

January 31, 2005

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Commonwealth of Pennsylvania
Secretary's Bureau
Pennsylvania Public Utility Commission
P. O. Box 3265
Harrisburg, PA 17105-3265

Re: Docket No. L00040168

Advanced Notice of Proposed Rulemaking Regarding
Small Generation Interconnection Standards and
Procedures

January 31, 2005

Dear Secretary McNulty:

Enclosed please find our comments on the Advanced Notice of Proposed Rulemaking
Regarding Small Generation Interconnection Standards and Procedures.

Respectfully Submitted,



Daniel J. Desmond
Deputy Secretary
Office of Energy and Technology Development

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Department of Environmental Protection
Recommendations and Comments on the Advanced Notice and Proposed
Rulemaking Concerning Small Generation Interconnection Standards
Published in 34 Pa.B.6426
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PA PUBLIC
LAW BOOK

Section 5 of Act 213 requires the PUC to develop statewide technical and net metering interconnection rules for customer-generators intending to operate renewable onsite generators in parallel with the electric utility grid, consistent with rules defined in other states within the service region of the RTO that manages the transmission system in any part of PA.

The Act defines a customer-generator as “A nonutility owner of a net metered distributed generation system with a nameplate capacity of not greater than 50 kilowatts if installed at a residential service or not larger than 1,000 kilowatts at other customer service locations, except for customers whose systems are above one megawatt and up to two megawatts who make their systems available to operate in parallel with the electric utility during grid emergencies as defined by the regional transmission organization, or where a microgrid is in place for the purpose of maintaining critical infrastructure, such as homeland security assignments, emergency services facilities, hospitals, traffic signals, wastewater treatment plants or telecommunications facilities, provided that technical rules for operating generators interconnected with facilities of an electric distribution company, electric cooperative or municipal electric system have been promulgated by the Institute of Electrical and Electronic Engineers and the Pennsylvania Public Utility Commission.” We recommend that for consistency among PJM states, including New Jersey, non-residential customer-generators up to 2 MW should be allowed to net-meter and interconnect.

The customer-generator should be credited at the full retail rate for excess generation each month, such credit to be carried over from one monthly billing period to the next, until the end of the annualized period. At the end of the annualized period, the electric supplier/provider should compensate the customer-generator for any excess kWh generated, at the supplier/provider’s avoided cost of wholesale power.

DEP has been made aware of several problems that potential owners of small distributed generation systems have encountered, either involving confusion in the requirements for interconnection, or through EDC rate policies that adversely impact the economics of these systems. For these reasons, DEP urges the Commission to adopt rules that favor customer-generators in such a way as to remove these barriers to project implementation.

Among the projects encountering economic disincentives have been farm-based anaerobic digestion systems. Most of these farm digesters, and potentially some mid-size wind energy or other renewable energy systems, are greater than 50 kW (existing proposed projects are typically 60 to 200 kW in capacity, although they could be larger). Many of these farm customers are residential service locations, and the legislation sets the cutoff for residential service at 50 kW. It is important to structure the rules so that these farm projects can benefit from net metering. This can be accomplished by allowing a customer operating a farm-based renewable energy system to

qualify as an "other customer service" regardless of their actual residential customer service status, and thereby become eligible to net meter up to 2 MW.

These kinds of on-farm net metered systems can supplement farming income, improve energy security in rural communities and reduce the impact of nutrient runoff in watersheds when implemented in tandem with environmental best practices.

Therefore, Rural Cooperatives or other generation or transmission and other electricity distribution service providers should be included in the development of these regulations.

New Jersey's net metering and interconnection standard regulation provides favorable access to renewable distributed generation projects. As far as technical interconnection standards go, New Jersey's requirement, based on IEEE 1547 and UL1741, is generally compatible with PJM's recently adopted (12/16/04) technical requirements and standards. For these reasons, we recommend basing Pennsylvania's regulation, in part, on New Jersey's recent rule (N.J.A.C. 14:4-9), effective October 4, 2004.

We prefer that both interconnection and net metering issues be addressed in a common regulation, rather than separately. Since both of these issues affect distributed generation system installation, and both involve the customer interacting with the electric distribution company, it would benefit the customer-generator to address these issues through a single regulatory process.

