PUBLIC SERVICE COMMISSION
OF WEST VIRGINIA
CHARLESTON

At a session of the PUBLIC SERVICE COMMISSION OF WEST VIRGINIA in the City of Charleston on the 30th day of June 2010.

GENERAL ORDER NO. 258

In the matter of a General Investigation to adopt rules for net metering arrangements and interconnections pursuant to West Virginia House Bill 103, and House Bill 408,effective July 1, 2009: Alternative and Renewable Energy Portfolio Act, codified as W. Va. Code §24-2F-1 *et seq.*

COMMISSION ORDER

This Commission order adopts final rules relating to net metering arrangements and interconnections.

BACKGROUND

In the 2009 West Virginia Legislative Session, the Legislature enacted House Bill 103, as later amended by House Bill 408, the Alternative and Renewable Energy Portfolio Act (Portfolio Act or Act), codified in Article 2F of Chapter 24 of the West Virginia Code. In the 2010 West Virginia Legislative Session, the Legislature enacted Senate Bill 350, which further amended the Portfolio Act to change certain definitions under the Act.

In order to encourage the development of alternative and renewable energy resources within the state, the Act, *inter alia*, requires the Public Service Commission of West Virginia to promulgate rules governing net metering and interconnection standards under W.Va. Code §24-2F-8 within twelve months of the effective date of the Act of July 1, 2009, or by July 1, 2010.

W.Va. Code §24-2F-8 (a) provides that the Commission shall adopt a rule requiring that all electric utilities, as defined in the Act, provide "a rebate or discount at fair value," to be determined by the Commission, to eligible Customer-generators for any electricity generation that is delivered to the utility under a net metering arrangement. Net metering is defined under W.Va. Code §24-2F-3(11) as "the difference between electricity supplied by an electric utility and 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 from the alternative or renewable energy resource is used to offset part or all of the electric retail customer's requirements for electricity."

The Act requires the Commission to institute a general investigation for the purpose of adopting rules pertaining to net metering and the interconnection of eligible electric generating facilities intended to operate in parallel with an electric utility's system pursuant to W.Va. Code §24-2F-8(c). On February 2, 2010, the Commission entered an Order, (i) initiating a general investigation and issuing legislative proposed rules, Rules Governing Electric Utility Net Metering Arrangements and Interconnections, 150 C.S.R. 33; (ii) providing notice and publication of the rulemaking by the Commission Executive Secretary; and (iii) providing a comment period for interested parties.

In issuing the proposed rules, the Commission stated that the provisions of the Act required that the Commission should consider (i) requiring all sellers of electricity to retail customers in the state, including rural electric cooperatives, municipally-owned electric facilities or utilities serving less than thirty-thousand residential electric customers, to offer net metering rebates or discounts to Customer-generators; (ii) rules of other states located within the PJM regional transmission organization;[1] (iii) increasing the allowed kilowatt capacity for commercial customer-generators to an amount not to exceed five hundred kilowatts and for industrial customer-generators to an amount not to exceed two megawatts; and (iv) interconnection standards for combined heat and power.

In the Order entered February 2, 2010, the Commission stated that it proposed to limit the capacity that may be contributed by residential Customer-generators to 25 kW, although commercial and industrial Customer-generators may contribute more. The Commission stated that it intended for the proposed rules to apply to rural electric cooperatives, municipally-owned electric facilities and utilities serving less than thirty-thousand residential electric customers. The Commission invited comment upon the proposal to apply the proposed rules to these entities. In addition, the Commission invited comment on language regarding the location requirement under the definition of a "Customer-generator" in the proposed rules. The Commission further stated that upon final adoption of the rules, electric utilities would be required to file interconnection agreements for Commission approval.

By the Commission Order dated February 2, 2010, as corrected on February 22, 2010, the Commission invited interested parties to file initial comments by April 5, 2010 by 4:00 p.m. and to file reply comments no later than May 5, 2010 by 4:00 p.m.

[1] PJM Interconnection LLC is the regional transmission organization that coordinates the transmission grid and the movement of wholesale electricity in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia.

On March 29, 2010, the individuals, Donna J. Dean and John L. Meyer, filed initial comments.

On April 2, 2010, Brookfield Renewable Power (Brookfield) and PIMBY Energy, LLC (PIMBY) filed initial comments.

On April 5, 2010, Appalachian Power Company and Wheeling Power Company (collectively the AEP Companies), the West Virginia Energy Users Group (WVEUG), and Commission Staff (Staff) filed initial comments. Joint comments were filed by the City of New Martinsville, the City of Phillipi, Harrison Rural Electrification Association, Inc., Craig-Botetourt Electric Cooperative and Shenandoah Valley Electric Cooperative (collectively the Public Systems). The individuals, Kevin Fooce, and Arthur W. and Pamela C. Dodds, filed initial comments.

On April 5, 2010, Potomac Edison and Monongahela Power Company, dba Allegheny Power (Allegheny Power), requested an extension of time to file comments.

On April 6, 2010, Staff filed a Further Staff Memo, correcting its initial comments.

On April 7, 2010, IREC filed initial comments.

On April 7, 2010, the Commission issued a Procedural Order, granting an extension of time for Allegheny Power to file initial comments until April 9, 2010, at 4:00 p.m., and accepting the initial comments filed by IREC on April 7, 2010.

On April 15, 2010, Allegheny Power filed initial comments.

On April 16, 2010, the AEP Companies filed an attachment to its initial comments, the letter of the AEP Companies dated October 1, 2009, previously filed by the AEP Companies in General Order No. 184.25, a separate general investigation proceeding initiated by the Commission Order entered July 28, 2009, to establish a credit trading program under the Act. The AEP Companies inadvertently failed to attach the letter dated October 1, 2009, with the initial comments filed on April 5, 2010.

On May 5, 2010, Staff filed reply comments.

On May 6, 2010, IREC filed reply comments.

On May 27, 2010, Robert Harrington filed a letter of protest.

On June 2, 2010, ThompsonGas & Electric Service, Inc. filed comments.

DISCUSSION

The Commission has reviewed and considered the comments filed by the interested parties in this proceeding in promulgating final Rules Governing Electric Utility Net Metering Arrangements and Interconnections, 150 C.S.R. 33, attached hereto as Attachment A. Based on the comments received and its own review, the Commission has made a number of revisions to the proposed rules, as shown in the strikethrough version of the rules, attached hereto as Attachment B.

The Commission will address the main issues raised in the context of this rulemaking proceeding. In addition, the Commission has a response to some of the comments filed, as discussed below.

Application of the Rules to All Sellers of Electricity in the State

W.Va. Code §24-2F-8 (b) requires the Commission to consider requiring all sellers of electricity to retail customers in the state, including rural electric cooperatives, municipally-owned electric facilities or utilities serving less than thirty-thousand residential electric customers, to offer net metering rebates or discounts to Customer-generators. By Commission Order dated February 2, 2010, the Commission stated that it intended to apply the proposed rules to all sellers of electricity to retail customers in the state. The Commission invited comment on the application of the proposed rules to the rural electric cooperatives, municipally-owned electric facilities and utilities serving less than thirty-thousand residential electric customers.

