Suspension: This Agreement will be suspended during any period in which the Customer is not eligible for delivery service from the Company.

II. SCOPE OF AGREEMENT

2.1 Scope of Agreement: This Agreement relates solely to the conditions under which the Company and the Customer agree that the Unit may be interconnected to and operated in parallel with the Company's system.

2.2 Electricity Not Covered: The Company shall have no duty under this Agreement to account for, pay for, deliver, or return in kind any electricity produced by the Facility and delivered into the Company's System unless the system is net metered as described in Public Service Law Sections 66-j or 66-l.

III. INSTALLATION, OPERATION AND MAINTENANCE OF UNIT

3.1 Compliance with SIR: Subject to the provisions of this Agreement, the Company shall be required to interconnect the Unit to the Company's system, for purposes of parallel operation, if the Company accepts the Unit as in compliance with the SIR. The Customer shall have a continuing obligation to maintain and operate the Unit in compliance with the SIR.

3.2 Observation of the Unit - Construction Phase: The Company may, in its discretion and upon reasonable notice, conduct reasonable on-site verifications during the construction of the Unit. Whenever the Company chooses to exercise its right to conduct observations herein it shall specify to the Customer its reasons for its decision to conduct the observation. For purposes of this paragraph and paragraphs 3.3 through 3.5, the term "on-site verification" shall not include testing of the Unit, and verification tests shall not be required except as provided in paragraphs 3.3 and 3.4.

3.3 Observation of the Unit - Ten-day Period: The Company may conduct on-site verifications of the Unit and observe the execution of verification testing within a reasonable period of time, not exceeding ten (10) business days after system installation. The applicant's facility will be allowed to commence parallel operation upon satisfactory completion of the verification test. The applicant must have complied with and must continue to comply with all contractual and technical requirements.

3.4 Observation of the Unit - Post-Ten-day Period: If the Company does not perform an on-site verification of the Unit and observe the execution of verification testing within the ten-day period, the Customer will send the utility within five (5) days of the verification testing a written notification certifying that the Unit has been installed and tested in compliance with the SIR, the utility-accepted design and the equipment manufacturer's instructions. The Customer may begin to produce energy upon satisfactory completion of the verification test. After receiving the verification test notification, the Company will either issue to the applicant a formal letter of acceptance for interconnection, or may request that the applicant and utility set a date and time to conduct an on-site verification of the Unit and make reasonable inquiries of the Customer, but only for purposes of determining whether the verification tests were properly performed. The Customer 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.

3.5 Observation of the Unit - Operations: The Company may conduct on-site verification of the operations of the Unit after it commences operations if the Company has a reasonable basis for doing so based on its responsibility to provide continuous and reliable utility service or as authorized by the provisions of the Company's Retail Tariff relating to the verification of customer installations generally.

3.6 Costs of Dedicated Facilities: During the term of this Agreement, the Company shall design, construct and install the Dedicated Facilities. The Customer shall be responsible for paying the incremental capital cost of such Dedicated Facilities attributable to the Customer's Unit. All

costs associated with the operation and maintenance of the Dedicated Facilities after the Unit first produces energy shall be the responsibility of the Company.

IV. DISCONNECTION OF THE UNIT

4.1 Emergency Disconnection: The Company may disconnect the Unit, without prior notice to the Customer (a) to eliminate conditions that constitute a potential hazard to Company personnel or the general public; (b) if pre-emergency or emergency conditions exist on the Company system; (c) if a hazardous condition relating to the Unit is observed by a utility inspection; or (d) if the Customer has tampered with any protective device. The Company shall notify the Customer of the emergency if circumstances permit.

4.2 Non-Emergency Disconnection: The Company may disconnect the Unit, after notice to the responsible party has been provided and a reasonable time to correct, consistent with the conditions, has elapsed, if (a) the Customer has failed to make available records of verification tests and maintenance of his protective devices; (b) the Unit system interferes with Company equipment or equipment belonging to other customers of the Company; (c) the Unit adversely affects the quality of service of adjoining customers.

4.3 Disconnection by Customer: The Customer may disconnect the Unit at any time.

4.4 Utility Obligation to Cure Adverse Effect: If, after the Customer meets all interconnection requirements, the operations of the Company are adversely affecting the performance of the Unit or the Customer's premises, the Company shall immediately take appropriate action to eliminate the adverse effect. If the Company determines that it needs to upgrade or reconfigure its system the Customer will not be responsible for the cost of new or additional equipment beyond the point of common coupling between the Customer and the Company.

V. ACCESS

5.1 Access to Premises: The Company shall have access to the disconnect switch of the Unit at all times. At reasonable hours and upon reasonable notice consistent with Section III of this Agreement, or at any time without notice in the event of an emergency (as defined in paragraph 4.1), the Company shall have access to the Premises.

