West Virginia Net Metering Service

Customer Information Package

APPALACHIAN POWER

An AEP Company

Net Metering - The means of measuring the difference between the electricity supplied by an electric utility and the electricity generated from an alternative or renewable energy resource facility owned or operated by an electric retail customer when any portion of the electricity generated by the alternative energy resource facility is used to offset part or all of the electric retail customer requirements for electricity.

This document is intended to provide documents for commonly installed inverter based photovoltaic and/or wind turbine generating systems (25kW or less) that may qualify for Net Metering Service. Documents for non-inverter based and/or larger systems may be requested from Jacob H. Crocker (jhcrocker@aep.com) at 614-716-2183.

The Company's Net Metering Service Tariff (Tariff N.M.S.) provides detailed information regarding availability of the service, charges, metering, conditions of service, and technical requirements.

Company approval of connecting a generator to its distribution system is required.

Summary of the process:

1. A completed Interconnection Application is submitted to the Company (includes: manufacturer's literature illustrating UL 1741 compliance, applicable fee, proof of insurance, and electrical one-line diagram)
2. Company reviews Application.
3. Company will notify customer of approval or disapproval of interconnection and provide any applicable conditions.
4. Customer submits completed Certificate of Completion, signed Interconnection Agreement(s), schedule and plan to complete commission test as required by IEEE 1547 to the Company.
5. Customer completes all conformance testing (see 4.1.5.e of the Public Service Commission of West Virginia Interconnection Standards) required by IEEE 1547 and notifies Company of test results within 10 business days.
6. Company accepts test results or notifies customer of deficiencies within 10 business days
7. Company executes Interconnection Agreement thereby granting the customer the right to operate the generator connected to the AEP system.
8. Company may conduct on-site inspections to verify the proper installation and continuing safe operations of the generating facilities.

(Note: Some documents within are dated and subject to change. It may be necessary to contact the Company for the latest documents.)

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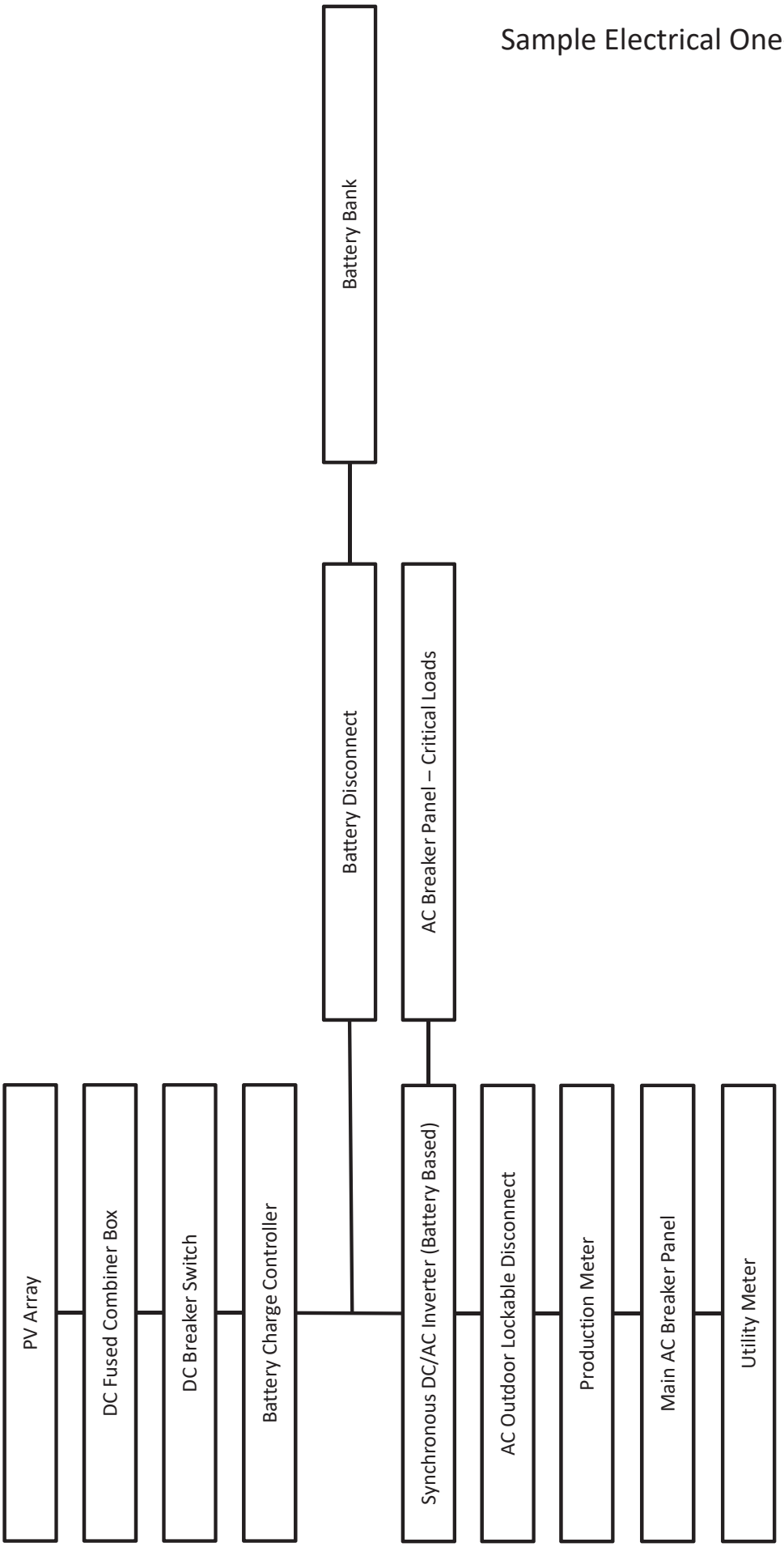
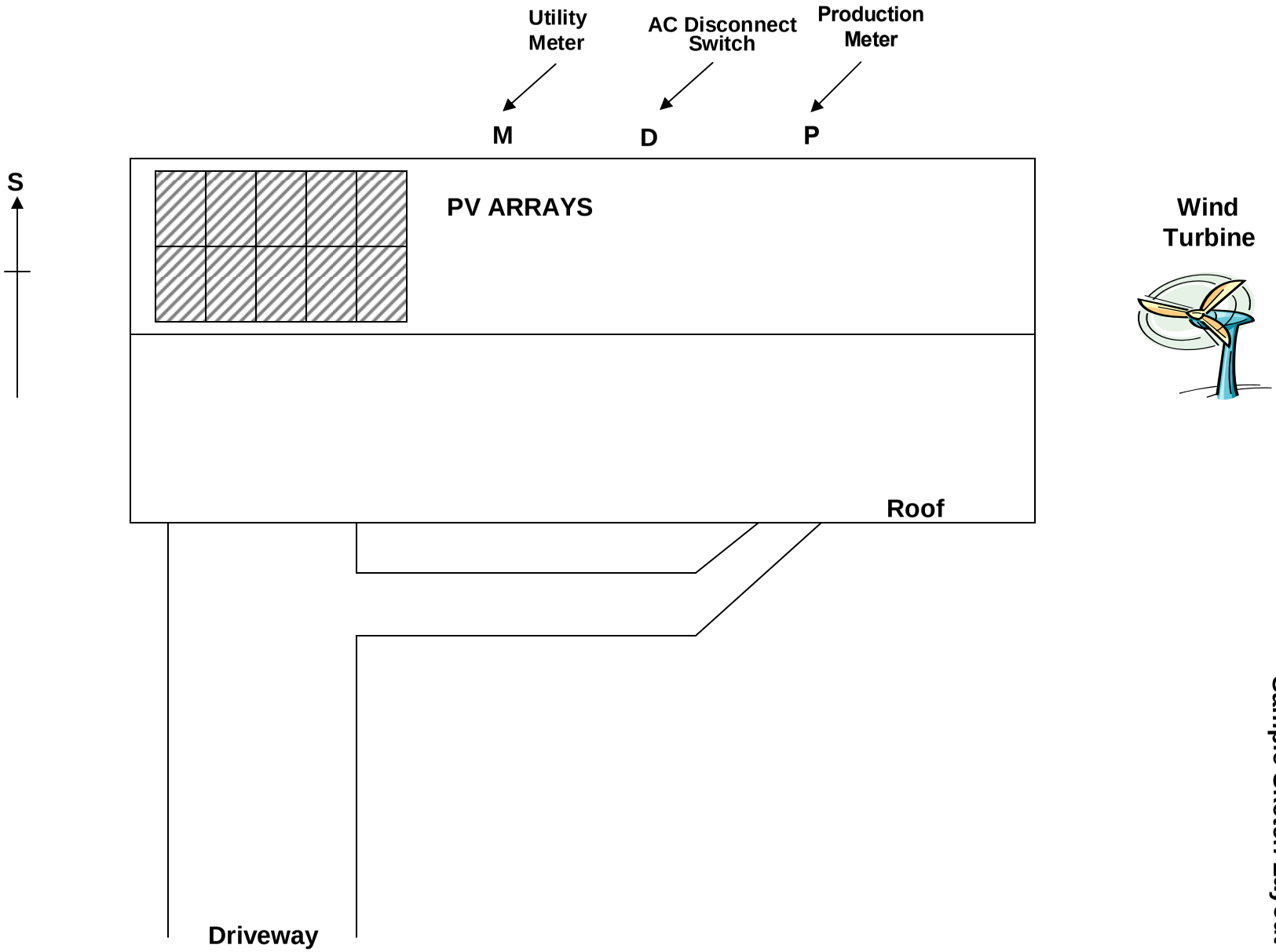
Application Checklist

- ☐ Completed Application
- ☐ Secured general liability insurance (minimum $100,000) – attach proof of insurance (e.g. Certificate of Insurance)
- ☐ Attached electrical one-line diagram of proposed installation
- ☐ Enclosed inverter documentation illustrating UL 1741 compliance (e.g. manufacturer's specification sheet)
- ☐ Enclosed $30 check

Sample Electrical One-Line





Sample Sketch Layout

TITLE 150
LEGISLATIVE RULE
PUBLIC SERVICE COMMISSION

SERIES 33
RULES GOVERNING ELECTRIC UTILITY NET METERING ARRANGEMENTS AND INTERCONNECTIONS

§150-33-1. General.

1.1. Scope. -- The following rules govern the net metering arrangements and interconnections between electric utilities and electric utility customers that are also generators of electricity using alternative and renewable resources. The rules also govern interconnection standards between electric utilities and small power producers, including net metering customers.

1.2. Authority. -- W. Va. Code §24-2F-8.

1.3. Filing Date. -- October 16, 2019.

1.4. Effective Date. -- November 15, 2019.

1.5. Application of Rules.

1.5.1. If hardship results from the application of any rule contained herein or if unusual difficulty is involved in immediately complying with any rule, or upon other good cause shown, application may be made to the Commission for a temporary or permanent exemption or waiver from its provisions. No application for modification or exemption will be considered by the Commission unless the application includes a full and complete justification for such action. Furthermore, to the extent the rule is based on a specific statutory requirement, the Commission is unable to waive such a rule based upon specific statutory requirement.

§150-33-2. Definitions.

2.1. "Alternative energy resources" -- The following resources, methods, projects or technologies for the production or generation of electricity:

2.1.1. Advanced coal technology -- A technology used in a new or existing energy generating facility to reduce airborne carbon emissions associated with the combustion or use of coal and includes, but is not limited to, carbon dioxide capture and sequestration technology, supercritical technology, advanced supercritical technology as that technology is determined by the Public Service Commission, ultrasupercritical technology and pressurized fluidized bed technology and any other resource, method, project or technology certified by the Commission as advanced coal technology.