In the joint comments filed by the Public Systems, the Public Systems opposed the application of the proposed rules to the rural electric cooperatives, municipally-owned electric facilities and utilities serving less than thirty-thousand residential electric customers. Among other things, the Public Systems assert that systems of the small electric utilities may not have the ability to comply with the rule requirements providing for the increased system capacity limits for commercial Customer-generators of up to 500 kilowatts and for industrial Customer-generators of up to 2 megawatts.

The comments filed by the AEP Companies, Staff, and IREC supported the application of the net metering and interconnection standards to rural electric cooperatives, municipally-owned electric utilities and utilities serving less than thirty-thousand electric customers in the state. In it comments, Staff recommended that the Commission include a provision in the final rules to limit Customer-generator participation in net metering within the service territories of these entities to small scale generators with a nameplate capacity of up to 50 kW, in order to address the limitations of the members of the Public Systems and other small electric utilities operating in the state.

The Commission finds that it is important to provide access to net metering for all electric retail customers in the state, including those provided electric service by rural electric cooperatives, municipally-owned electric facilities or utilities serving less than thirty-thousand residential electric customers. However, the Commission recognizes the concern of the Public Systems regarding the impact of the rules on the small electric utilities.

In response to the comments filed by Staff and the Public Systems, the Commission has amended the rules under Section 150-33-2.5 to limit the application of the rules to the rural electric cooperatives, municipally-owned electric facilities and utilities serving less than thirty-thousand residential electric customers. Under Section 150-33-2.5, as revised, the final rules specify that the maximum nameplate capacity for a Customer-generator to be served by rural electric cooperatives, municipally-owned electric utilities or utilities serving less than thirty-thousand customers shall be 50 kilowatts.

Definitions under Section 150-33-2

The definitions under Section 150-33-2 parallel the definitions set forth in the Portfolio Act under W.Va. Code §24-2F-3. On its own review, the Commission has found that certain definitions under Section 150-33-2 must be amended to reflect the definitions provided under the Portfolio Act. The Commission has revised the definition of "advanced coal technology" under Section 150-33-2 to reflect the amendment of the definition by the West Virginia Legislature with the enactment of House Bill 408 on November 20, 2009, with an effective date of February 17, 2010.

In addition, the Commission has revised the definitions under Section 150-33-2 to reflect recent statutory changes. In 2010, the West Virginia Legislature amended the Portfolio Act with the enactment of Senate Bill 350 on March 13, 2010, with an effective date of June 11, 2010. Senate Bill 350 amended the definitions under W.Va. Code §24-2F-3 to recategorize recycled energy from an alternative energy resource to a renewable energy resource and to remove the restriction that ethanol be produced from sources other than corn in order to be a renewable energy resource. The Commission has revised Section 150-33-2 to be consistent with the statutory changes under Senate Bill 350.

In addition, the Commission received comments from interested parties on specific definitions in the proposed rules under Section 150-33-2, and has a response to those comments below.

Section 150-33-2.5

The Commission invited comment on the definition of "Customer-generator" under Section 150-33-2.5 with the following language in the proposed rule:

> "Customer-generator" - An electric retail customer who owns and operates an alternative or renewable energy resource facility ("generation project") within

this state and located *the Commission invites comments on the following alternatives [at the customer's service location] [on property owned or leased by the customer and within two miles of the customer's service location] [location not relevant]* with 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, and which system 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 and customers.

The alternative language under Section 150-33-2.5 stating, "on property owned or leased by the customer and within two miles of the customer's service location," is similar to language in the Pennsylvania net metering rules that provide for meter aggregation. The Commission received numerous comments from interested parties on the policy of meter aggregation, as referenced under Section 150-33-2.5 and throughout the proposed rules. In addition to the proposed alternative language under Section 150-33-2.5, the rules contain other provisions relating to meter aggregation by physical meter aggregation or by virtual meter aggregation, as found in Sections 150-33-2.12, 150-33-2.14, 150-33-2.18, 150-33-7.2.e, and 150-33-8.6 of the proposed rules.

The AEP Companies suggested that the provisions related to meter aggregation should be eliminated under Section 150-33-2.5 and throughout the rules. The Public Systems agreed with the AEP Companies that meter aggregation should not be included within the rules. Among other points raised by these parties, the AEP Companies and the Public Systems suggested that meter aggregation by virtual aggregation would require costly manual billing procedures and expensive system upgrades in order for the utilities to implement virtual meter aggregation.

IREC filed comments supporting the provisions allowing for meter aggregation for facilities within two miles of the customer location under Section 150-33-2.5 and throughout the rules. IREC stated that the purpose of meter aggregation is to simplify net metering for Customer-generators who have multiple meters located at a single or several locations by allowing them to net those meters against a single eligible generating facility. IREC stated that the meter aggregation policy primarily benefits agricultural customers who have multiple meters at various locations throughout a farm property. IREC stated that its experience with meter aggregation in other states shows that virtual meter aggregation is not used often, but that it can be extremely advantageous to agricultural customers. PIMBY and Staff filed comments in support of the meter aggregation policy as well.

In its comments, Allegheny Power noted that West Penn Power, its sister company operating in Pennsylvania, has had occasional customer inquiries about meter aggregation. Allegheny Power stated, however, that no customer has been served with physical or virtual

meter aggregation by West Penn Power because of the costs associated with meter aggregation. Allegheny Power suggested that if the Commission elects to keep the meter aggregation provisions in the rules, the costs associated with meter aggregation should be borne by the Customer-generator as currently provided in the proposed rules. Staff agreed with the comments of Allegheny Power that the costs associated with meter aggregation should be borne by the Customer-generator.

The Commission declines the suggestion of the AEP Companies and Public Systems to eliminate the provisions related to meter aggregation under Section 150-33-2.5 and throughout the rules. The Commission agrees with the comments filed by IREC. The Commission believes that the meter aggregation policy may have a positive effect in encouraging the development of alternative and renewable energy resource facilities on farms and agricultural operations throughout the state. In addition, based upon a review of the comments filed, the Commission believes that the potential negative impact of the meter aggregation policy on the utilities is likely to be minimal. The Commission agrees with Staff and Allegheny Power that the Customer-generator should be responsible for the expense associated with meter aggregation and has retained this requirement in the final rules.

Under Section 150-33-2.5, Staff suggested a revision to permit the electric retail customer to lease the alternative or renewable energy resource facility equipment. IREC agrees with Staff that the electric retail customer should be able to lease the facility equipment to be eligible for net metering. The Commission agrees with the comments filed by IREC and Staff and has amended the final rules to reflect this decision.

Under Section 150-33-2.5, both Staff and IREC suggested a revision to include the term " agricultural customers". The Commission declines the recommendation of IREC and Staff to include the term "agricultural customers" under Section 150-33-2.5.

Under Section 150-33-2.5, Staff suggested revisions to Section 150-33-2.5 and throughout the rules, regarding the location requirement and the meter aggregation policy. The Commission has included the revisions suggested by Staff, with its own modifications in the final rules.

Section 150-33-2.15.d

Under Section 150-33-2.15.d, the proposed rules contain a definition of "run of river hydropower." The commentator, Brookfield, owns two hydroelectric generating facilities in West Virginia located at Hawks Nest and Glen Ferris, West Virginia that are federally licensed by the Federal Energy Regulatory Commission (FERC). Brookfield suggested that the definition of "run of river hydropower" under Section 150-33-2.15.d should be modified to be consistent with the federal licencing requirements of FERC. The Commission agrees with Brookfield. Accordingly, the Commission will adopt the language suggested by Brookfield under Section 150-33-2.15.d in the final rules.