5.2 Company and Customer Representatives: The Company shall designate, and shall provide to the Customer, the name and telephone number of a representative or representatives who can be reached at all times to allow the Customer to report an emergency and obtain the assistance of the Company. For the purpose of allowing access to the premises, the Customer shall provide the Company with the name and telephone number of a person who is responsible for providing access to the Premises.

5.3 Company Right to Access Company-Owned Facilities and Equipment: If necessary for the purposes of this Agreement, the Customer shall allow the Company access to the Company's

equipment and facilities located on the Premises. To the extent that the Customer does not own all or any part of the property on which the Company is required to locate its equipment or facilities to serve the Customer under this Agreement, the Customer shall secure and provide in favor of the Company the necessary rights to obtain access to such equipment or facilities, including easements if the circumstances so require.

VI. DISPUTE RESOLUTION

6.1 Good Faith Resolution of Disputes: Each Party agrees to attempt to resolve all disputes arising hereunder promptly, equitably and in a good faith manner.

6.2 Mediation: If a dispute arises under this Agreement, and if it cannot be resolved by the Parties within ten (10) business days after written notice of the dispute, the parties agree to submit the dispute to mediation by a mutually acceptable mediator, in a mutually convenient location in New York State, in accordance with the then current CPR Institute for Dispute Resolution Mediation Procedure, or to mediation by a mediator provided by the New York Public Service Commission. The Parties agree to participate in good faith in the mediation for a period of up to 90 days. If the Parties are not successful in resolving their disputes through mediation, then the parties may refer the dispute for resolution to the New York Public Service Commission, which shall maintain continuing jurisdiction over this agreement.

6.3 Escrow: If there are amounts in dispute of more than two thousand dollars ($2,000), the Customer shall either place such disputed amounts into an independent escrow account pending final resolution of the dispute in question, or provide to the Company an appropriate irrevocable standby letter of credit in lieu thereof.

VII. INSURANCE

7.1 The Customer is not required to provide general liability insurance coverage as part of this Agreement, the SIR, or any other Company requirement. Due to the risk of incurring damages however, the Public Service Commission recommends that every distributed generation customer protect itself with insurance.

7.2 Effect: The inability of the Company to require the Customer to provide general liability insurance coverage for operation of the Unit is not a waiver of any rights the Company may have to pursue remedies at law against the Customer to recover damages.

VIII. MISCELLANEOUS PROVISIONS

8.1 Beneficiaries: This Agreement is intended solely for the benefit of the parties hereto, and if a party is an agent, its principal. Nothing in this Agreement shall be construed to create any duty to, or standard of care with reference to, or any liability to, any other person.

8.2 Severability: If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction, such

portion or provision shall be deemed separate and independent, and the remainder of this Agreement shall remain in full force and effect.

8.3 Entire Agreement: This Agreement constitutes the entire Agreement between the parties and supersedes all prior agreements or understandings, whether verbal or written.

8.4 Waiver: No delay or omission in the exercise of any right under this Agreement shall impair any such right or shall be taken, construed or considered as a waiver or relinquishment thereof, but any such right may be exercised from time to time and as often as may be deemed expedient. In the event that any agreement or covenant herein shall be breached and thereafter waived, such waiver shall be limited to the particular breach so waived and shall not be deemed to waive any other breach hereunder.

8.5 Applicable Law: This Agreement shall be governed by and construed in accordance with the law of the State of New York.

8.6 Amendments: This Agreement shall not be amended unless the amendment is in writing and signed by the Company and the Customer.

8.7 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, lightning, 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 Party 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.

8.8 Assignment to Corporate Party: At any time during the term, the Customer may assign this Agreement to a corporation or other entity with limited liability, provided that the Customer obtains the consent of the Company. Such consent will not be withheld unless the Company can demonstrate that the corporate entity is not reasonably capable of performing the obligations of the assigning Customer under this Agreement.

8.9 Assignment to Individuals: At any time during the term, a Customer may assign this Agreement to another person, other than a corporation or other entity with limited liability, provided that the assignee is the owner, lessee, or is otherwise responsible for the Unit.

8.10 Permits and Approvals: Customer shall obtain all environmental and other permits lawfully required by governmental authorities prior to the construction and for the operation of the Unit during the term of this Agreement.

8.11 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 or leased by the Customer from third parties, including without limitation the Unit and any structures, equipment, wires, appliances or devices appurtenant thereto.