2.1.2. Coal bed methane;

2.1.3. Natural gas;

2.1.4. Fuel produced by a coal gasification or liquification facility;

2.1.5. Synthetic gas;

2.1.6. Integrated gasification combined cycle technologies;

2.1.7. Waste coal -- A technology by which electricity is produced by the combustion of the by-product, waste or residue created from processing coal (such as gob);

2.1.8. Tire-derived fuel; and

2.1.9. Pumped storage hydroelectric projects.

2.2. "Alternative energy resource facility" -- A facility or equipment that generates electricity from alternative energy resources.

2.3. "Commission" -- The Public Service Commission of West Virginia.

2.4. "Cross-subsidization" -- The practice of charging costs, including the incremental cost of interconnection and the net of the difference in the cost of a traditional meter and the metering equipment required for net metering, directly incurred by the electric utility in accommodating a net metering system to electric retail customers who are not Customer-generators.

2.5. "Incremental Cost of Interconnection" -- The additional cost incurred by the Utility to connect to a Customer-generator that would not be incurred to connect to a customer that is not a Customer-generator.

2.6. "Customer-generator" -- An electric retail customer who owns or leases, and operates an alternative or renewable energy resource facility ("generation project") within this State that meets the following criteria: the generation project is located on the same tract of land as its metering point(s) or if the generation facility is located on contiguous tract(s), the generation project is located within two miles of the customer's metering point(s); the tract or contiguous tracts are owned or leased by the customer as a private residence or used by a commercial or industrial customer in the normal course of business; the generation project has a nameplate capacity of not greater than 25 kilowatts if installed at a residential service location, not greater than 500 kilowatts if installed at a commercial service location, or not greater than 2 megawatts if installed at an industrial service location; provided that, the maximum nameplate capacity for a Customer-generator served by rural electric cooperatives, municipally-owned electric utilities or utilities serving less than thirty-thousand residential customers shall be 50 kilowatts; and, the generation project is designed and installed to operate in parallel with the electric utility distribution system without adversely affecting the operation of equipment and service of the electric utility and its customers and without presenting safety hazards to the electric utility or customers.

2.7. "Customer-generator facility" -- The alternative or renewable energy resource equipment operated by a Customer-generator to generate, manage, monitor and deliver electricity to the electric utility.

2.8. "Electric distribution system" -- A portion of an electric system which delivers electricity from transformation points on the transmission system to points of connection at a customer premises.

2.9. "Electric retail customer" -- A direct purchaser of electric power whose service is billed by an electric utility based on meter reading, but excludes an occupant of a building or facility where the occupants are not direct purchasers of electricity.

2.10. "Electric utility" -- The electric distribution company or electric generation supplier that sells electricity to retail customers in West Virginia.

2.11. "kW" -- Kilowatt -- A unit of power representing 1,000 watts. A kW equals 1/1000 of a MW.

2.12. “MW” -- Megawatt -- A unit of power representing 1,000,000 watts. A MW equals 1,000 kWs.

2.13. “Meter aggregation” -- The combination of readings from and billing for all meters regardless of rate class on eligible properties owned or leased by a Customer-generator for eligible properties located within the service territory of a single electric utility. Meter aggregation may be completed through physical or virtual meter aggregation.

2.14. “Net metering” -- The means of measuring the difference between the electricity supplied by an electric utility and the electricity generated from a Customer-generator when any portion of the electricity generated by the alternative energy resource facility is used to offset part or all of the Electric retail customer requirements for electricity.

2.15. “Non-standard meter” -- Meter capable of measuring generator output and time-of-day usage.

2.16. “Physical meter aggregation” -- The physical rewiring of all meters regardless of rate class on properties owned or leased by a Customer-generator to provide a single point of contact for a meter or meters to measure net electric service for that Customer-generator.

2.17. “Renewable energy resources” -- The following resources, methods, projects or technologies for the production or generation of electricity:

2.17.1. Solar photovoltaic or other solar electric energy;

2.17.2. Solar thermal energy;

2.17.3. Wind power;

2.17.4. Run of river hydropower -- A hydropower facility that, during normal operating conditions, does not utilize storage and that has outflow from the project that approximates the inflow of the project. The flow regime below a run of river hydropower project will essentially be the river’s natural regime, except in special circumstances, such as might follow reinstallation of flashboards, project shutdowns, or as required pursuant to flood control and navigation control requirements of the U.S. Army Corps of Engineers or the terms and conditions of the facility’s Federal Energy Regulatory Commission license to promote the environment, recreation, or fish habitat. Under those circumstances, a change in storage contents is necessary, and outflow is reduced below inflow for a period. Another circumstance is the flow transition after an idle station is brought on line, causing initial flows downstream to exceed inflow.

2.17.5. Geothermal energy -- Electricity produced by extracting hot water or steam from geothermal reserves in the earth’s crust and supplied to steam turbines that drive generators;

2.17.6. Biomass energy -- A technology by which electricity is produced from a nonhazardous organic material that is available on a renewable or recurring basis, including pulp mill sludge;

2.17.7. Biologically derived fuel -- Methane gas, ethanol, or biodiesel fuel;

2.17.8. Fuel cell technology -- Any electrochemical device that converts chemical energy in a hydrogen-rich fuel directly into electricity, heat and water without combustion; and,

2.17.9. Recycled energy -- Useful thermal, mechanical or electrical energy produced from: (i) exhaust heat from any commercial or industrial process; (ii) waste gas, waste fuel or other forms of energy that would otherwise be flared, incinerated, disposed of or vented; and (iii) electricity or equivalent mechanical energy extracted from a pressure drop in any gas, excluding any pressure drop to a condenser that subsequently vents the resulting heat.

2.18. "Renewable energy resource facility" -- A facility or equipment that generates electricity from renewable energy resources.

2.19. "Reporting period" -- The 12-month period from June 1 through May 31.

2.20. "Virtual meter aggregation" -- The combination of readings and billing for all meters regardless of rate class on eligible properties owned or leased by a Customer-generator by means of the electric utility billing process, rather than through physical rewiring of the Customer-generator property for a physical, single point of contact.

§150-33-3. General Provisions.

3.1. An electric utility shall offer net metering to a Customer-generator that generates electricity on the Customer-generator side of the meter using alternative or renewable energy sources, on a first-come, first-served basis based on the date of application for interconnection as provided in these rules and pursuant to a standard tariff. An electric utility shall offer net metering to Customer-generators, on a first-come, first-served basis so long as the total generation capacity installed by all Customer-generators is no greater than three percent (3%) of the electric utility aggregate customer peak demand in the State during the previous year, of which no less than one-half percent (0.5%) is reserved for residential Customer-generators.

3.2. An electric utility may apply to the Commission for authority to limit the addition of net metering facilities when the capacity of all distributed generation and net metering facilities on a distribution line section exceeds fifteen percent (15%) of the peak load on that line section for three-phase circuits, and five percent (5%) of the peak load on that section for single-phase circuits.

3.3. An electric utility shall file a tariff with the Commission consistent with these rules, in the form of Form No. 1 attached to these rules, that provides for net metering and net metering protocols that enable the electric utility to offer net metering to Customer-generators taking service from the electric utility.

3.4. An electric utility shall prepare information about net metering consistent with these rules and disclose that information annually to its customers by bill insert and by posting information on its web site.

3.5. If construction or upgrades of the electric utility system that are not required to connect customers that are not Customer-generators are required in order to interconnect the Customer-generator facility, additional charges to cover incremental costs incurred by the electric utility shall be determined by the electric utility and paid by the Customer-generator. The Customer-generator shall pay any additional charges, as determined by the electric utility, for equipment, labor, testing or inspections requested by the customer.

3.6. A Customer-generator shall install, operate and maintain its Customer-generator facility in accordance with the requirements of these rules.

3.7. An electric utility may not require additional equipment or insurance or impose any other fee or requirement unless the additional equipment, insurance or other requirement is specifically authorized under these rules and included in the electric utility tariff approved by the Commission.

3.8. All electric utilities, Customer-generators, and other persons or entities governed by these rules shall comply with the Institute of the Electrical and Electronics Engineers (IEEE) standards at all times, and as the same shall be amended. In the event, however, a net metering customer governed by these rules prior to November 15, 2019 is required to make equipment modifications to bring the Customer-generator's system into compliance with these rules, as amended, the Customer-generator shall be afforded a period of time not to exceed six (6) months from the date the Customer-generator's electric utility provider provides notice of the enactment of the amended rules to bring the Customer-generator facility into compliance.

§150-33-4. Continuing Obligations.

4.1. A Customer-generator shall maintain general liability insurance providing the following coverage:

4.1.1. A Customer-generator with a Customer-generator facility with a nameplate capacity of up to 50 kW shall maintain general liability insurance in the amount of one hundred thousand dollars ($100,000).

4.1.2. A Customer-generator with a Customer-generator facility with a nameplate capacity of greater than 50 kW and up to 500 kW shall maintain general liability insurance in the amount of five hundred thousand dollars ($500,000).

4.1.3. A Customer-generator with a Customer-generator facility with a nameplate capacity of greater than 500 kW shall maintain general liability insurance in the amount of one million dollars ($1,000,000).

4.2. A Customer-generator facility is transferable to other persons or service locations only after written notification by the Customer-generator to the electric utility and verification by a licensed electrician that the installation is in compliance with all applicable safety and power quality standards, and that the transferee has met all insurance requirements.

§150-33-5. Netting Monthly Charges.

5.1. Monthly charges for energy, and demand where applicable, to serve the Customer-generator net or total load shall be determined according to the electric utility net metering tariff for Customer-generators.

5.1.1. Charges for energy consumption contained in the net metering tariff for Customer-generators shall be the same as charges for energy consumption contained in the standard service tariff under which the Customer-generator would otherwise be served.

5.1.2. The fixed monthly minimum bills and charges contained in the net metering tariff for Customer-generators shall not exceed comparable charges contained in the standard service tariff under which the Customer-generator would otherwise be served by more than the costs directly incurred by the electric utility in accommodating a net metering system. Charges may include: customer charges; other monthly charges not related to energy consumption; and charges for incremental cost of interconnection and the net difference in the cost of a traditional meter and the bi-directional meter requirement for net metering directly incurred by the electric utility in accommodating a net metering system to electric retail customers who are not Customer-generators.

5.2. Measurement and Charges. The measurement of net electrical energy supplied or generated will be calculated as follows:

5.2.1. The net electrical energy produced and the electrical energy consumed during the billing period shall be measured in a manner consistent with the normal electric utility metering practice.

5.2.2. The electric utility shall credit a Customer-generator at the full retail rate, or the net metering credit approved by the Commission in a general rate filing, for each kW hour produced by an alternative or renewable energy resource installed on the Customer-generator side of the electric meter and delivered to the electric utility's distribution system through the Customer-generator's electric meter, up to the total amount of electricity delivered by the electric utility to that Customer-generator during the billing period. Provided, that the rate credits shall not reduce the bill below the fixed monthly minimum bill plus any separate charge to the net metering customers for the Incremental Cost of Connection.

5.2.3. If a Customer-generator supplies more electricity to the electric distribution system than the electric utility delivers to the Customer-generator in a given billing period, the excess kW hours shall be carried forward and credited against the Customer-generator usage in subsequent billing periods in accordance with 5.2.2. above. Provided that, if a Customer-generator terminates service with the electric utility, the electric utility is not required to provide compensation to the Customer-generator for any outstanding kW hour credits.

5.2.4. For Customer-generators involved in virtual meter aggregation programs, a credit shall be applied first to the meter through which the Customer-generator facility supplies electricity to the distribution system, then prorated equally to the remaining meters for the Customer-generator accounts.

§150-33-6. Meters and Metering.