Section 150-33-3.1

Under Section 150-33-3.1, the proposed rules provide a limit on participation in net metering to one percent (1%) of the electric utility aggregate customer peak demand in the State. The Commission believes that the proposed rules omit language specifying that the limit is based on the utility aggregate customer peak demand in the State during the previous year [emphasis added]. The Commission has corrected the omission of the phrase, "during the previous year" in the final rules.

In the comments filed by PIMBY and Staff, the parties recommended that Section 150-33-3.1 be revised to provide no cap or limit on the aggregate of installed capacity. Staff stated that there should be no cap or limit on the aggregate capacity unless the distribution utility makes a showing that customer-generated capacity above a certain level represents a threat to system reliability. IREC recommended that the Commission increase the capacity limit to at least five percent (5%), based on the net metering rules in Delaware and Maryland, states within the territory of PJM Interconnection that have aggregate capacity limits of five percent (5%) and eight percent (8%), respectively.

The Commission has taken into consideration the net metering rules of the other states within the territory of PJM Interconnection and will increase the limit on participation in net metering to three percent (3%) of the electric utility aggregate customer peak demand in the State during the previous year. The Commission declines the recommendation of the commentators to have no cap or limit on the aggregate of installed capacity. Instead, the Commission has adopted a limit that is within a reasonable range of those states within the territory of PJM Interconnection that do provide a specific percentage limit on the aggregate of installed capacity. In addition to the states of Delaware and Maryland, the Commission considered the net metering rules of other states within the territory of PJM Interconnection, including the states of Illinois, Indiana, Kentucky, Michigan and Virginia that specify a percentage limit of one percent (1%) or less on the aggregate of installed capacity. In addition, the Commission will reserve at least one-half percent (0.5%) of the electric utility aggregate customer peak demand for net metering participation by residential customers, in order to assure that the residential customers have a fair share of the opportunity to participate in net metering.

Section 150-33-3.4

Under Section 150-33-3.4, the proposed rules require the utilities to prepare information about net metering and to disclose that information annually to its customers by bill insert and by posting information on its web site. The AEP Companies and the Public Systems suggested that the Commission eliminate the requirement for the utilities to provide information by the annual bill insert in order to reduce the costs associated with the bill insert. The AEP Companies and the Public Systems maintained that the public will receive adequate information about net metering by posting the information on the utility web site.

The Commission believes that many customers still rely on the information received in their utility bills to update the customers on current utility policies. In addition, the Commission believes that information about the net metering program should be widely distributed to the public in order to promote participation in net metering. Accordingly, the Commission declines the suggestion of the AEP Companies and the Public Systems to change the electric utility information requirement under Section 150-33-3.4.

Section 150-33-3.7

Under Section 150-33-3.7, the proposed rules provide that a Customer-generator that is eligible for net metering owns the alternative energy credits of the electricity it generates unless there is a contract with an express provision that assigns ownership of the alternative energy credits to another entity or the Customer-generator expressly rejects any ownership interest in the alternative energy credits. The proposed rules contain other references to the Customer-generator ownership of alternative energy credits, including at Sections 150-33-8.4 and 150-33-8.5.

As noted in the joint comments of the Public Systems, the Commission has not made a determination that third parties other than electric utilities are eligible for alternative energy credits under the Act in the context of the Commission proceeding in General Order No. 184.25, In the matter of a proceeding to seek preliminary comments from interested parties regarding the scope of a proposed rulemaking to establish a credit trading program pursuant to West Virginia House Bill 103, effective July 1, 2009: Alterative and Renewable Energy Portfolio Act, codified as W.Va. Code §24-2F-1 et seq.

By Commission order entered July 28, 2009, the Commission initiated a general investigation proceeding in General Order No. 184.25 to invite comments prior to promulgating rules to provide a system of tradeable credits to establish, verify and monitor the generation and sale of electricity generated from alternative and renewable energy resources under the Portfolio Act. In the Commission order dated July 28, 2009, the Commission invited comment from interested parties regarding the content, extent and nature of the proposed rules to establish a credit trading program. Among other issues, the Commission invited and has received many comments from interested parties in General Order No. 184.25 as to whether the Commission should extend by rule the award of alternative and renewable energy resource credits to electric distribution companies or electric generators other than electric utilities. As stated in the Commission Order of July 28, 2009, the Commission will promulgate rules to establish a system of tradeable credits prior to the date of January 1, 2011, the deadline date for electric utilities to file compliance plans under the Act pursuant to W.Va. Code §24-2F-4.

Upon further reflection of Section 150-33.3.7 and related rule provisions, the Commission believes that it is premature to address the issue of Customer-generator ownership of alternative energy credits in the Rules Governing Electric Utility Net Metering Arrangements and Interconnections, 150 C.S.R. 33, prior to addressing the issue of Customer-generator ownership of alternative and renewable energy credits in the context of

General Order No. 184.25. Thus, the Commission has revised the proposed rules to remove the references to Customer-generator ownership of alternative energy credits and will address that issue in the context of the rulemaking proceeding in General Order No. 184.25.

Sections 150-33-4 and 150-33-5

The Commission received numerous comments regarding the interconnection standards under Section 150-33-4 and the technical requirements under Section 150-33-5. Many of the comments filed in this proceeding discuss prior policy adopted by the Commission. In order to fully address the comments filed, the Commission will provide a brief overview of prior policy. The Commission previously considered net metering and interconnection standards in Case No. 06-0708-E-GI, General Investigation into Net metering, Smart Metering and Interconnection standards set forth in the Federal Energy Policy Act of 2005. By Commission Order dated December 12, 2006, the Commission adopted a Consensus Statement filed by the parties as a resolution to that proceeding. By Commission order dated January 26, 2007, the Commission required all electric utilities in the state to file net metering tariffs consistent with the net metering and interconnection standards set forth in the Consensus Statement approved by the Commission in Case No. 06-0708-E-GI.

In the comments filed by the individuals, Donna J. Dean and John L. Meyer, the parties stated that the interconnection fees, charges and terms are not clearly specified under the proposed rules. The comments filed by Staff and IREC stated that the proposed rules lack important provisions including: (i) standardized terms and definitions, (ii) standardized agreements and applications, (iii) a multilevel review process, (iv) general interconnection requirements, (v) certification requirements, (vi) a dispute resolution process, and (vii) review timelines.

In its comments, Staff recommended that the Commission eliminate the interconnection standards and technical requirements under the proposed rules in Sections 150-33-4 and 150-33-5 and adopt the interconnection standards previously approved by the Commission in Case No. 06-0708-E-GI.

In its comments, the AEP Companies noted that many of the interconnection issues were resolved in Case No. 06-0708-E-GI. The AEP Companies maintained that the proposed rules unnecessarily address interconnection technical and equipment details that are better addressed in the Commission approved interconnection standards in the existing tariffs. The AEP Companies assert that the Commission approved interconnection standards in the tariffs have the advantage of greater flexibility as compared to interconnection standards adopted by rule. The Commission declines the suggestion of the AEP Companies because we believe that the Act requires the Commission to promulgate rules governing interconnection standards under W.Va. Code §24-2F-8(c).