ACCEPTED AND AGREED:

Customer: _____

Date: _____

Company: _____

Date: _____

APPENDIX B

NEW YORK STATE STANDARIZED APPLICATION FOR SINGLE PHASE ATTACHMENT OF PARALLEL GENERATION EQUIPMENT 25 KW OR LESS TO THE ELECTRIC SYSTEM OF

Utility:_____

Customer:

Name: _____ Phone: (___)_____

Fax: (___)_____

Email: _____

Address:_____ Municipality: _____

Utility Account Number:_____

Agent (if any):

Name: _____ Phone: (___)_____

Fax: (___)_____

Email: _____

Address:_____ Municipality: _____

Consulting Engineer or Contractor:

Name: _____ Phone: (___)_____

Address:_____

_____

Estimated In-Service Date: _____

Existing Electric Service:

Capacity: _____Amperes Voltage: _____Volts

Service Character: ( )Single Phase ( )Three Phase

Location of Protective Interface Equipment on Property:

(include address if different from customer address)

_____

Energy Producing Equipment/Inverter Information:

Manufacturer: _____

Model No. _____ Version No. _____

( )Synchronous ( )Induction ( )Inverter ( )Other_____

Rating: _____kW Rating: _____kVA

Generator Connection: ( )Delta ( )Wye ( )Wye Grounded

Interconnection Voltage: _____Volts

System Type Tested (Total System): ( )Yes ( )No; attach product literature

Equipment Type Tested (i.e. Inverter, Protection System):

( )Yes ( )No; attach product literature

Three line Diagram attached: ( )Yes

Installation Test Plan attached: ( )Yes

If applicable, Certification to UL 1741 attached: ( )Yes

Signature:

_____	_____	_____
CUSTOMER/AGENT SIGNATURE	TITLE	DATE

APPENDIX C

NEW YORK STATE STANDARIZED APPLICATION FOR ATTACHMENT OF PARALLEL GENERATION EQUIPMENT ABOVE 25 KW UP TO 2 MW TO THE ELECTRIC SYSTEM OF

Utility:_____

Customer:
Name: _____ Phone: (___)_____

Fax: (___)_____

Email: _____

Address:_____ Municipality: _____

Utility Account Number:_____

Agent (if any):
Name: _____ Phone: (___)_____

Fax: (___)_____

Email: _____

Address:_____ Municipality: _____

Consulting Engineer or Contractor:
Name: _____ Phone: (___)_____

Address:_____

_____

Estimated In-Service Date: _____

Existing Electric Service:
Capacity: _____Amperes Voltage: _____Volts
Service Character: ( )Single Phase ( )Three Phase
Secondary 3 Phase Transformer Connection ( )Wye ( )Delta

Location of Protective Interface Equipment on Property:
(include address if different from customer address)

_____

Energy Producing Equipment/Inverter Information:
Manufacturer: _____
Model No. _____ Version No. _____
( )Synchronous ( )Induction ( )Inverter ( )Other_____
Rating: _____kW Rating: _____kVA
Rated Output: ____VA Rated Voltage: ____Volts

Rate Frequency: ____Hertz Rated Speed: ____RPM
Efficiency: ____% Power Factor: ____%
Rated Current: ____Amps Locked Rotor Current: ____Amps
Synchronous Speed: ____RPM Winding Connection:
Min. Operating Freq./Time:
Generator Connection: ( )Delta ( )Wye ( )Wye Grounded
System Type Tested (Total System): ( )Yes ( )No; attach product literature
Equipment Type Tested (i.e. Inverter, Protection System):
( )Yes ( )No; attach product literature
Three line Diagram attached: ( )Yes
Verification Test Plan attached: ( )Yes
If applicable, Certification to UL 1741 attached: ( )Yes

For Synchronous Machines:

Submit copies of the Saturation Curve and the Vee Curve
( )Salient ( )Non-Salient
Torque: _____lb-ft Rated RPM: _____
Field Amperes: _____ at rated generator voltage and current
and _____% PF over-excited
Type of Exciter: _____
Output Power of Exciter: _____
Type of Voltage Regulator: _____
Direct-axis Synchronous Reactance (X_d) _____ohms
Direct-axis Transient Reactance (X'_d) _____ohms
Direct-axis Sub-transient Reactance (X''_d) _____ohms

For Induction Machines:

Rotor Resistance (R_r)_____ohms Exciting Current ____Amps
Rotor Reactance (X_r)_____ohms Reactive Power Required:
Magnetizing Reactance (X_m)_____ohms ___VARs (No Load)
Stator Resistance (R_s)_____ohms ___VARs (Full Load)
Stator Reactance (X_s)_____ohms
Short Circuit Reactance (X''_d)_____ohms Phases:
Frame Size: _____ Design Letter: ____ ( )Single
Temp. Rise: _____^{o}C. ( )Three-Phase

For Inverters:

Manufacturer: _____ Model:
Type: ___ ( )Forced Commutated ( )Line Commutated
Rated Output: _____Amps _____Volts
Efficiency: _____%

Signature:

_____ _____ _____

CUSTOMER/AGENT SIGNATURE TITLE DATE