6.1. The electric utility may elect to accomplish net energy metering for a Customer-generator by using (i) a standard meter capable of measuring the net flow of electricity in two (2) directions, (ii) two separate standard meters configured to measure gross inflow of electricity and gross outflow of electricity, or (iii) a non-standard meter(s). If an electric utility elects to meter under (i), (ii), or (iii), net metering customers will be responsible for only the incremental cost to meter a Customer-generator under option (i) that would not be incurred to meter a customer that is not a Customer-generator. If an electric utility elects to install a non-standard meter(s), the electric utility will bear the expenses for the non-standard metering, including the cost of the meter and installation of the meter, that exceed the incremental cost to meter a Customer-generator under option (i) that would not be incurred to meter a customer that is not a Customer-generator. Customer-generators may not opt out of the installation of non-standard meters.

6.2. A customer applying to be a Customer-generator after November 15, 2019 must agree to the installation of a blank meter socket in a utility-approved accessible location that would allow the electric utility to directly measure the customer-owned generating facility's output with either a standard or non-standard meter. The blank meter socket may, at the initial discretion of the electric utility, be installed by either the electric utility or the Customer-generator. If installed by the Customer-generator, the electric utility shall supply the Customer-generator with the blank meter socket or reimburse the Customer-generator for that cost and fully reimburse the Customer-generator for the installation cost.

6.3. If two meters are used to measure energy flows, for each applicable billing period including time-of-day billing periods, the reading of the meter measuring the flow of energy from the Customer-generator to the electric utility shall be subtracted from the reading of the meter measuring the flow of energy from the electric utility to the Customer-generator to obtain a measurement of net kW hours for billing purposes.

6.4. The electric utility shall offer Customer-generators a time-differentiated energy tariff rate or a non-time-differentiated energy rate, if the electric utility offers the choice to other customers in the same rate class as the Customer-generator. If the Customer-generator uses a meter and billing arrangement that has time-differentiated rates, the electric utility shall calculate net bills for each time period.

6.5. Virtual meter aggregation on properties owned or leased and operated by a Customer-generator shall be allowed for purposes of net metering. Virtual meter aggregation shall be limited to active meters serving a Customer-generator located on properties owned or leased within two (2) miles of the boundaries of the Customer-generator's single or contiguous property, as provided in subsection 2.6, and within a single electric utility's service territory. Physical meter aggregation shall be at the expense of the Customer-generator. The electric utility shall provide the necessary equipment to complete physical aggregation. If the Customer-generator requests virtual meter aggregation, it shall be provided by the electric utility at the expense of the Customer-generator. The Customer-generator shall be responsible for any incremental expense entailed in processing his account on a virtual meter aggregation basis.

§150-33-7. Report to the Commission.

7.1. An electric utility that offers net metering shall submit an annual net metering report to the Commission. The report shall be submitted by July 30 of each year, and shall include the following information for the twelve (12) months ending May 31 of that year: (i) the total number of net metered Customer-generator facilities, by resource type; (ii) the total rated generating capacity of net metering Customer-generators by resource type; (iii) net kW hours by month received from or delivered to net metered Customer-generators served through single bi-directional meters and an estimate of total kW hours by month produced by those single bi-directional metered Customer-generators with an explanation of the basis for the electric utility estimate; and (iv) kW hours by month delivered to and received from net metered Customer-generators served through separate inflow and outflow meters.

§150-33-8. Interconnection Obligation.

8.1. Subject to the requirements of these rules and the authorizing statute, an electric utility is obligated to interconnect a Customer-generator facility to its system. The electric utility and the customer must enter into an interconnection agreement, as set forth in the interconnection standards and technical requirements incorporated by reference in these rules as Form No. 2.

TARIFF N.M.S.
(Net Metering Service)
Form No. 1

Availability of Service

Available to residential and general service customers who own and operate an eligible electric generating facility designed to operate in parallel with the Company system. The total rated generating capacity of all customers served under this tariff shall be limited to three percent (3%) of the Company single hour peak load during the previous year, of which one-half percent (0.5%) is reserved for residential Customer-generators.

Conditions of Service

1. For the purposes of this tariff, an eligible Customer-generator must meet the definition of "Customer-generator" as set forth in the Commission Rules Governing Electric Utility Net Metering Arrangements and Interconnections, 150 C.S.R. 33 ("Net Metering Rules").

2. A Customer-generator seeking to interconnect an eligible electric generating facility to the Company system must submit to designated Company personnel a completed interconnection application, and a one-line diagram showing the configuration of the proposed net metering facility. The Company will provide copies of all applicable forms upon request.

3. An interconnection agreement between the Company and the Customer-generator must be executed before the Customer-generator facility may be interconnected with the Company system.

4. All generator equipment and installations must comply with the Company's technical requirements. All generator equipment shall be installed in accordance with the manufacturer specifications as well as all applicable provisions of the National Electrical Code and state and local codes. All generator equipment and installations shall comply with all applicable safety, performance and power quality standards, established by the National Electrical Code, the Institute of Electrical and Electronic Engineers, including having a disconnect readily accessible to the electric utility between the facilities of the Customer-generator and the electric utility, and accredited testing laboratories. The disconnect shall comply with Rule 4.1.7. or 4.2.7. of the Interconnection Standards.

5. The Customer-generator shall provide the Company proof of qualified installation of the Customer-generator facility. Certification by a licensed electrician shall constitute acceptable proof.

6. The Customer-generator shall install, operate, and maintain the Customer-generator facility in accordance with the manufacturer suggested practices for safe, efficient, and reliable operation in parallel with the Company system.

7. The Company may, at its own discretion, isolate any Customer-generator facility if the Company has reason to believe that continued interconnection with the Customer-generator facility creates or contributes to a system of emergency.

8. The Company may perform reasonable on-site inspections to verify the proper installation and continuing safe operation of the Customer-generator facility and the interconnection facilities, at reasonable times and upon reasonable advance notice to the Customer-generator.

9. A Customer-generator shall maintain general liability insurance providing the following coverage: 1) a Customer-generator with a Customer-generator facility with a nameplate capacity of up to 50 kW shall maintain general liability insurance in the amount of one hundred thousand dollars ($100,000); 2) a Customer-generator with a nameplate capacity of greater than 50 kW and up to 500 kW shall maintain general liability insurance in the amount of five hundred thousand dollars ($500,000); and 3) a Customer-generator with a Customer-generator facility with a nameplate capacity of greater than 500 kW shall maintain general liability coverage in the amount of one million dollars ($1,000,000). The Customer-generator must submit evidence of such insurance to the Company with the interconnection application. The Company's receipt of evidence of liability insurance does not imply an endorsement of the terms and conditions of the coverage.

10. An eligible Customer-generator facility is transferable to other persons or service locations only upon written notification by the Customer-generator to the Company and verification by a licensed electrician that the facility is in compliance with all applicable safety and power quality standards. All other conditions of service apply.

Metering

Net energy metering shall be accomplished by (i) using a standard meter capable of measuring the flow of electricity in two directions, (ii) two separate meters configured to measure gross inflow of electricity and gross outflow of electricity, or (iii) a non-standard meter(s). If offered to other customers in the same class as the Customer-generator, net energy flows may also be measured by time-of-day at the Customer-generator's option by (i) using a standard meter capable of measuring the flow of electricity in two directions by time-of-day, or (ii) two separate meters capable of measuring flows by time-of-day.

If the existing electrical meter installed at the Customer-generator facility is not capable of measuring the flow of electricity in two directions or by time-of-day as required above, the Company shall install new metering equipment for the Customer-generator at the expense of the Customer-generator for the incremental cost in accordance with the Rules Governing Electric Utility Net Metering Arrangements and Interconnections, 150 C.S.R. 33.

If two meters are used to measure energy flows, for each applicable billing period including time-of-day billing periods, the reading of the meter measuring the flow of energy from the Customer-generator to the Company shall be subtracted from the reading of the meter measuring the flow of energy from the Company to the Customer-generator to obtain a measurement of net kW hours for billing purposes.

Monthly Charges

Monthly charges shall be calculated using an identical rate structure to the structure that would apply to the customer if it were not a Customer-generator.

Rates:

Here the electric utility should include the rates applicable to each class of customer using the same rate structure and energy rates applicable to customers that are not Customer-generators.

Fixed monthly charges may include: customer charges, other monthly charges not related to energy consumption, charges for incremental cost of interconnection, and the net difference in the cost of a traditional meter and the bi-directional meter requirement for net metering directly incurred by the electric utility in accommodating a net metering system that would not be required for electric retail customers who are not Customer-generators as allowed by the rules of the Public Service Commission.

Fixed monthly minimum bills and charges that are different from such charges in applicable tariffs for customers that are not Customer-generators must be approved by the Public Service Commission and shall not exceed comparable charges contained in the standard service tariff under which the Customer-generator would otherwise be served by more than the incremental added costs directly incurred by the electric utility in accommodating a net metering system.

Measurement and Charges. The measurement of net electrical energy supplied or generated will be calculated as follows:

1. The net electrical energy produced or consumed during the billing period shall be measured in accordance with normal metering practices.

2. The Company shall credit a Customer-generator for each kW hour produced by an alternative or renewable energy resource installed on the Customer-generator side of the electric meter and delivered to the electric utility's electric distribution system through the Customer-generator's electric revenue meter, up to the total amount of electricity delivered by the electric utility to that customer during the billing period.

3. The electric utility shall credit a Customer-generator at the full retail rate for each kW hour produced by an alternative or renewable energy resource installed on the Customer-generator side of the electric meter and delivered to the electric utility's distribution system through the Customer-generator's electric meter, up to the total amount of electricity delivered by the electric utility to that Customer-generator during the billing period. Provided, that the rate credits shall not reduce the bill below the fixed monthly minimum bill plus any separate charge to the net metering customers for the Incremental Cost of Connection.

4. If a Customer-generator supplies more electricity to the electric distribution system than the Company delivers to the Customer-generator in a given billing period, the excess kW hours shall be carried forward and credited against the Customer-generator usage in subsequent billing periods in accordance with Rule 5.2.2. of the Rules Governing Electric Utility Net Metering Arrangements and Interconnections, 150 C.S.R. 33. Provided that, if a Customer-generator terminates service with the electric utility, the electric utility is not required to provide compensation to the Customer-generator for any outstanding kW hour credits.

5. For Customer-generators involved in virtual meter aggregation programs, a credit shall be applied first to the meter through which the Customer-generator facility supplies electricity to the distribution system, and then prorated equally to the remaining meters for the Customer-generator's accounts.

Equipment Design Requirements

Data for all major equipment proposed by the Customer to satisfy the Technical Requirements must be submitted for review and approval by the Company with a completed interconnection application. To facilitate review and approval, the Company will maintain a list of Pre-certified equipment.

The Company List of Pre-certified equipment is available upon request and contains Pre-certified equipment types, makes, and models of manufactured generating equipment and interconnection system components. This listing is based upon equipment certified by recognized national testing laboratories as suitable for interconnection with a distribution system based upon compliance with IEEE 1547.

The use of equipment that is not pre-certified may delay the Company review and approval of the customer's design. All interconnection equipment must be approved by the Company prior to being connected to the Company distribution system and before parallel operation is allowed.

The interconnection system hardware and software design requirements in the Technical Requirements are intended to assure protection of the Company distribution system.

INTERCONNECTION STANDARDS

1. Scope and Applicability.

1.1. These standards establish interconnection requirements for Distributed Resources (DR) units up to 2 MW in nameplate capacity, operating in parallel with the Electric Distribution System, that are not required to execute an interconnection agreement with PJM Interconnect (PJM). However, nothing in these procedures shall prevent PJM from subsequently requiring an Interconnection Customer to enter into a separate Interconnection Agreement with PJM if the Small Generator Facility subsequently starts participating in a PJM market or otherwise falls under the scope of PJM Interconnection requirements. Small Generator Facilities that are not designed to operate in parallel are not subject to these procedures. These standards apply to all electric utilities in West Virginia.