The Commission agrees with the Staff recommendation. We have adopted detailed interconnection standards that are incorporated by reference into the final rules as Form No.

2. The standards in Form No. 2 are modeled after the interconnection standards approved by the Commission in Case No. 06-0708-E-GI, with modifications to reflect the final rules as adopted by the Commission in this proceeding and the requirements of the Portfolio Act. The Commission believes that the interconnection standards in Form No. 2 address and include the necessary technical requirements for interconnection that were previously included in the proposed rules under Section 150-33-5.

There were several comments filed regarding specific proposed rule provisions under proposed Sections 150-33-4 and 150-33-5. The final rules reflect the decision of the Commission on these specific rule provisions. However, the Commission has a response to the comments filed by the parties regarding proposed Section 150-33-4.4 and Section 150-33-5.3, as discussed below.

Under Section 150-33-4.4, the proposed rules require a Customer-generator to maintain homeowner, commercial or other insurance in the amount of at least one hundred thousand dollars ($100,000) for the liability of the insured against the losses or damages arising from the use of the Customer-generator facility. In the comments filed by Public Systems and IREC, the parties suggested the Commission should adopt a graduated level of insurance requirements based on the increased system sizes of the generating facilities for commercial and industrial Customer-generators. The Commission agrees and has adopted a graduated level of insurance requirements for eligible generating facilities in the final rules.

Under Section 150-33-5.3, the proposed rules required a Customer-generator facility to have a visibly open, lockable, manual disconnect switch, that is accessible by the electric utility and is clearly labeled. In the comments filed by the individuals, Kevin Fooce, Donna J. Dean and John L. Meyer, PIMBY, IREC and Staff, the parties suggested that the Commission should eliminate the requirement for the external disconnect switch, particularly for small inverter-based systems. The Commission agrees and has modified the requirement for the external disconnect switch. Under the interconnection standards approved in Form No. 2, a Customer-generator facility that meets the requirements of a Level 1 generator facility, with an electric nameplate capacity of 25 kW or less, that is inverter-based and certified, is not required to install an external disconnect switch.

Section 150-33-7

Section 150-33-7.2.b

Under Section 150-33-7.2.b of the proposed rules, the AEP Companies suggested that the language should be modified to specify (i) that a Customer-generator would receive only credit for electricity generated by the Customer-generator and which flows back into the electric grid through the customer's meter (ii) that a Customer-generator's credit offsets energy delivered by the electric utility to the Customer-generator through location's net meter, and (iii) that the Customer-generator receive credit on the basis of the generation component of retail rate. The Commission agrees with the language suggested by the AEP

Companies under Section 150-33-7.2.b, except that the Commission will retain the language providing that the electric utility credit a Customer-generator at full retail rate.

In its comments, Staff stated that it supports the use of the full retail rate as the credit mechanism for the billing period up to the Customer-generator's full energy consumption provided that the credits are not used to offset any monthly minimum bill, customer charge, demand charges or other charges not related to energy consumption. Under Section 150-33-7, Staff recommended that the Commission add a subsection to specifically provide that the Customer-generator credits shall not be applied to reduce any monthly minimum bill, customer charge, demand charges or other charges not related to energy consumption. The Commission agreed with Staff and has included this revision in the final rules.

Section 150-33-7.2.d

Under Section 150-33-7.2.d., the proposed rules provide that the electric utility shall compensate the Customer-generator for any excess kW hours generated by the Customer-generator beyond the twelve month Reporting period.

In its comments, Staff recommended that the provision in Section 150-33-7.2.d be omitted in view of FERC rulings that indicate FERC will assert jurisdiction over transactions in which a Customer-generator is compensated at the end of the Reporting period under a net metering arrangement. In support of its recommendation to delete proposed Section 150-33-7.2.d, Staff cited the FERC orders in MidAmerican Energy Company, Docket EL99-3-000, 94 F.E.R.C. P61, 340; 2001 FERC LEXIS 630, entered on March 28, 2001, and in Sun Edison, LLC, Docket No. EL09-31-000, 129 F.E.R.C. P61, 146; 2009 FERC LEXIS 2263, entered November 19, 2009.

In the 2001 MidAmerican Energy Company order, FERC declined to issue the request of MidAmerican Energy Company for a declaratory order that certain actions of the Iowa Utilities Board implementing the Iowa net metering rules were preempted by federal law under the Public Utilities Regulatory Policies Act of 1978 (PURPA). However, in the 2009 SunEdison, LLC order, FERC indicated that it may assert jurisdiction over net metering programs at paragraph 18 of the order wherein it stated:

> Only if the end-use customer participating in the net metering program produces more energy than it needs over the applicable billing period, and thus is considered to have made a net sale of energy to a utility over the applicable billing period, has the Commission asserted jurisdiction. If the entity making a net sale is a QF that has been exempted from section 250 of the FPA by section 292.601 of our regulations, no filing under the FPA is necessary to permit the net sale; however, if the entity is either not a QF or is a QF that is not exempted from section 205 of the FPA by section 292.601 of our regulations, a filing under the FPA is necessary to permit the sale.

Staff has interpreted the FERC ruling in the SunEdison, LLC order to indicate that payment to the Customer-generator by the utility for excess net generation after the end of the Reporting period would constitute a sale of energy to the utility subject to FERC jurisdiction. Staff recognized that the net metering rules in a number of states allow for compensation to the Customer-generator for net excess generation at the end of the Reporting period. However, Staff recommended that the Commission delete proposed Section 150-33-7.2.d to avoid a potential conflict with FERC jurisdiction. Instead , Staff recommended that the Commission adopt a provision that allows an indefinite rollover of net excess generation to the Customer-generator. The Commission agrees with Staff. The final rules reflect that any net excess generation at the end of the Reporting period will roll over indefinitely to the Customer-generator.

Section 150-33-8

Under Section 150-33-8 of the proposed rules, Staff recommended that the Commission add a subsection including time-differentiated rates in the final rules. IREC supported the Staff proposal for the inclusion of time-differentiated rates in the final rules. The Commission agrees with Staff and has included language in the final rules reflecting the Staff recommendation.

Section 150-33-9.1

Under Section 150-33-9.1 of the proposed rules, Staff recommended that the Commission expand the reporting requirements of the utilities to the Commission regarding the net metering program. The Commission agrees with Staff and has included language in the final rules reflecting the Staff recommendation.

FINDINGS OF FACT

1. In the 2009 West Virginia Legislative Session, the Legislature enacted House Bill 103, as later amended by House Bill 408, the Alternative and Renewable Energy Portfolio Act, codified in Article 2F of Chapter 24 of the West Virginia Code. In the 2010 West Virginia Legislative Session, the Legislature enacted Senate Bill 350, which further amended the Act. The Alternative and Renewable Energy Portfolio Act requires the Public Service Commission to promulgate rules governing net metering and interconnection standards within twelve months of the effective date of the Act of July 1, 2009, or by July 1, 2010.

2. By Order entered February 2, 2010, the Commission initiated a general investigation, issued legislative proposed rules, Rules Governing Electric Utility Net Metering Arrangements and Interconnections, 150 C.S.R.33, ordered public notice, and provided a comment period for the proposed legislative rules.

3. The Commission received comments from the following parties: Appalachian Power Company and Wheeling Power Company, Potomac Edison and Monongahela Power

Company, dba Allegheny Power, Brookfield Renewable Power, the West Virginia Energy Users Group, PIMBY Energy, LLC, the City of New Martinsville, the City of Phillipi, Harrison Rural Electrification Association, Inc., Craig-Botetourt Electric Cooperative and Shenandoah Valley Electric Cooperative, Interstate Renewable Energy Council, ThomasGas & Electric Service, Inc., Commission Staff, Donna J. Dean and John L. Meyer, Kevin Fooce, Arthur W. and Pamela C. Dodds, and Robert Harrington.

4. No party requested a hearing on the rule amendments.

CONCLUSION OF LAW

The Commission has considered the comments filed in this proceeding and by this Order promulgates final Rules Governing Electric Utility Net Metering Arrangements and Interconnections, 150 C.S.R. 33.

ORDER

IT IS THEREFORE ORDERED that the attached Rules Governing Electric Utility Net Metering Arrangements and Interconnections, 150 C.S.R. 33, and the forms attached thereto, attached hereto as Attachment A, are hereby adopted as final Commission rules.

IT IS FURTHER ORDERED that Attachment B hereto is a blackline version of the final rules, showing changes from the rules as proposed on February 2, 2010, and the final rules.

IT IS FURTHER ORDERED that the new Rules Governing Electric Utility Net Metering Arrangements and Interconnections, and the forms attached thereto, shall be effective sixty days from the date of this order, or on August 30, 2010.

IT IS FURTHER ORDERED that upon entry hereof, the Commission Executive Secretary shall file a copy of this order and the rules, together with the required forms, with the Secretary of State of West Virginia.

IT IS FURTHER ORDERED that on entry of this order the case shall be removed from the Commission docket of open cases.

IT IS FURTHER ORDERED that the Executive Secretary of the Commission serve a copy of this Order and the attached black lined version of the rules by electronic service on all parties of record who have filed an e-service agreement, by United States First Class Mail on all parties of record who have not filed an e-service agreement, and on Staff by hand delivery.

A True Copy, Teste:

Sandra Squire
Executive Secretary

ASH/rmt
GO258cd.wpd

ATTACHMENT A

TITLE 150
PROCEDURAL RULES
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-1 et seq.

1.3. Filing Date. -- June 30, 2010

1.4. Effective Date. -- August 30, 2010

1.5. Application of Rules

1.5.a. 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. "The Act" - The Alternative and Renewable Energy Portfolio Act codified in Article 2F of Chapter 24 of the West Virginia Code, as it may be amended in the future.

2.2. "Alternative energy resources" - The following resources, methods, projects

or technologies for the production or generation of electricity:

2.2.a. 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.

2.2.b. Coal bed methane;

2.2.c. Natural gas;

2.2.d. Fuel produced by a coal gasification or liquification facility;

2.2.e. Synthetic gas;

2.2.f. Integrated gasification combined cycle technologies;

2.2.g. 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);

2.2.h. Tire-derived fuel;

2.2.i. Pumped storage hydroelectric projects;

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

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

2.5. "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, leased, or operated 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 and customers.

2.6. "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.

2.7. "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.

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

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

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

2.11. "MW" - Megawatt - A unit of power representing 1,000,000 watts. A MW equals 1,000 kWs.

2.12. "Meter aggregation" - The combination of readings from and billing for all meters regardless of rate class on eligible properties owned or leased and operated 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.

2.13. "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.

2.14. "Physical meter aggregation" - The physical rewiring of all meters regardless of rate class on properties owned or leased and operated 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.

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

2.15.a. Solar photovoltaic or other solar electric energy;

2.15.b. Solar thermal energy;

2.15.c. Wind power;

2.15.d. Run of river hydropower - A hydropower facility that, during normal operating conditions, does not utilize storage and that has outflow from the project equal to inflow of the project on an instantaneous basis. The flow regime below a run of the 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 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.

2.15.e. 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.

2.15.f. 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;

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

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

2.15.i. 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.

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

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

2.18. "Virtual meter aggregation" - The combination of readings and billing for all meters regardless of rate class on eligible properties owned or leased and operated 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 may 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 is required in order to interconnect the Customer-generator facility, additional charges to cover 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 or by order of the Commission.

150 -33-4. Continuing Obligations

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

4.1.a. 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.b. 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.c. 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 standard service tariff under which the Customer-generator would otherwise be served, absent operation of the Customer-generator facility.

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

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

5.2.b. 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 utility's distribution system through the Customer-generator's electric meter, up to the total amount of electricity

delivered by the utility to that Customer-generator during the billing period.

5.2.c. Rate credits shall not be applied to reduce any fixed monthly minimum bill, customer charge, demand charges or other charges not related to energy consumption.

5.2.d. 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 at the full retail rate. Provided that, if a Customer-generator terminates service with the electric utility, the utility is not required to provide compensation to the Customer-generator for any outstanding kW hour credits.

5.2.e. 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. Net energy metering shall be accomplished by (i) using a standard meter capable of measuring the flow of electricity in two (2) directions, or (ii) two separate meters.

6.2. If the existing electrical meter installed at the Customer-generator facility is not capable of measuring the flow of electricity in two directions, the electric utility shall install new metering equipment for the Customer-generator at the expense of the electric utility. Any subsequent metering equipment change necessitated by the Customer-generator shall be paid by the Customer-generator.

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 single or contiguous property, as provided in Rule 2.5, 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 only 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 Reporting period ending May 31 of that year: (i) the total number of net metered Customer-generator facilities, by resource type; (ii) the total estimated rated generating capacity of net metering Customer-generators by resource type; (iii) total kW hours received from net metered Customer-generators; and (iv) total estimated kW hours produced by net metered Customer-generators, provided that this estimate does not require additional metering equipment.

150-33-8. Interconnection Obligation.

8.1. Subject to the requirements of these rules and the authorizing statute, a utility is obligated to interconnect a Customer-generator facility to its system. The 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. Customers served under this tariff must also take service from the Company under the applicable standard service tariff. 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 and accredited testing laboratories.

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 50kW 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 50kW and up to 500 kW shall maintain general liability insurance in the amount of five 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 ($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, or (ii) two separate meters. 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 and by time-of-day as required above, the Company shall install new metering equipment for the Customer-generator at Company expense. Any subsequent metering equipment change necessitated by the Customer-generator shall be paid for by the Customer-generator.

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.

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 utility's electric distribution system through the Customer-generator's electric revenue meter, up to the total amount of electricity delivered by the utility to that customer during the billing period.

3. 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 at the full retail rate. Provided that, if a Customer-generator terminates service with the electric utility, the utility is not required to provide compensation to the Customer-generator for any outstanding kW hour credits.

4. Rate credits shall not be applied to reduce any fixed monthly minimum bill, customer charge, demand charges or other charges not related to energy consumption.

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 2 MW or less that does 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 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 Generating 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 Electric Distribution Companies 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 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 69kV or less.

c. The interconnection will not cause the aggregated generation on the radial distribution circuit including the proposed generator to exceed 15% of the Line Section annual peak, three-phase load or 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 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 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 10-day response period and immediately complete their evaluation of the Interconnection Request within 3 business days of receipt of the Applicant's re-submittal.

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 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 EDC.