1.2. There are two (2) levels, or categories, for the application, review, and approval of DR interconnections:

1.2.1. Level 1 — Small Generator Facilities with Electric Nameplate Capacities of 25 kW or less, are inverter-based and certified.

1.2.2. Level 2 — Small Generator Facilities with Electric Nameplate Capacities of 2 MW or less that do not qualify under Level 1.

2. Definitions.

2.1. Unless the context clearly requires a different meaning, as read herein:

Adverse system impact — shall mean the negative effects due to technical or operational limits on conductors or equipment being exceeded that may compromise the safety, power quality, and reliability of the Electric Distribution System.

Applicant — shall mean a person who has submitted an Interconnection Request to interconnect a Small Generator Facility to a Utility's Electric Distribution System, sometimes also referred to as the "Interconnection Customer."

Area network — shall mean a type of electric distribution system served by multiple transformers interconnected in an electrical network circuit, which is generally used in large metropolitan areas that are densely populated, in order to provide high reliability of service. This term has the same meaning as the term "distribution secondary grid network" as stated in Institute of Electrical and Electronics Engineers (IEEE) standard 1547 Section 4.1.4 (published July 2003), as amended and supplemented.

Business day — shall mean Monday through Friday, excluding Federal or State Holidays.

Calendar day — shall mean any day including Saturday, Sunday or Federal or State Holidays.

Certificate of completion — shall mean the certificate in the form provided in Appendix D.

Certified — shall mean the equipment that satisfies the requirements of Appendix C.

Commission — shall mean the Public Service Commission of West Virginia.

Distribution upgrades — shall mean the required additions and modifications to the Utility's Electric Distribution System on the supply side of the Point of Interconnection. Distribution Upgrades do not include the Applicant's Interconnection Facilities.

Electric nameplate capacity — shall mean the net maximum or net instantaneous peak electric output capability measured in either watts or volt-amps of a Small Generator Facility as designated by the manufacturer.

Utility — shall mean the electric utility entity that owns the Electric Distribution System serving the DR.

Electric Distribution System — shall mean the facilities and equipment used to transmit electricity to ultimate usage points such as homes and industries from interchanges with higher voltage transmission networks that transport bulk power over longer distances. The voltage levels at which Electric Distribution Systems operate differ among areas but generally carry less than 69 kilovolts of electricity. Electric Distribution System has the same meaning as the term Area EPS defined in 3.1.6.1 of IEEE 1547.

Fault Current — shall mean the electrical current that flows through a circuit during an electrical fault condition. A fault condition occurs when one or more electrical conductors contact ground and/or each other. Types of faults include phase to ground, double-phase to ground, three-phase to ground, phase-to-phase, and three-phase. A Fault Current is several times larger in magnitude than the current that normally flows through a circuit.

IEEE 1547 — shall mean the most current official published version of IEEE 1547 "Standard for Interconnecting Distributed Resources with Electric Power Systems" at the time the Interconnection Request is submitted.

IEEE 1547.1 — shall mean the most current official published version of IEEE 1547 "Standard Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems" at the time the Interconnection Request is submitted.

Interconnection Agreement — shall mean an agreement between an Interconnection Customer and a Utility, which in addition to these procedures governs the connection of the Small Generator Facility to the Electric Distribution System, as well as the ongoing operation of the Small Generator Facility after it is connected to the system.

Interconnection Customer — shall mean any entity that proposes to interconnect a Small Generator Facility to an Electric Distribution System.

Interconnection Equipment — shall mean a group of components or integrated system connecting an electric generator with an Electric Distribution System that includes all interface equipment including switchgear, protective devices, inverters, or other interface devices. Interconnection Equipment may be installed as part of an integrated equipment package that includes a generator or other electric source.

Interconnection Facilities — shall mean facilities and equipment required by the Utility to interconnect the Small Generator Facility and the Interconnection Customer's Interconnection Equipment to the Electric Distribution System. Collectively, Interconnection Facilities include all facilities and equipment between the Small Generator Facility and the Point of Common Coupling, including any modification, additions or Distribution Upgrades that are necessary to physically and electrically interconnect the Small Generator Facility to the Utility's Electric Distribution System. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades.

Interconnection Request — shall mean an Interconnection Customer's request, in the form of Appendix A or B of these Interconnection Standards to interconnect a new Small Generator Facility, or to increase the capacity of, or operating characteristics of an existing Small Generator Facility that is interconnected with the Utility's Electric Distribution System.

Line section — shall mean that portion of a Utility's distribution system connected to an Interconnection Customer, bounded by automatic sectionalizing devices or the end of the distribution line.

Minor equipment modification — shall mean minor changes to the proposed Small Generator Facility that do not have a material impact on safety or reliability of the Electric Distribution System.

Nationally Recognized Testing Laboratory (NRTL) — shall mean a qualified private organization that meets the requirements of OSHA regulations. NRTLs perform independent safety testing and product certification. Each NRTL must meet the requirements as set forth by OSHA in the NRTL program.

Parallel operation — shall mean a Small Generator Facility that connects electrically to the Electric Distribution System and the potential exists for electricity to flow from the Small Generator Facility to the Electric Distribution System. This may be contrasted with a stand-alone generator that operates isolated from the Electric Distribution System.

Point of Common Coupling (PCC) — shall mean the point where the Customer's Interconnection Equipment connects to the Electric Distribution System at which harmonic limits or other operational characteristics such as IEEE 1547 requirements are applied.

Point of Interconnection (POI) — shall mean the point where the Interconnection Equipment connects to the Electric Distribution System.

PJM Interconnection LLC (PJM) — shall mean FERC-approved regional transmission organization that operates the electric transmission system.

PJM Small Generator Technical Requirements and Standards — shall mean the most current version of PJM's interconnection technical requirements applicable to small generators 10 MVA or smaller.

Queue position — shall mean the order of a valid Interconnection Request, relative to all other pending valid Interconnection Requests, that is established based upon the date and time of receipt of the valid Interconnection Request by the Utility. An Interconnection Request shall not be deemed to be invalid by virtue of its being finally evaluated under different procedures from those under which it was originally considered, e.g., an Interconnection Request originally submitted as a Level 1 Interconnection Request but eventually evaluated under Level 2 procedures is still a valid interconnection request and is to be assigned a Queue Position based on the date of its original submission as a Level 1 Interconnection Request.

Scoping meeting — shall mean the meeting between representatives of the Interconnection Customer and the Utility conducted for the purpose of discussing alternative interconnection options, to exchange information including any Electric Distribution System data and earlier study evaluations that would be reasonably expected to impact such interconnection options, to analyze such information, and to determine the potential feasible Points of Interconnection.

Small Generator Facility — shall mean the equipment used by an Interconnection Customer to generate or store electricity that operates in parallel with the Electric Distribution System. A Small Generator Facility has an Electric Nameplate Capacity rating of 2 MW or less and typically includes an electric generator, prime mover, and the Interconnection Equipment required to safely interconnect with the Electric Distribution System.

Spot Network — shall have the same meaning assigned to the term under IEEE Standard 1547 Section 4.1.4, as amended and supplemented. A Spot Network is generally used to supply power to a single customer or a small group of customers.

Standard Small Generator Interconnection Agreement — shall mean the form of Interconnection Agreement applicable to Level 1 Interconnection Request as provided in Appendix A, or Level 2 Interconnection Request as provided in Appendix B. These agreements shall apply to all Small Generator Facilities as described herein.

UL 1741 — shall mean Underwriters Laboratories (UL) Standard "Inverters, Converters, and Controllers for Use in Independent Power Systems."

Conformance — shall mean the interconnection installation evaluation required by IEEE 1547 Section 5.3 and the commissioning test required by IEEE 1547 Section 5.4. For interconnection equipment that has not been Certified, the Conformance Test shall also include the on-site design tests as required by IEEE 1547 Section 5.1 and witnessing by the Utility of production tests required by IEEE 1547 Section 5.2. All tests witnessed by the Utility are to be performed in accordance with IEEE 1547.1.

3. General Provisions.

3.1. Interconnection Requests. The Interconnection Customer desiring to interconnect a Small Generator Facility shall submit an Interconnection Request to the Utility. Interconnection Requests are to be made using the standardized forms contained in Appendix A for Level 1 applications, and Appendix B for Level 2 applications. All utilities shall accommodate the filing of Interconnection Requests electronically.

3.2. Utility Designated Point of Contact. The Utility shall designate an employee or office from which information on the interconnection of Small Generator Facilities can be obtained through informal requests by prospective Interconnection Customers. The level of information to be made available to the prospective Interconnection Customer should include, but not necessarily be limited to, information on the affected Electric Distribution System or portion thereof including any relevant system studies or interconnection studies to the extent that such provision does not violate confidentiality provisions or critical infrastructure requirements.

3.3. Technical Standard. The most current version of IEEE 1547 "Standard for Interconnecting Distributed Resources with Electric Power Systems" will be adopted as the technical standard for the interconnection of Small Generator Facilities in the State.

3.4. Modification of the Application. Any modification to machine data or equipment configuration or to the interconnection site of the Small Generator Facility not agreed to in writing by the Utility and the Interconnection Customer may be deemed a withdrawal of the Application and may require submission of a new Application, unless proper notification of each party by the other and a reasonable time to cure the problems created by the changes are undertaken.

3.5. Site Control. Documentation of site control must be submitted for Small Generator Facility additions with the Complete Application. Site control may be demonstrated through:

3.5.1. Ownership of, a leasehold interest in, or a right to develop a site for the purpose of constructing a Small Generator Facility.

3.5.2. An option to purchase or acquire a leasehold site for such purpose.

3.5.3. An exclusive or other business relationship between Small Generator Facility and the entity having the right to sell, lease or grant the Small Generator Facility the right to possess or occupy a site for such purpose.

3.6. Dispute Resolution. Each Party shall make every reasonable attempt to resolve disputes in a prompt, equitable, good faith manner. Where possible, dispute resolution will be conducted in an informal, expeditious manner in order to reach resolution with minimal costs and delay. If the parties fail to settle their dispute, either party may make a filing with the Commission for adjudication of the dispute (e.g., file a complaint).

3.7. If the Interconnection Request is for a Small Generator Facility that includes multiple energy production devices at a site for which the Interconnection Customer seeks a single Point of Interconnection, the Interconnection Request shall be evaluated on the basis of the aggregate Electric Nameplate Capacity of multiple devices.

3.8. If the Interconnection Request is for an increase in capacity for an existing Small Generator Facility, the Interconnection Request shall be evaluated on the basis of the new total Electric Nameplate Capacity of the Small Generator Facility.

3.9. The Utility shall maintain records of all Interconnection Requests received, the times required to complete Interconnection Request approvals and disapprovals, and any justification for the actions taken on the Interconnection Requests. The Utility shall keep such records on file for a minimum of three years.

3.10. Once an Interconnection Request is deemed complete by the Utility, any modification other than a Minor Equipment Modification to the proposed Small Generator Facility or Interconnection Equipment, or Minor Equipment Modification that would not affect the application of the screens in Levels 1 or 2, and that is not agreed to in writing by the Utility, shall require submission of a new Interconnection Request.

3.11. To minimize costs, the Utility may propose to interconnect more than one Small Generator Facility of a single customer at a single Point of Interconnection provided such interconnection is supportable by the customer’s facilities. A request for such interconnection shall not be unreasonably refused. An Interconnection Customer, however, may elect to pay the entire cost of a separate Interconnection Facility.

3.12. Maintenance and Testing. Each Interconnection Customer shall conduct periodic maintenance and testing of its Small Generator Facility in accordance with the provisions of IEEE 1547 relating to maintenance and testing.

4. Interconnection Request, Review, and Approval Procedures.

4.1. Level 1 Interconnections.

4.1.1. Application. All Level 1 Small Generator Facilities shall use the standard Interconnection Request Form contained in Appendix A.