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 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 $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. An EDC 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 69kV 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 15% of the Line Section annual peak, three-phase load or 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 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 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 80% of the short circuit interrupting capability; nor is the interconnection proposed for a circuit that already exceeds 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 10-day response period and immediately complete their evaluation of the Interconnection Request within 3 business days of receipt of the Applicant's re-submittal.

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 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 inspection, 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 can be considered an isolation device for purposes of this requirement. 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

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:_____

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 ☐
3 Phase Transformer Connection ☐ Wye ☐ Delta

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

Address:_____
City:_____State:_____Zip:_____
Phone:_____Fax:_____

List interconnection components/system(s) to be used in the Small Generators 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:_____O 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

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 it has been tested in accordance 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.

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 Company:_____

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:_____

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 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:

1) Construction of the Small Generator Facility. The Interconnection Customer may proceed to construct (including operational testing not to exceed 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 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 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 Generating Small Generator Facility does not operate in the manner consistent with this Agreement

d) The Utility has the right to disconnect the Small Generator Facility in the event of improper installation or failure to pass the Witness Test.

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 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 25kW 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:_____
Phone:_____ Fax:_____
If to Utility:
Attention:_____
Address:_____
City:_____ State:_____ Zip:_____

Phone:_____ Fax:_____

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

For Utility:

Name: _____
Title: _____
Date: _____

For the Interconnection Customer:

Name: _____
Title: _____
Date: _____

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 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 Business Days after receipt of the Certificate of Completion, the Utility may conduct a Witness Test, The Witness Test shall be conduced only upon reasonable notice and at a mutually convenient time within the ten day period. If the Utility does not conduct the Witness Test within ten 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 tin 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 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 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 This 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 Electric Distribution System. The Utility shall provide the Interconnection Customer with five 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 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 .I 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

5.1.1 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. (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 50% of the cost estimated for its Interconnection Facilities prior to its beginning design of such facilities.

Article 6. Assignment.

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 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.

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, 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 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 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:_____
Phone: _____Fax:_____ E-mail_____

If to Utility:
Utility:_____
Attention:_____
Address:_____
City:_____State:_____Zip:_____
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:_____
Interconnection Customer:_____
Attention:_____
Address:_____
City: _____State:_____ Zip:_____

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:_____

Phone:_____Fax:_____E-Mail_____
Utility's Operating Representative:_____
*Attention:*_____
Address:_____
City:_____ State:_____ Zip:_____
Phone: _____Fax:_____

10.4 Changes to the Notice Information. Either Party may change this notice information by giving five 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:
Name:_____
Title:_____
Date:_____

For the Interconnection Customer
Name:_____
Title:_____
Date:_____

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 174 1 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 C3 7.108- 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, EEE 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

ATTACHMENT B

TITLE 150
PROCEDURAL RULES
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-1 et seq.

1.3. Filing Date. -- June 30, 2010

1.4. Effective Date. -- August 30, 2010

1.5. Application of Rules

1.5.a. 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 ~~c~~Commission unless ~~there is submitted therewith~~ the application includes a full and complete justification ~~of~~ for such action. Furthermore, to the extent the rule is based on a specific statutory requirement, the Commission is unable to waive such a ~~provisions~~ rule based upon specific statutory requirement.

150-33-2. Definitions.

2.1. "The Act" - The Alternative and Renewable Energy Portfolio Act codified in Article 2F of Chapter 24 of the West Virginia Code, as it may be amended in the future.

2.2. "Alternative energy resources" - ~~include t~~The following resources, methods,

projects or technologies for the production or generation of electricity:

2.2.a. Advanced coal technology~~, which means a~~ - 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.

2.2.b. Coal bed methane;

2.2.c. Natural gas;

2.2.d. Fuel produced by a coal gasification or liquification facility;

2.2.e. Synthetic gas;

2.2.f. Integrated gasification combined cycle technologies;

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

2.2.h. Tire-derived fuel;

2.2.i. Pumped storage hydroelectric projects;

~~2.2.j. 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.~~

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

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

2.5. "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: ~~and located~~ 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, leased, or operated 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 ~~with 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 ~~system~~ 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 and customers.

2.6. "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.

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

2.8. "Electric retail customer" - A direct purchaser of electric power whose service is billed by a utility based on meter reading~~.~~.

~~2.8.a. The term "Electric retail customer"~~ but excludes an occupant of a building or facility where the occupants are not direct purchase~~s~~rs of electricity.

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

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

2.11. "MW" - Megawatt - A unit of power representing 1,000,000 watts. A MW equals 1,000 kWs.

2.12. "Meter aggregation" - The combination of readings from and billing for all meters regardless of rate class on eligible properties owned or leased and operated 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.

2.13. "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.

2.14. "Physical meter aggregation" - The physical rewiring of all meters regardless of rate class on ~~eligible~~ properties owned or leased and operated by a Customer-generator to provide a single point of contact for a ~~single~~ meter or meters to measure net electric service for that Customer-generator.

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

2.15.a. Solar photovoltaic or other solar electric energy;

2.15.b. Solar thermal energy;

2.15.c. Wind power;

2.15.d. Run of river hydropower - A hydropower facility that, during normal operating conditions, does not utilize storage and that has outflow from the ~~facility~~ project equal to inflow of the ~~facility impoundment~~ project on an instantaneous basis. The flow regime below a run of the river hydropower project will essentially be the river's natural regime, except in special circumstances, such as might follow reinstallation of flashboards ~~or~~ , project shutdowns,or as required pursuant to 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.

2.15.e. 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.

2.15.f. 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;

2.15.g. Biologically derived fuel - Methane gas, ethanol ~~not produced from corn~~ ,or biodiesel fuel; ~~and~~

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

2.15.i. 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.

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

2.17. "Reporting period" - The 12-month period from June 1 through May 31. ~~A Reporting period shall be numbered according to the calendar year in which it begins and ends.~~

2.18. "Virtual meter aggregation" - The combination of readings and billing for all meters regardless of rate class on eligible properties owned or leased and operated 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 may 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 ~~less~~ no greater than ~~one percent (1%)~~ 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. ~~Should~~ If construction or upgrades of the electric utility system ~~be~~ is required in order to interconnect the Customer-generator facility, additional charges to cover 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, ~~metering,~~ 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. A Customer-generator that is eligible for net metering owns the alternative energy credits of the electricity it generates, unless there is a contract with an express provision that assigns ownership of the alternative energy credits to another entity or the~~

~~Customer-generator expressly rejects any ownership interest in alternative energy credits.~~

~~3.8.~~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 or by order of the Commission.

~~**150-33-4. Interconnection.**~~

~~4.1. A Customer-generator seeking to interconnect a Customer-generator alternative or renewable energy resource facility with an electric utility system shall submit to the electric utility a completed application, which shall include a one-line diagram showing the configuration of the proposed facility.~~

~~4.2. A Customer-generator of 25 kW or less must pay a nonrefundable application for interconnection fee (a "NAFI fee") of $30.00. For a Customer-generator of more than 25 kW, the electric utility shall calculate the amount of the NAFI fee based on the estimated costs of interconnection. The NAFI fee will cover the electric utility cost to inspect the Customer-generator facility.~~

~~4.3. For Customer-generators of more than 25 kW, should the electric utility determine that an interconnection study is required to determine if installation of the Customer-generator facility will have significant impact on the electric utility system, the electric utility will advise the Customer-generator of the estimated cost of performing such study. Upon payment by the Customer-generator of the estimated study costs, the electric utility will proceed with the interconnection study.~~

~~4.4. The Customer-generator must submit to the electric utility evidence of homeowner, commercial or other insurance providing coverage in the amount of at least one hundred thousand dollars ($100,000) for the liability of the insured against losses or damages arising from the use of the Customer-generator facility.~~

~~4.5. A Customer-generator and an electric utility shall execute a Commission-approved interconnection agreement prior to interconnection of a Customer-generator facility with an electric utility system.~~

~~4.6. Prior to interconnection, a Customer-generator facility must:~~

~~4.6.a. Comply with the electric utility technical requirements.~~

~~4.6.b. Be installed in accordance with manufacturer specifications and~~

~~applicable provisions of the National Electrical Code and state and local codes. The Customer-generator will provide the electric utility with proof of such installation. Certification by a licensed electrician shall constitute acceptable proof.~~

~~4.6.c. Comply with all applicable safety, performance and power quality standards established by the National Electrical Code, the Institute of Electrical and Electronic Engineers and accredited testing laboratories.~~

~~**150-33-5. Technical Requirements**~~

~~5.1. A Customer-generator facility net metering installation must operate in parallel with the electric utility distribution system.~~

~~5.2. A Customer-generator facility must meet the technical requirements of IEEE 1547 "Standard for Interconnecting Distributed Resources with Electric Power Systems".~~

~~5.3. A Customer-generator facility must include a visibly open, lockable, manual disconnect switch, that is accessible by the electric utility and is clearly labeled.~~

150 -33-6<u>4</u>. Continuing Obligations

~~6.~~4.1. A Customer-generator shall maintain ~~homeowner, commercial or other~~ general liability insurance providing the following coverage: ~~in the amount of at least one hundred thousand dollars ($100,000) for the liability of the insured against losses or damages arising from the use of the Customer-generator facility.~~

4.1.a. 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.b. 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.c. 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).

~~6.~~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-~~7.~~5. Netting Monthly Charges

~~7.~~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 standard service tariff under which the Customer-generator would otherwise be served, absent operation of the ~~c~~Customer-generator facility.

~~7.~~5.2. Measurement and Charges. The measurement of net electrical energy supplied or generated will be calculated as follows:

~~7.~~5.2.a. The net electrical energy produced or consumed during the billing period shall be measured in accordance with normal metering practices

~~7.2.~~5.2.b. 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 ~~revenue~~ meter and delivered to the utility's distribution system through the Customer-generator's electric ~~revenue~~ meter, up to the total amount of electricity ~~used by~~ delivered by the utility to that Customer-generator during the billing period.

5.2.c. Rate credits shall not be applied to reduce any fixed monthly minimum bill, customer charge, demand charges or other charges not related to energy consumption.

~~7.2.c~~5.2.d. 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 at the full retail rate. ~~Any excess kW hours shall continue to accumulate until the end of the Reporting period.~~ Provided that, if a Customer-generator terminates service with the electric utility, the utility is not required to provide compensation to the Customer-generator for any outstanding kW hour credits.

~~7.2.d. At the end of each Reporting period, the electric utility shall compensate the Customer-generator for any excess kW hours generated by the Customer-generator over the amount of kW hours delivered by the electric utility during the same Reporting period at the electric utility's average cost of generation during the twelve month Reporting period.~~

~~7.5.~~5.2.e. 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-~~8~~6. Meters and Metering.

~~8~~6.1. Net energy metering shall be accomplished by (i) using a standard ~~kW~~ meter capable of measuring the flow of electricity in two (2) directions, or (ii) two separate meters.

~~8~~6.2. If the existing electrical meter installed at the Customer-generator facility is not capable of measuring the flow of electricity in two directions, the electric utility shall install new metering equipment for the Customer-generator at ~~electric utility~~ the expense of the electric utility. Any subsequent metering equipment change necessitated by the Customer-generator shall be paid ~~for~~ by the Customer-generator.

~~8~~6.3. If two meters are used to measure ~~net kW~~ 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.

~~8.4. When the Customer-generator intends to take title or transfer title to any alternative energy credits which may be produced by the Customer-generator facility, the Customer-generator shall bear the cost of additional net metering equipment required to qualify the alternative energy credits in accordance with the Act and Public Service Commission rules.~~

~~8.5. When the Customer-generator expressly rejects ownership of alternative energy credits produced by the Customer-generator facility, the electric utility may supply additional metering equipment required to qualify the alternative energy credit at electric utility~~

~~expense. In those circumstances, the electric utility shall take title to any alternative energy credit produced. An electric utility shall, prior to taking title to any alternative energy credits produced by a Customer-generator, fully inform the Customer-generator of the potential value of the alternative energy credits and other options available to the Customer-generator for the disposition of those credits. A Customer-generator is not prohibited from having a qualified meter service provider install metering equipment for the measurement of generation, or from selling alternative energy credits to a third party other than an electric utility.~~

~~8.6.~~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 ~~and operated~~ within two (2) miles of the boundaries of the Customer-generator single or contiguous property, as provided in Rule 2.5, and within a single electric utility's service territory. Physical meter aggregation shall be at the ~~Customer-generator's~~ 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 ~~Customer-generator's~~ expense of the Customer-generator. The Customer-generator shall be responsible only for any incremental expense entailed in processing his account on a virtual meter aggregation basis.

150-33-9~~7~~. Report to the Commission.

~~9~~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 Reporting period ending May 31 of that year: (i) the total number of net metered Customer-generator facilities, by resource type; ~~and~~ (ii) the total estimated rated generating capacity of net metering Customer-generators by resource type; (iii) total kW hours received from net metered Customer-generators; and (iv) total estimated kW hours produced by net metered Customer-generators, provided that this estimate does not require additional metering equipment.

150-33-8. Interconnection Obligation.

8.1. Subject to the requirements of these rules and the authorizing statute, a utility is obligated to interconnect a Customer-generator facility to its system. The 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. Customers served under this tariff must also take service from the Company under the applicable standard service tariff. The total rated generating capacity of all customers served under this tariff shall be limited to ~~one percent (1%)~~ 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 "~~c~~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 and accredited testing laboratories.

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 Customer must provide a visibly open, lockable, manual disconnect switch, which is accessible by the Company and is clearly labeled.~~

~~8~~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.

~~9~~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.

~~10~~9. A Customer-generator shall maintain ~~homeowner, commercial or other~~ general liability insurance providing the following coverage: ~~in the amount of at least one hundred thousand dollars ($100,000) or such amount of coverage reasonably deemed necessary by the Company to protect its plant and other customers for the liability of the insured against losses or damages arising from the use of the Customer-generator facility.~~ 1) a Customer-generator with a Customer-generator facility with a nameplate capacity of up to 50kW 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 50kW and up to 500 kW shall maintain general liability insurance in the amount of five 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 ($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.

~~11~~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 ~~kW~~ meter capable of measuring the flow of electricity in two directions, or (ii) two separate meters. 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 and by time-of-day as required above, the Company shall install new metering equipment for the Customer-generator at Company expense. Any subsequent metering equipment change necessitated by the Customer-generator shall be paid for by the Customer-generator.