4.1.2. Application Fees. A maximum fee of thirty dollars ($30) shall be charged for all Level 1 applications.

4.1.3. Each Utility shall adopt a Level 1 interconnection review procedure as set forth in Section 4.1.6. herein for all Small Generator Facilities that meet the screening criteria in Section 3.6. A Utility shall not impose additional requirements not specifically authorized under this Section.

4.1.4. Level 1 Screening Criteria. For interconnection of a proposed Small Generator Facility the Utility shall utilize the Level 1 procedure set forth in 4.1.6. if the Small Generator Facility meets the following criteria:

a. The Small Generator Facility utilizes inverter-based technology and customer Interconnection Equipment that is non-islanding, UL listed, and Certified in accordance with the provisions contained in Appendix C.

b. The Small Generator Facility has an Electric Nameplate Capacity of 25 kW or less and is proposing to interconnect to distribution facilities operating at 69 kV or less.

c. The interconnection will not cause the aggregated generation on the radial distribution circuit including the proposed generator to exceed fifteen percent (15%) of the Line Section annual peak, three-phase load or five percent (5%) of the Line Section annual peak, single-phase load as measured at the substation. Should the generator fail this screening criterion, the Utility shall proceed with interconnection if it determines that the generator can still be interconnected in a safe, reliable manner.

d. For interconnection to the load side of Spot Network protectors, the aggregated generation including the proposed generator must not exceed five percent (5%) of a Spot Network's maximum load.

e. If the proposed Small Generator Facility is to be interconnected on a single-phase shared secondary, the aggregate generation capacity on the shared secondary, including the proposed Small Generator Facility, will not exceed 25 kW.

f. If the proposed Small Generator Facility is single-phase and is to be interconnected on a center tap neutral of a 240 volt service, its addition shall not create an imbalance between the two sides of the 240 volt service of more than twenty percent (20%) of the nameplate rating of the service transformer.

4.1.5. Level 1 Review Procedure.

a. Upon receipt of a standard Level 1 Interconnection Request provided in Appendix A the Utility shall within ten (10) business days inform the Applicant that the Interconnection Request is either complete or incomplete, and if incomplete provide a list of the missing items.

b. In the event the Utility does not have a record of receipt of the Interconnection Request, the Applicant will provide the Utility with an additional copy of the Interconnection Request. If the Applicant can demonstrate by return mail receipt that the original Interconnection Request was delivered to the Utility, the Utility shall be required to forgo the initial ten-day (10-day) response period and immediately complete their evaluation of the Interconnection Request within three (3) business days of receipt of the Applicant's resubmittal.

c. Utility Verification. The Utility verifies Small Generator Facility equipment can be interconnected safely and reliably using Level 1 screens set forth in Section 4.1.4. This can take up to fifteen (15) business days after receipt of a complete Interconnection Request.

d. Certificate of Completion. Before service is provided by the Utility, the Interconnection Customer shall submit a Certificate of Completion as provided in Appendix D to the Interconnection Standards.

e. Conformance Test. The Interconnection Customer shall provide the completed Certificate of Completion, three executed copies of the Interconnection Agreement and the proposed schedule and plan for completing the tests required by IEEE 1547 to the Utility. Within ten (10) business days following the receipt of the above items by the Utility or within the time limits agreed to by the Parties, the Interconnection Customer shall complete all testing required by IEEE 1547. The Utility may choose to be present at the Small Generator Facility during the testing of the proposed interconnection. The Interconnection Customer shall provide the test results to the Utility. If the Utility identifies problems with the inspection, if the test results are unsatisfactory, or if the Utility does not agree with the customer's periodic test procedures, the Utility will notify the customer in writing within ten (10) business days with the deficiencies clearly identified. The Utility may withhold authorization for parallel operation until such deficiencies have been properly corrected.

f. The Small Generator Facility shall obtain approval by all local or municipal electric code officials with jurisdiction over the interconnection.

4.1.6. Unless the Utility can demonstrate that the Small Generator Facility cannot be interconnected safely and reliably, the Utility shall execute the standard Level 1 Interconnection Agreement as provided in Appendix E.

4.1.7. Isolation Device. Unless otherwise prohibited by state regulation and if required by Utility operating practices, all Level 1 Small Generator Facilities shall be capable of being isolated from the Utility by means of a lockable, visible-break isolation device readily accessible by the Utility. Unless a readily accessible load break device is otherwise provided in the interconnection system, the isolation device shall be capable of interrupting load. The isolation device shall be installed, owned, and maintained by the owner of the Small Generator Facility and located between the Small Generator Facility and the Point of Interconnection. A draw-out type circuit breaker with the provision for padlocking at the draw-out position qualifies as an isolation device for purposes of this requirement. The outdoor disconnector shall be within sight and within ten (10) feet of meter socket and no more than five (5) feet above ground level. Alternatively, the Interconnection Customer, at its option, may elect to provide the Utility access to an isolation device that is contained in a building or area that may be

unoccupied and locked or not otherwise readily accessible to the Utility, by providing a lockbox capable of accepting a lock provided by the Utility that will provide ready access to the isolation device. Where a lockbox is required, the Interconnection Customer shall install the lockbox in a location that is readily accessible by the Utility and the Interconnection Customer shall affix a placard in a location acceptable to the Utility that provides clear instructions to its operating personnel on how to gain access to the isolation device. Because this standard will affect existing Interconnection Customers, the Interconnection Customer shall have six (6) months from the date the Interconnection Customer's electric utility provider provides notice of the enactment of the Rules Governing Electric Utility Net Metering Arrangements and Interconnections, 150 C.S.R. 33 (effective November 15, 2019 to comply with this standard).

4.1.8. If the Small Generator Facility is not approved under a Level 1 review, the Interconnection Customer may submit a new Interconnection Request for consideration under Level 2 procedures specified herein without sacrificing the original Queue Position.

4.2. Level 2 Interconnections.

4.2.1. Application. Level 1 Small Generator Facilities that were not approved under a Level 1 review and all Level 2 Small Generator Facilities shall use the standard Interconnection Request Form contained in Appendix B.

4.2.2. Application Fees. A maximum fee of fifty dollars ($50) plus one dollar ($1) per kW of capacity shall be charged for all Level 2 applications.

4.2.3. Each Utility shall adopt a Level 2 interconnection review procedure as set forth in Section 4.2.5. for all Small Generator Facilities that meet the screening criteria in Section 3.6. A utility shall not impose additional requirements not specifically authorized under this Section.

4.2.4. Level 2 Screening Criteria. For interconnection of a proposed Small Generator Facility the Utility shall utilize the procedures set forth in 4.2.5 if the Small Generator Facility meets all of the following screening criteria:

a. The Small Generator Facility has an Electric Nameplate Capacity of 2 MW or less, is Certified in accordance with the provisions contained in Appendix C, does not qualify under the requirements for a Level 1 interconnection, and is proposing to interconnect to distribution facilities operating at 69 kV or less, provided that an industrial customer that is served at a higher transmission level may meet this criteria.

b. The interconnection will not cause the aggregated generation on the radial distribution circuit including the proposed generator to exceed fifteen percent (15%) of the Line Section annual peak, three-phase load or five percent (5%) of the Line Section annual peak, single-phase load as measured at the substation. If the generator fails this screening criterion, the Utility shall proceed with interconnection if it determines that the generator can still be interconnected in a safe, reliable manner.

c. For interconnection to the load side of Spot Network protectors, the aggregated generation including the proposed generator must not exceed five percent (5%) of a Spot Network's maximum load.

d. The aggregated generation on the radial distribution circuit including the proposed generator will not contribute more than ten percent (10%) to the distribution circuit's maximum fault current at the point on the high voltage (primary) level nearest the proposed point of common coupling.

e. The proposed Small Generating Facility, in aggregate with other generation on the distribution circuit, will not cause any distribution protective devices and equipment (including but not limited to substation breakers, fuse cutouts, and line reclosers), or Interconnection Customer equipment on the system to exceed eighty percent (80%) of the short circuit interrupting capability; nor is the interconnection proposed for a circuit that already exceeds eighty percent (80%) of the short circuit interrupting capability.

f. The proposed Small Generating Facility, in aggregate with other generation interconnected to the distribution low voltage side of the substation transformer feeding the distribution circuit where the Small Resource proposes to interconnect, will not exceed 10 MW in an area where there are known or posted transient stability limitations to generating units located in the general electrical vicinity (e.g., 3 or 4 transmission voltage level busses from the point of interconnection).

g. If the proposed Small Generator Facility is to be interconnected on a single-phase shared secondary, the aggregate generation capacity on the shared secondary, including the proposed Small Generator Facility, will not exceed 25 kW.

4.2.5. Level 2 Review Procedure:

a. Upon receipt of a standard Level 2 Interconnection Request provided in Appendix B, the Utility shall within ten (10) business days inform the Applicant that the Interconnection Request is either complete or incomplete, along with a list of the missing items.

b. In the event the Utility does not have a record of receipt of the Interconnection Request, the Applicant shall provide the Utility with an additional copy of the Interconnection Request. If the Applicant can demonstrate by return mail receipt that the original Interconnection Request was delivered to the Utility, the Utility shall be required to forgo the initial ten-day (10-day) response period and immediately complete their evaluation of the Interconnection Request within three (3) business days of receipt of the Applicant's resubmittal.

c. The Utility verifies Small Generator Facility equipment can be interconnected safely and reliably using the Level 2 screens set forth in Section 4.2.4. This can take up to twenty-five (25) business days after receipt of a complete Interconnection Request.

d. Certificate of Completion. Before service is provided by the Utility, the Interconnection Customer shall submit a Certificate of Completion as provided in Appendix D to the Utility.

e. Conformance Test. The interconnection customer shall provide the completed Certificate of Completion, three executed copies of the Interconnection Agreement and the proposed schedule and plan for completing the tests required by IEEE 1547 to the Utility. Within ten (10) business days following the receipt of the above items by the Utility or within the time limits agreed to by the Parties, the Interconnection Customer shall complete all testing required by IEEE 1547. The Utility may choose to be present at the Small Generator Facility during the testing of the proposed interconnection. The Interconnection Customer shall provide the test results to the Utility. If the Utility identifies problems with the inspections, if the test results are unsatisfactory, or if the Utility does not agree with the customer's periodic test procedures, the Utility shall notify the customer in writing within ten (10) business days with the deficiencies clearly identified. The Utility may withhold authorization for parallel operation until such deficiencies have been properly corrected.

f. The Small Generator Facility shall obtain approval by all local or municipal electric code officials with jurisdiction over the interconnection.

4.2.6. Unless the Utility can demonstrate that the Small Generator Facility cannot be interconnected safely and reliably, the Utility shall sign the approval line on the Interconnection Request Form and execute the standard Level 2 Interconnection Agreement as provided in Appendix F.

4.2.7. Isolation Device. Unless otherwise prohibited by state regulation and if required by Utility operating practices, all Level 2 Small Generator Facilities shall be capable of being isolated from the Utility by means of a lockable, visible-break isolation device readily accessible by the Utility. Unless a readily accessible load break device is otherwise provided in the interconnection system, the isolation device shall be capable of interrupting load. The isolation device shall be installed, owned, and maintained by the owner of the Small Generator Facility and located between the Small Generator Facility and the Point of Interconnection. A draw-out type circuit breaker with the provision for padlocking at the draw-out position qualifies as an isolation device for purposes of this requirement. The outdoor disconnector shall be within sight and within ten (10) feet of meter socket and no more than five (5) feet above ground level. Alternatively, the Interconnection Customer, at its option, may elect to provide the Utility access to an isolation device that is contained in a building or area that may be unoccupied and locked or not otherwise readily accessible to the Utility, by providing a lockbox capable of accepting a lock provided by the Utility that will provide ready access to the isolation device. Where a lockbox is required, the Interconnection Customer shall install the lockbox in a location that is readily accessible by the Utility and the Interconnection Customer shall affix a placard in a location acceptable to the Utility that provides clear instructions to its operating personnel on how to gain access to the isolation device.

APPENDICES:

APPENDIX A - INTERCONNECTION REQUEST FORM (LEVEL 1)
APPENDIX B - INTERCONNECTION REQUEST FORM (LEVEL 2)
APPENDIX C - CERTIFICATION REQUIREMENTS
APPENDIX D - CERTIFICATE OF COMPLETION
APPENDIX E - INTERCONNECTION AGREEMENT (LEVEL 1)
APPENDIX F - INTERCONNECTION AGREEMENT (LEVEL 2)
APPENDIX G - RELEVANT CODES AND STANDARDS

FORM NO. 2-A
APPENDIX A - INTERCONNECTION REQUEST FORM (LEVEL 1)

Contact Information

Interconnection Customer: _____

Company Name or Individual: _____ Contact Person: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

Alternative Contact Information (if different from Applicant)

Name: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

Facility Information

Location (if different from above): _____

Utility: _____

Account Number (existing Utility customers): _____

Inverter Manufacturer: _____

Model: _____

Nameplate Rating: _____ (kW) _____ (kVA) _____ (AC Volts) Single- or Three-Phase _____

System Design Capacity: _____ (kW) _____ (kVA)

Prime Mover: Photovoltaic ☐ Reciprocating Engine ☐ Fuel Cell ☐ Turbine ☐

Other: _____

Energy Source: Solar ☐ Wind ☐ Hydro ☐ Natural Gas ☐ Fuel Oil ☐

Other: _____

Is the inverter Certified? ☐ Yes ☐ No (If yes, attach manufacturer's cut sheet showing listing and label information from the appropriate listing authority, e.g. UL 1741 listing)

Estimated Install Date: _____ Est. In-Service Date: _____

FORM NO. 2-B
APPENDIX B - INTERCONNECTION REQUEST FORM (LEVEL 2)

Customer:

Name: _____ Phone:_____

Address: _____ Municipality: _____

Consulting Engineer or Contractor:

Name: _____ Phone:_____

Address: _____

Estimated In-Service: _____

Existing Electric Service:

Capacity: _____ Amps Voltage: _____Volts

Service Character: Single-Phase ☐ Three-Phase ☐ Secondary ☐

Three-Phase Transformer Connection: ☐ Wye ☐ Delta

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

Attention: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Phone: _____ Fax: _____

List interconnection components/system(s) to be used in the Small Generator Facility that are Certified

Component/System NRTL Providing Label & Listing

1. _____
2. _____
3. _____
4. _____
5. _____

Please provide copies of manufacturer brochures or technical specification

Energy Production Equipment/Inverter Information:

☐ Synchronous ☐ Induction ☐ Inverter ☐ Other _____

Rating: _____ kW Rating: _____ kVA

Rated Voltage: _____ Amps

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

System Design Capacity: _____ (kW) _____ (kVA)

For Synchronous Machines:

Manufacturer: _____

Model No. _____ Version No. _____

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: _____

Locked Rotor Current: _____ Amps Synchronous Speed: _____ RPM

Winding Connection: _____ Min. Operating Freq./Time: _____

Generator Connection: ☐ Delta ☐ Wye ☐ Wye Grounded

Direct-axis Synchronous Reactance (Xd) _____ ohms

Direct-axis Transient Reactance (X'd) _____ ohms

Direct-axis Sub-transient Reactance (X"d) _____ ohms

For Induction Machines:

Manufacturer: _____

Model No.: _____ Version No.: _____

Locked Rotor Current: _____ Amps

Rotor Resistance (Rr) _____ ohms Exciting Current _____ Amps

Rotor Reactance (Xr) _____ ohms Reactive Power Required: _____

Magnetizing Reactance (Xm) _____ ohms _____ VARs (Full Load)

Stator Reactance (Rs) _____ ohms _____ VARs (Full Load)

Stator Reactance (Xs) _____ ohms

Short Circuit Reactance (X"d) _____ ohms

Phases: ☐ Single ☐ Three-Phase

Frame Size: _____ Design Letter: _____ Temp. Rise: _____ ° C.

For Inverter Based Facilities:

Inverter:

Manufacturer: _____ Model: _____

Type: _____ Forced Commutated _____ Line Commutated

Rated Output: _____ Amps _____ Volts

Efficiency: _____% Power Factor: _____%

DC Source/Prime Mover:

☐ Solar ☐ Wind ☐ Hydro ☐ Other _____

Rating: _____ kW Rating: _____ kVA

Rated Voltage: _____ Volts

Open Circuit Voltage (If applicable): _____ Volts

Rated Current: _____ Amps

Short Circuit Current (If applicable): _____ Amps

Other Facility Information:

The following items must be attached to this form to be considered complete:

One-Line Diagram attached: ☐ Yes ☐ No

Plot Plan attached: ☐ Yes ☐ No

Installation Test Plan attached: ☐ Yes ☐ No

Customer Signature:

_____ _____ _____

CUSTOMER TITLE DATE

FORM NO. 2-C
APPENDIX C - CERTIFICATION REQUIREMENTS

1. Small Generating Facility equipment proposed for use separately or packaged with other equipment in an interconnection system shall be considered certified for interconnected operation if (1) it has been tested in accordance with IEEE 1547.1 in compliance with the appropriate codes and standards referenced below in Appendix G by any Nationally Recognized Testing Laboratory (NRTL) recognized by the United States Occupational Safety and Health Administration to test and certify interconnection equipment pursuant to the relevant codes and standards listed in Appendix G, (2) it has been labeled and is publicly listed by such NRTL at the time of the interconnection application, and (3) such NRTL makes readily available for verification all test standards and procedures it utilized in performing such equipment certification, and, with consumer approval, the test data itself. The NRTL may make such information available on its web site and by encouraging such information to be included in the manufacturer's literature accompanying the equipment.

2. The Interconnection Customer must verify that the intended use of the Interconnection Equipment falls within the use or uses for which the Interconnection Equipment was labeled, and listed by the NRTL.

3. Certified Interconnection Equipment shall not require further type-test review, testing, or additional equipment to meet the requirements of this Standard Small Generator Interconnection Procedure; however, nothing herein shall preclude the need for an on-site Witness Test nor follow-up production testing by the Interconnection Customer.

4. If the Certified Interconnection Equipment package includes only interface components (switchgear, inverters, or other interface devices), then an Interconnection Customer must show that the generator or other electric source being utilized with the equipment package is compatible with the equipment package and is consistent with the testing and listing specified for this type of interconnection equipment.

5. Provided the generator or electric source, when combined with the equipment package, is within the range of capabilities for which it was tested by the NRTL, and does not violate the interface components' labeling and listing performed by the NRTL, no further design review, testing or additional equipment on the customer side of the point of common coupling shall be required to meet the requirements of this interconnection procedure.

6. Interconnection Equipment does not include equipment provided by the Utility.

FORM NO. 2-D
APPENDIX D - SMALL GENERATOR FACILITY CERTIFICATE OF COMPLETION

Installation Information Check if owner-installed ☐

Interconnection Customer: _____ Contact Person: _____

Mailing Address: _____

_____

Location of Small Generator Facility (if different from above):

_____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

Electrician:

Name: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

License Number: _____

Date Interconnection Agreement approved by the Utility: _____

Application ID Number: _____

Electrical Inspection:

The system has been installed and inspected in compliance with the local Building/Electrical Code of ___

_____

Signed: _____

Name (printed):_____

Date: _____

FORM NO. 2-E
APPENDIX E - INTERCONNECTION AGREEMENT (LEVEL 1)

This Agreement is made and entered into this _____ day of _____, _____, by and between _____, a _____, organized and existing under the laws of the State of _____ ("Interconnection Customer"), and _____, a _____, existing under the laws of the State of _____ ("Utility"). Interconnection Customer and Utility each may be referred to as a "Party," or collectively as the "Parties."

Recitals:

Whereas, Interconnection Customer proposes to develop a Small Generator Facility, or generating capacity addition to an existing Small Generator Facility, consistent with the Interconnection Request completed by Interconnection Customer on _____; and

Whereas, Interconnection Customer desires to interconnect the Small Generator Facility with Utility's Electric Distribution System.

Now, therefore, in consideration of and subject to the mutual covenants contained herein, the Parties agree as follows:

1) Construction of the Small Generator Facility. The Interconnection Customer may proceed to construct (including operational testing not to exceed two (2) hours) the Small Generator Facility once conditional approval to interconnect a Small Generator Facility has been provided by the Utility.

2) Final Interconnection and Operation. The Interconnection Customer may operate the Small Generator Facility and interconnect with the Utility's Electric Distribution System once all of the following have occurred:

a) Electrical Inspection: Upon completing construction, the Interconnection Customer will cause the Small Generator Facility to be inspected by the local electrical wiring inspector with jurisdiction.

b) Certificate of Completion: The Interconnecting Customer returns the Certificate of Completion to the Utility at address noted.

c) Utility has either waived the right to a Witness Test in the Interconnection Request, or completed its Witness Test as per the following:

i) Utility Right of Inspection. Within ten (10) business days after receipt of the Certificate of Completion, the Utility may, upon reasonable notice and at a mutually convenient time, conduct a Witness Test of the Small Generator Facility to ensure that all equipment has been appropriately installed and that all electrical connections have been made in accordance with applicable codes.

ii) If the Utility does not perform the Witness Test within ten (10) business days or by mutual agreement of the Parties, the Witness Test is deemed waived.

d) Suitable Utility metering equipment required under applicable tariffs must be installed and tested in accordance with applicable ANSI standards.

3) Periodic Testing. All interconnection-related protective functions and associated batteries shall be periodically tested at intervals specified by the manufacturer, system integrator, or authority having jurisdiction over the DR interconnection. Periodic test reports or a log for inspection shall be maintained in accordance with the provisions of IEEE 1547.

4) Access. The Utility shall have access to the disconnect switch and metering equipment of the Small Generator Facility at all times. The Utility shall provide reasonable notice to the customer when possible prior to using its right of access.

5) Disconnection. The Utility may temporarily disconnect the Small Generator Facility upon the following conditions:

a) For scheduled outages upon reasonable notice;

b) For unscheduled outages or emergency conditions;

c) If the Small Generator Facility does not operate in the manner consistent with this Agreement;

d) In the event of improper installation or failure to pass the Witness Test; or

e) The Interconnection Equipment used by the Small Generator Facility is de-listed by the Nationally Recognized Testing Laboratory that provided the listing at the time the interconnection was approved and the Utility shows that the Interconnection Equipment has the potential to cause a safety, reliability or a power quality problem.

6) Termination. This Agreement may be terminated under the following conditions:

a) By Interconnection Customer. The Interconnection Customer may terminate this Agreement by providing written notice to the Utility.

b) By the Utility. The Utility may terminate this Agreement (1) if the Small Generator Facility fails to operate for any consecutive twelve-month (12-month) period, or (2) the Customer fails to remedy a violation of terms of this Agreement.

7) Permanent Disconnection. In the event the Agreement is terminated, the Utility shall have the right to disconnect its facilities or direct the Customer to disconnect its Small Generator Facility.

8) Disputes. Each Party agrees to attempt to resolve all disputes regarding the provisions of the interconnection procedures promptly, equitably and in a good faith manner.

9) Governing Law, Regulatory Authority, and Rules. The validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the laws of the State of West Virginia, without regard to its conflicts of law principles. This Agreement is subject to all Applicable Laws and Regulations. Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a Governmental Authority.

10) Survival Rights. This Agreement shall continue in effect after termination to the extent necessary to allow or require either Party to fulfill rights or obligations that arose under the Agreement.

11) Assignment/Transfer of Ownership of the Small Generator Facility. This Agreement shall survive the transfer of ownership of the Small Generator Facility to a new owner when the new owner agrees in writing to comply with the terms of this Agreement and so notifies the Utility.