If two meters are used to measure ~~net kW~~ 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.

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 ~~revenue~~ meter and delivered to the utility's electric distribution system through the Customer-generator's electric revenue

meter, up to the total amount of electricity ~~used by~~ delivered by the utility to that customer during the billing period.

3. 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 at the full retail rate. ~~Any excess kW hours shall continue to accumulate until the end of the Reporting period.~~ Provided that, if a Customer-generator terminates service with the electric utility, the utility is not required to provide compensation to the Customer-generator for any outstanding kW hour credits.

~~4. At the end of each Reporting period, the Company shall compensate the Customer-generator for any excess kW hours generated by the Customer-generator over the amount of kW hours delivered by the Company during the same year at the Company average avoided cost of generation during the twelve (12) month Reporting period.~~

4. Rate credits shall not be applied to reduce any fixed monthly minimum bill, customer charge, demand charges or other charges not related to energy consumption.

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.

~~**Other Charges**~~

~~Except for the cost of the first meter as provided in Net Metering Rule 8.2., the Customer-generator is responsible for all equipment and installation costs of the electric generating facility.~~

~~As specified in the interconnection application, a Customer-generator of 25 kW or less must pay a nonrefundable application for interconnection fee ("NAFI fee") of $30.00. For a Customer-generator of more than 25 kW, the electric utility shall calculate the amount of the NAFI fee based on the estimated costs of interconnection. The NAFI fee will include the cost of inspection of the Customer-generator facility if the Company deems such inspection is necessary.~~

~~For Customer-generators of more than 25 kW, should the Company determine that an interconnection study is required to determine if installation of the Customer-generator facility will have significant impact on the Company system, the Company will advise the~~

~~Customer-generator of the estimated cost of performing such study. Upon payment by the Customer-generator of the estimated study costs, the Company will proceed with the interconnection study.~~

~~Should construction or upgrades of the Company system be required in order to interconnect the Customer-generator facility, additional charges to cover costs incurred by the Company shall be determined by the Company and paid by the Customer-generator. The Customer-generator shall pay any additional charges, as determined by the Company, for equipment, labor, metering, testing or inspections requested by the customer.~~

~~Technical Requirements~~

~~The technical requirements for interconnection of Customer-generator facilities to the Company distribution system are as follows: Interconnection enables the Customer-generator facility to operate in parallel with the Company distribution system. An Interconnection Study may be required to determine the impact of the Customer-generator facility on the Company distribution system beyond the point of common coupling.~~

~~The Customer-generator facility shall comply with the requirements specified in IEEE 1547, "Standard for Interconnecting Distributed Resources with Electric Power Systems" and other technical requirements stated herein and in the Net Metering Rules~~.

~~IEEE 1547 contains the majority of the technical requirements necessary for interconnection. IEEE 1547 is limited to an aggregate capacity of 10 MW or less interconnected at typical primary and/or secondary voltages, IEEE 1547 does not address planning, designing, operating, or maintaining the Company distribution system and it does not identify or address all of the potential system impacts the proposed net metering installation may create beyond the point of common coupling. Due to the limitations of IEEE 1547, additional technical requirements apply.~~

~~These Technical Requirements are supplementary to and do not intentionally conflict with or supersede applicable laws, ordinances, rules or regulations established by Federal, State and other governmental bodies. The Customer-generator is responsible for conforming to all applicable laws, ordinances, rules or regulations established by Federal, State and other governmental bodies. Additional requirements for interconnection may be imposed by the regional transmission operator to address transmission system operating issues related to the proposed Customer-generator facility. Additional requirements may also be necessary to comply with the requirements of other approved tariffs associated with the Company or other third parties providing services.~~

~~To assure that the safety, reliability and power quality of the distribution system is not degraded by interconnection of the Customer-generator facility:~~

~~1) The Customer-generator facility shall comply with the Technical Requirements stated herein.~~
~~2) Any distribution system modifications and/or modifications to the Customer-generator facility identified by the interconnection study shall be completed~~
~~3) The Customer-generator facility shall be operated and maintained in compliance with this Tariff and the Net Metering Rules.~~

~~IEEE publications are available from the Institute of Electrical and Electronics Engineers, 433 Hoes Lane, P.O. Box 133 1, Piscataway, NJ 08855-133 1 (http://standards.ieee.ord).~~

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. ~~Suitability for interconnection does not imply that Pre-certified equipment may be interconnected without a study to determine system impact.~~

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 2 MW or less that does 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 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 Generating 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 Electric Distribution Companies 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 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 69kV or less.

c. The interconnection will not cause the aggregated generation on the radial distribution circuit including the proposed generator to exceed 15% of the Line Section annual peak, three-phase load or 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 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 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 10-day response period and immediately complete their evaluation of the Interconnection Request within 3 business days of receipt of the Applicant's re-submittal.

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 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 EDC.

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 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 $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. An EDC 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 69kV 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 15% of the Line Section annual peak, three-phase load or 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 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 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 80% of the short circuit interrupting capability; nor is the interconnection proposed for a circuit that already exceeds 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 10-day response period and immediately complete their evaluation of the Interconnection Request within 3 business days of receipt of the Applicant's re-submittal.

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 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 inspection, 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 can be considered an isolation device for purposes of this requirement. 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)

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:_____

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 ☐
3 Phase Transformer Connection ☐ Wye ☐ Delta

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

Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ Fax: _____

List interconnection components/system(s) to be used in the Small Generators 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: _____ O 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

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 it has been tested in accordance 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.

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 Company: _____

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: _____

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 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:

1) Construction of the Small Generator Facility. The Interconnection Customer may proceed to construct (including operational testing not to exceed 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 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 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 Generating Small Generator Facility does not operate in the manner consistent with this Agreement

d) The Utility has the right to disconnect the Small Generator Facility in the event of improper installation or failure to pass the Witness Test.

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 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 25kW 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: _____

Phone: _____ Fax: _____

If to Utility:

Attention: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

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

For Utility:

Name: _____
Title: _____
Date: _____

For the Interconnection Customer:

Name: _____
Title: _____
Date: _____

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 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 Business Days after receipt of the Certificate of Completion, the Utility may conduct a Witness Test, The Witness Test shall be conduced only upon reasonable notice and at a mutually convenient time within the ten day period. If the Utility does not conduct the Witness Test within ten 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 tin 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 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 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 This 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 Electric Distribution System. The Utility shall provide the Interconnection Customer with five 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 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 .I 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

5.1.1 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. (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 50% of the cost estimated for its Interconnection Facilities prior to its beginning design of such facilities.

Article 6. Assignment.

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 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.

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, 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 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 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: _____
Phone: _____ Fax: _____ E-mail _____

If to Utility:
Utility: _____
Attention: _____
Address: _____
City: _____ State: _____ Zip: _____
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: _____
Interconnection Customer: _____
Attention: _____
Address: _____
City: _____ State: _____ Zip: _____

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: _____

Phone: Fax: E-Mail

Utility's Operating Representative:

Attention:

Address:

City: State: Zip:

Phone: Fax:

10.4 Changes to the Notice Information. Either Party may change this notice information by giving five 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:

Name:

Title:

Date:

For the Interconnection Customer

Name:

Title:

Date:

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 174 1 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 C3 7.108- 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, EEE 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