12) Insurance. The Interconnection Customer with a Small Generator Facility with an Electric Nameplate Capacity of 25 kW or less shall be required to maintain general liability insurance in the amount of one hundred thousand dollars ($100,000) under the terms of this Agreement.

13) Notice. Unless otherwise provided in this Agreement, any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if delivered in person, delivered by recognized national courier service, or sent by first class mail, postage prepaid, to the person specified below:

If to Interconnection Customer:

Interconnection Customer: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Phone: _____ Facsimile: _____

If to Utility:

Utility: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Phone: _____ Facsimile: _____

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their respective duly authorized representatives.

For Utility:

Signature: _____

Printed Name: _____

Title: _____

Date: _____

For the Interconnection Customer:

Signature: _____

Printed Name: _____

Title: _____

Date: _____

FORM NO. 2-F
APPENDIX F - INTERCONNECTION AGREEMENT (LEVEL 2)

This Agreement is made and entered into this _____ day of _____, _____, by and between _____, a _____, organized and existing under the laws of the State of _____ ("Interconnection Customer"), and _____, a _____, existing under the laws of the State of _____ ("Utility"). Interconnection Customer and Utility each may be referred to as a "Party," or collectively as the "Parties."

Recitals:

Whereas, Interconnection Customer is proposing to develop a Small Generator Facility, or generating capacity addition to an existing Small Generator Facility, consistent with the Interconnection Request completed by Interconnection Customer on _____; and

Whereas, Interconnection Customer desires to interconnect the Small Generator Facility with Utility's Electric Distribution System.

Now, therefore, in consideration of and subject to the mutual covenants contained herein, the Parties agree as follows:

Article 1. Scope and Limitations of Agreement.

1.1. This Agreement shall be used for all approved Level 2 Interconnection Requests according to the procedures set forth in the Standard Small Generator Interconnection Procedures.

1.2. This Agreement governs the terms and conditions under which the Small Generator Facility will interconnect to, and operate in Parallel with, Utility's Electric Distribution System.

1.3. This Agreement does not constitute an agreement to purchase or deliver the Interconnection Customer's power.

1.4. Nothing in this Agreement is intended to affect any other agreement between Utility and the Interconnection Customer. However, in the event that the provisions of this Agreement are in conflict with the provisions of other Utility tariffs, the Utility tariff shall control.

1.5. Responsibilities of the Parties.

1.5.1. The Parties shall perform all obligations of this Agreement in accordance with all Applicable Laws and Regulations, Codes and Standards, Operating Requirements, and Good Utility Practice.

1.5.2. The Interconnection Customer shall construct, interconnect, operate and maintain its Small Generator Facility, and construct, operate, and maintain its Interconnection Equipment in accordance with the applicable manufacturer's recommended maintenance schedule, in accordance with this Agreement, and with Good Utility Practice.

1.5.3. Utility shall construct, own, operate, and maintain its Electric Distribution System and Interconnection Facilities in accordance with this Agreement, and with Good Utility Practice.

1.5.4. The Interconnection Customer agrees to construct its facilities or systems in accordance with applicable specifications that meet or exceed those provided by PJM's Small Generator Technical Requirements and Standards, the National Electrical Code, National Electrical Safety Code, the American National Standards Institute, IEEE, Underwriters Laboratories, any Operating Requirements in effect at the time of construction, and other applicable national and State codes and standards. The Interconnection Customer agrees to design, install, maintain, and operate its Small Generator Facility so as to reasonably minimize the likelihood of a disturbance adversely affecting or impairing the Electric Distribution System or equipment of the Utility.

1.5.5. Each Party shall operate, maintain, repair, and inspect, and shall be fully responsible for the facilities that it now owns or subsequently may own unless otherwise specified in the Attachments to this Agreement. Each Party shall be responsible for the safe installation, maintenance, repair and condition of their respective lines and appurtenances on their respective sides of the Point of Interconnection.

1.6. Parallel Operation Obligations. Once the Small Generator Facility has been authorized to commence parallel operation, the Interconnection Customer shall abide by all written rules and procedures developed by the Utility which pertain to the Parallel operation of the Small Generator Facility, copies of which are provided in Attachment to this Agreement.

1.7. Metering. The Interconnection Customer shall not be responsible for the cost of the purchase, installation, operation, maintenance, testing, repair, and replacement of metering and data acquisition equipment unless obligations consistent with the Rules of the Public Service Commission of West Virginia are specified in Attachments to this Agreement.

1.8. Reactive Power. The Interconnection Customer shall design its Small Generator Facility to maintain a composite power delivery at continuous rated power output at the Point of Common Coupling at a power factor within the range of 0.95 leading to 0.95 lagging. Utility may also require the Interconnection Customer to follow a voltage or VAR schedule applicable to similarly situated generators in the control area on a comparable basis and which shall be clearly specified in the Attached Utility procedures. Under no circumstance shall these additional requirements for reactive power support exceed the normal operating capabilities of the Small Generator Facility.

1.9. Capitalized Terms. Capitalized terms used herein shall have the meanings specified in the Interconnections Standards or the body of this Agreement.

Article 2. Inspection, Testing, Authorization, and Right of Access.

2.1. Equipment Testing and Inspection. The Interconnection Customer shall test and inspect its Small Generator Facility and Interconnection Facilities prior to interconnection, and in accordance with the PJM Small Generator Technical Requirements and Standards. The Interconnection Customer shall not operate its Small Generator Facility in Parallel with Utility's Electric Distribution System without prior written authorization by the Utility as provided for in 2.1.1.

2.1.1. Prior to Parallel Operation, the Interconnection Customer shall provide the Utility a completed Certificate of Completion. Within ten (10) business days after receipt of the Certificate of Completion, the Utility may conduct a Witness Test. The Witness Test shall be conducted only upon reasonable notice and at a mutually convenient time within the ten-day (10-day) period. If the Utility does not conduct the Witness Test within ten (10) business days or within the time otherwise mutually agreed to by the Parties, the Witness Test is deemed waived. If the Witness Test is successful or alternatively if the Witness Test is waived, the Utility shall affix an authorized signature to the Certificate of Completion and return it to

the Interconnection Customer approving the interconnection and authorizing Parallel Operation. Such authorization shall not be unreasonably withheld, conditioned, or delayed.

2.1.2. If the Witness Test is not successful, the Utility shall have the right to disconnect the Small Generator Facility until such time as changes are made to address the deficiencies identified in the Witness Test and another Witness Test can be scheduled.

2.1.3. To the extent that the Interconnection Customer decides to conduct interim testing of the Small Generator Facility prior to the Witness Test, it may request that the Utility observe these tests and that these tests be deleted from the final Witness Test. The Utility may, at its own expense, send qualified personnel to the Small Generator Facility to observe such interim testing.

2.2. Right of Access. The Utility shall have access to the disconnect switch and metering equipment of the Small Generator Facility at all times. The Utility shall provide reasonable notice to the customer when possible prior to using its right of access.

Article 3. Effective Date, Term, Termination, and Disconnection.

3.1. Effective Date. This Agreement shall become effective upon execution by the Parties.

3.2. Term of Agreement. This Agreement shall become effective on the Effective Date and shall remain in effect for a period of ten (10) years from the Effective Date or such other longer period as the Interconnection Customer may request and shall be automatically renewed for each successive one-year period thereafter, unless terminated earlier in accordance with Article 3.3 of this Agreement.

3.3. Termination. No termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination.

3.3.1. The Interconnection Customer may terminate this Agreement at any time by giving the Utility twenty (20) business days written notice.

3.3.2. Either Party may terminate this Agreement after Default pursuant to Article 6.6.

3.3.3. Upon termination of this Agreement, the Small Generator Facility will be disconnected from the Utility's Electric Distribution 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.

3.3.4. The provisions of this Article shall survive termination or expiration of this Agreement.

3.4. Temporary Disconnection. The Utility may temporarily disconnect the Small Generator Facility from its Electric Distribution System for so long as reasonably necessary in the event one or more of the following conditions or events occurs:

3.4.1. Emergency Conditions. "Emergency Condition" shall mean a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (2) that, in the case of the Utility, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Electric Distribution System, the Utility's Interconnection Facilities or (3) that, in the case of the Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Small Generator Facility or the Interconnection Equipment. Under Emergency Conditions, the Utility or the Interconnection Customer may immediately suspend interconnection service and temporarily disconnect the Small Generator Facility. The Utility shall notify the Interconnection

Customer promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the Interconnection Customer's operation of the Small Generator Facility. The Interconnection Customer shall notify the Utility promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect Utility's Electric Distribution System. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of both Parties' facilities and operations, its anticipated duration, and the necessary corrective action.

3.4.2. Routine Maintenance, Construction, and Repair. The Utility may interrupt interconnection service or curtail the output of the Small Generator Facility and temporarily disconnect the Small Generator Facility from the Utility's Electric Distribution System when necessary for routine maintenance, construction, and repairs on the Electric Distribution System. The Utility shall provide the Interconnection Customer with five (5) business days notice prior to such interruption. The Utility shall use reasonable efforts to coordinate such reduction or temporary disconnection with the Interconnection Customer.

3.4.3. Forced Outages. During any forced outage, the Utility may suspend interconnection service to effect immediate repairs on the Utility's Electric Distribution System. The Utility shall use reasonable efforts to provide the Interconnection Customer with prior notice. If prior notice is not given, the Utility shall, upon request, provide the Interconnection Customer written documentation after the fact explaining the circumstances of the disconnection.

3.4.4. Adverse Operating Effects. The Utility shall provide the Interconnection Customer with a written notice of its intention to disconnect the Small Generator Facility if, based on Good Utility Practice, the Utility determines that operation of the Small Generator Facility will likely cause disruption or deterioration of service to other customers served from the same electric system, or if operating the Small Generator Facility could cause damage to the Utility's Electric Distribution System. Supporting documentation used to reach the decision to disconnect shall be provided to the Interconnection Customer upon request. The Utility may disconnect the Small Generator Facility if, after receipt of the notice, the Interconnection Customer fails to remedy the adverse operating effect within a reasonable time which shall be at least five (5) business days from the date the Interconnection Customer receives the Utility's written notice supporting the decision to disconnect, unless Emergency Conditions exist, in which case the provisions of Article 3.4.1 apply.

3.4.5. Modification of the Small Generator Facility. The Interconnection Customer must receive written authorization from the Utility before making any change to the Small Generator Facility that may have a material impact on the safety or reliability of the Electric Distribution System. Such authorization shall not be unreasonably withheld. Modifications shall be done in accordance with Good Utility Practice. If the Interconnection Customer makes such modification without the Utility's prior written authorization, the latter shall have the right to temporarily disconnect the Small Generator Facility.

3.4.6. Reconnection. The Parties shall cooperate with each other to restore the Small Generator Facility, Interconnection Facilities, and Utility's Electric Distribution System to their normal operating state as soon as reasonably practicable following a temporary disconnection.

Article 4. Cost Responsibility for Interconnection Facilities and Distribution Upgrades.

4.1. Interconnection Facilities.

4.1.1. The Interconnection Customer shall be responsible for its share of all reasonable expenses, including overheads, associated with (1) owning, operating, maintaining, repairing, and replacing its

Interconnection Equipment, and (2) operating, maintaining, repairing, and replacing the Utility's Interconnection Facilities.

4.2. Distribution Upgrades. The Utility shall design, procure, construct, install, and own any Distribution Upgrades. The actual cost of the Distribution Upgrades, including overheads, shall be directly assigned to the Interconnection Customer.

Article 5. Billing, Payment, Milestones, and Financial Security.

5.1. Billing and Payment Procedures and Final Accounting.

5.1.l. The Utility shall bill the Interconnection Customer for the design, engineering, construction, and procurement costs of Utility-provided Interconnection Facilities and Distribution Upgrades contemplated by this Agreement on a monthly basis, or as otherwise agreed by the Parties. The Interconnection Customer shall pay each bill within thirty (30) calendar days of receipt, or as otherwise agreed to by the Parties.

5.1.2. Within ninety (90) calendar days of completing the construction and installation of the Utility's Interconnection Facilities and Distribution Upgrades to this Agreement, the Utility shall provide the Interconnection Customer with a final accounting report of any difference between (1) the actual cost incurred to complete the construction and installation and the budget estimate provided to the Interconnection Customer and a written explanation for any significant variation, and (2) the Interconnection Customer's previous deposit and aggregate payments to the Utility for such Interconnection Facilities and Distribution Upgrades. If the Interconnection Customer's cost responsibility exceeds its previous deposit and aggregate payments, the Utility shall invoice the Interconnection Customer for the amount due and the Interconnection Customer shall make payment to the Utility within thirty (30) calendar days. If the Interconnection Customer's previous deposit and aggregate payments exceed its cost responsibility under this Agreement, the Utility shall refund to the Interconnection Customer an amount equal to the difference within thirty (30) calendar days of the final accounting report.

5.2. Interconnection Customer Deposit. At least twenty (20) business days prior to the commencement of the design, procurement, installation, or construction of a discrete portion of the Utility's Interconnection Facilities and Distribution Upgrades, the Interconnection Customer shall provide the Utility with a deposit equal to fifty percent (50%) of the cost estimated for its Interconnection Facilities prior to its beginning design of such facilities.

Article 6. Assignment, Liability, Indemnity, Force Majeure, Consequential Damages, and Default.

6.1. Assignment. This Agreement may be assigned by either Party upon fifteen (15) business days prior written notice, and with the opportunity to object by the other Party. When required, consent to assignment shall not be unreasonably withheld; provided that:

6.1.1. Either Party may assign this Agreement without the consent of the other Party to any affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement;

6.1.2. The Interconnection Customer shall have the right to assign this Agreement, without the consent of the Utility, for collateral security purposes to aid in providing financing for the Small Generator Facility.

6.1.3. For a Small Generator Facility offsetting part or all of the load of a Utility customer at a given site, that customer is the Interconnection Customer and that customer may assign its Interconnection Agreement to a subsequent occupant of the site. For a Small Generator Facility providing energy directly to a Utility, the Interconnection Customer is the owner of the Generator Facility and may assign its Interconnection Agreement to a subsequent owner of the Generator Facility. Assignment is only effective after the assignee provides written notice of the assignment to the Utility and agrees to accept the Interconnection Customer's responsibilities under this Interconnection Agreement.

6.1.4. All other assignments shall require the prior written consent of the non-assigning Party, such consent not to be unreasonably withheld.

6.1.5. Any attempted assignment that violates this Article is void and ineffective. Assignment shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. An assignee is responsible for meeting the same obligations as the Interconnection Customer.

6.2. Limitation of Liability. Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either Party be liable to the other Party for any indirect, special, consequential, or punitive damages, except as specifically authorized by this Agreement.

6.3. Indemnity.

6.3.1. This provision protects each Party from liability incurred to third Parties as a result of carrying out the provisions of this Agreement. Liability under this provision is exempt from the general limitations on liability found in Article 6.2.

6.3.2. Each Party shall at all times indemnify, defend, and hold the other Party harmless from, any and all damages, losses, claims, including claims and actions relating to injury or to death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the indemnified Party's action or failure to meet its obligations under this Agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

6.3.3. If an indemnified Party is entitled to indemnification under this Article as a result of a claim by a third party, the indemnifying Party shall, after reasonable notice from the indemnified Party, assume the deference of such claim. If the indemnifying Party fails, after notice and reasonable opportunity to proceed under this Article, to assume the defense of such claim, the indemnified Party may at the expense of the indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.

6.3.4. If the indemnifying Party is obligated to indemnify and hold the indemnified Party harmless under this Article, the amount owing to the indemnified Party shall be the amount of such indemnified Party's actual loss, net of any insurance or other recovery.

6.3.5. Promptly after receipt of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in this Article may apply, the indemnified Party shall notify the indemnifying Party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying Party.

6.4. Consequential Damages. Neither Party shall be liable under any provision of this Agreement for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may by liable to the other Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

6.5. Force Majeure.

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

6.5.2. If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, the Party affected by the Force Majeure Event ("Affected Party") shall promptly notify the other Party of the existence of the Force Majeure Event. The notification must 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, and if the initial notification was verbal, it should be promptly followed up with a written notification. The Affected Party shall keep the other Party informed on a continuing basis of developments relating to the Force Majeure Event until the event ends. The Affected Party will be entitled to suspend or modify its performance of obligations under this Agreement (other than the obligation to make payments) only to the extent that the effect of the Force Majeure Event cannot be reasonably mitigated by the Affected Party. The Affected Party shall use reasonable efforts to resume its performance as soon as possible.

6.6. Default.

6.6.1. Default exists where a Party has materially breached any provision of this Agreement, except that no default shall exist where a failure to discharge an obligation (other than the payment of money) is the result of a Force Majeure Event as defined in this Agreement, or the result of an act or omission of the other Party.

6.6.2. Upon a default, the non-defaulting Party shall give written notice of such default to the defaulting Party. Except as provided in Article 6.6.3, the defaulting Party shall have sixty (60) calendar days from receipt of the default notice within which to cure such default; provided, however, if such default is not capable of cure within sixty (60) calendar days, the defaulting Party shall commence efforts to cure within twenty (20) calendar days after notice and continuously and diligently pursue such cure within six (6) months from receipt of the default notice; and, if cured within such time, the default specified in such notice shall cease to exist.

6.6.3. If a default is not cured as provided in this Article, or if a default is not capable of being cured within the period provided for herein, the non-defaulting Party shall have the right to terminate this Agreement by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not that Party terminates this Agreement, to recover from the defaulting Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this Article will survive termination of this Agreement.

Article 7. Insurance.

The Interconnection Customer shall be required to maintain liability coverage under the terms of this Agreement based upon the Electric Nameplate Capacity of the Small Generator Facility as follows:

7.1. The Interconnection Customer with a Small Generator Facility with an Electric Nameplate Capacity up to 50 kW shall maintain general liability insurance in the amount of one hundred thousand dollars ($100,000).

7.2. The Interconnection Customer with a Small Generator Facility with an Electric Nameplate Capacity of greater than 50 kW and up to 500 kW shall maintain general liability insurance in the amount of five hundred thousand dollars ($500,000).

7.3. The Interconnection Customer with a Small Generator Facility with an Electric Nameplate Capacity of greater than 500 kW shall maintain general liability insurance in the amount of one million dollars ($1,000,000).

Article 8. Dispute Resolution.

Each Party agrees to attempt to resolve all disputes regarding the provisions of these interconnection procedures promptly, equitably and in a good faith manner.

Article 9. Miscellaneous.

9.1. Governing Law, Regulatory Authority, and Rules. The validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the laws of the State of West Virginia, without regard to its conflicts of law principles. This Agreement is subject to all Applicable Laws and Regulations. Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a Governmental Authority.

9.2. Amendment. The Parties may amend this Agreement by a written instrument duly executed by both Parties.

9.3. No Third-party Beneficiaries. This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and where permitted, their assigns.

9.4. Waiver.

9.4.1. The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

9.4.2. Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, or duty of this Agreement. Termination or default of this Agreement for any reason by Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from Utility. Any waiver of this Agreement shall, if requested, be provided in writing.

9.5. Entire Agreement. This Agreement, including all Attachments, constitutes the entire Agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, either Party's compliance with its obligations under this Agreement.

9.6. Multiple Counterparts. This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

9.7. No Partnership. This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon either Party. Neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

9.8. 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 or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall negotiate in good faith to restore insofar as practicable the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

9.9. Environmental Releases. Each Party shall notify the other Party, first orally and then in writing, of the release of any hazardous substances, any asbestos or lead abatement activities, or any type of remediation activities related to the Small Generator Facility or the Interconnection Facilities, each of which may reasonably be expected to affect the other Party. The notifying Party shall (1) provide the notice as soon as practicable, provided such Party makes a good faith effort to provide the notice no later than twenty-four (24) hours after such Party becomes aware of the occurrence, and (2) promptly furnish to the other Party copies of any publicly available reports filed with any Governmental Authorities addressing such events.

9.10. Subcontractors. Nothing in this Agreement shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this Agreement; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this Agreement in providing such services and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

9.10.1. The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible to the other Party for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall the Utility be liable for the actions or inactions of the Interconnection Customer or its subcontractors with respect to obligations of the Interconnection Customer under this Agreement. Any applicable obligation imposed by this Agreement upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

9.10.2. The obligations under this Article will not be limited in any way by any limitation of subcontractor's insurance.

Article 10. Notices.

10.1. General. Unless otherwise provided in this Agreement, any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if delivered in person, delivered by recognized national courier service, or sent by first class mail, postage prepaid, to the person specified below:

If to Interconnection Customer:

Interconnection Customer: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Phone: _____ Fax: _____ E-Mail: _____

If to Utility:

Utility:_____

Attention: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Phone: _____ Fax: _____ E-Mail: _____

10.2. Billing and Payment. Billings and payments shall be sent to the addresses set out below:

Interconnection Customer: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Utility:_____

Attention: _____

Address: _____

City: _____ State: _____ Zip Code: _____

10.3. Designated Operating Representative. The Parties may also designate operating representatives to conduct the communications which may be necessary or convenient for the administration of this Agreement. This person will also serve as the point of contact with respect to operations and maintenance of the Party's facilities.

Interconnection Customer's Operating Representative: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Phone: _____ Fax: _____ E-Mail: _____

Utility's Operating Representative: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Phone: _____ Fax: _____ E-Mail: _____

10.4. Changes to the Notice Information. Either Party may change this notice information by giving five (5) business days written notice prior to the effective date of the change.

Article 11. Signatures.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their respective duly-authorized representatives.

For Utility:

Signature: _____

Printed Name: _____

Title: _____

Date: _____

For the Interconnection Customer:

Signature: _____

Printed Name: _____

Title: _____

Date: _____

FORM NO. 2-G
APPENDIX G - RELEVANT CODES AND STANDARDS

IEEE 1547 Standard for Interconnecting Distributed Resources with Electric Power Systems (including use of IEEE 1547.1 testing protocols to establish conformity)

UL 1741 Inverters, Converters, and Controllers for Use in Independent Power Systems

IEEE Std 929-2000 IEEE Recommended Practice for Utility Interface of Photovoltaic (PV) Systems

NFPA 70 National Electrical Code

IEEE Std C37.90.1-1989 (R1944) IEEE Standard Surge Withstand Capability (SWC) Tests for Protective Relays and Relay Systems

IEEE Std C37.90.2 (1995) IEEE Standard Withstand Capability of Relay Systems to Radiated Electromagnetic Interference from Transceivers

IEEE Std C37.108-1989 (R2002) IEEE Guide for the Protection of Network Transformers

IEEE Std C257.12.44-2000, IEEE Standard Requirements for Secondary Network Protectors

IEEE Std C62.41.2-2002, IEEE Recommended Practice on Characterization of Surges in Low Voltage (1000V and Less) AC Power Circuits

IEEE Std C62.45-1992 (R2002) IEEE Recommended Practice on Surge Testing for Equipment Connected to Low-Voltage (1000V and Less) Power Circuits

ANSI C84.1-1995 Electric Power Systems and Equipment - Voltage Ratings (60 Hertz)

IEEE Std 100-2000, IEEE Standard Dictionary of Electrical and Electronic

NEMA MG 1-1998, Motors and Small Resources, Revision 3

IEEE Std 519-1992, IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems

NEMA MG 1-2003 (Rev 2004), Motors and Generators, Revision 1