Net metering should apply to Tier 1 energy resources only. The interconnection standards should apply to all Tier 1 and Tier 2 resources. *We should avoid making conditions any more favorable to "dirty" generation sources, such as uncontrolled diesel generation that is being used with increasing frequency for peak shaving.*

New Jersey's net metering standard applies to customer-generator facilities with generating capacity that does not exceed the customer's peak electric needs. This seems reasonable, as a facility generating much more power than needed could be seen to be competing unfairly with the EDC.

EDCs should develop a tariff and should make net metering available on a first-come, first-served basis.

Each supplier/provider or EDC should submit an annual net metering report to the Commission, which the Commission should make publicly available. The annual report should include:

1. The total number of customer-generator facilities;
2. The total estimated rated generating capacity of its net metering customer-generators;
3. The total estimated net kilowatt-hours received from customer-generators; and
4. The total estimated amount of energy produced by the customer-generators, which should be calculated using protocols approved by the Commission.

A customer-generator that is eligible for net metering owns the alternative energy credits associated with the electricity it generates, unless there is a contract with an express provision

that assigns ownership of these credits to another party. The customer-generator is the owner of the alternative energy credits, and can trade or sell them.

Fees and costs associated with net-metering and interconnection should be nominal and such that they should not place an undue economic or procedural burden on a customer generator.

Meters and Metering

A customer-generator facility used for net metering should be equipped with metering equipment that can measure the flow of electricity in both directions at the same rate. This is typically accomplished through use of a non-ratcheting single bi-directional meter. A customer-generator may choose to use an existing electric revenue meter if it can meet appropriate conditions. If the existing meter is not sufficient, the EDC should install a new revenue meter at the company's expense. Any subsequent revenue meter change necessitated by the customer-generator, whether because of a decision to stop net metering or for any other reason, should be paid for by the customer-generator.

The electric distribution company should not require more than one meter per customer-generator. However, an additional meter may be installed under either of the following circumstances:

1. The electric distribution company may install an additional meter at its own expense if the customer-generator consents; or
2. The customer-generator may request that the EDC install a meter, in addition to the revenue meter addressed in (c) above, at the customer-generator's expense. In such a case, the EDC should charge the customer-generator no more than the actual cost of the meter and its installation.

General Interconnection Provisions

(a) Each EDC should provide the following three review procedures for applications for interconnection of customer-generator facilities:

1. Level 1 – an EDC should use this review procedure for all applications to connect inverter-based customer-generator facilities, which have a power rating of 50 kW or less, and which meet the certification requirements in the next section. Level 1 interconnection review procedures are set forth the section after;
2. Level 2 – an EDC should use this review procedure for applications to connect customer-generator facilities with a power rating of 1 MW or less, or 2MW or less if otherwise eligible under this rule, which meet the certification requirements in the next section. Level 2 interconnection review procedures are set forth the section after; and
3. Level 3 – an EDC should use this review procedure for applications to connect customer-generator facilities with a power rating of 2MW or less if otherwise eligible under this rule, which do not qualify for either the level 1 or level 2 interconnection review procedures. Level 3 interconnection review procedures are set forth the section after.

(b) Each EDC should designate an employee or office from which an applicant can obtain basic application forms and information through an informal process. On request, this employee or office should provide all relevant forms, documents, and technical requirements for submittal of a complete application for interconnection review under this section, as well as specific information necessary to contact the EDC representatives assigned to review the application.

(c) Upon request, the EDC should meet with an applicant who qualifies for level 2 or level 3 interconnection review to assist them in preparing the application.

(d) An application for interconnection review could be submitted on a standard form, available from the EDC and posted on the Commission's website. The application form should require the following:

1. Basic information regarding the applicant and the electricity supplier(s) involved;
2. Information regarding the type and specifications of the customer-generator facility;
3. Information regarding the contractor who will install the customer-generator facility; and
4. Certifications and agreements regarding utility access to the customer-generator's property, emergency procedures, liability, compliance with electrical codes, proper operation and maintenance, receipt of basic information; and
5. Other similar information that is necessary to determine compliance with this chapter.

(e) An EDC should not be responsible for the cost of determining the rating of equipment owned by a customer-generator, or of equipment owned by other local customers.

(f) The provisions of this subchapter that apply to interconnection are primarily intended for customer-generator facilities that are eligible for net metering; that is, renewable generation facilities with a capacity no greater than two megawatts. However, these provisions may be used for review of other interconnections at the discretion of the EDC.

(g) If the interconnection of a customer-generator facility is subject to interconnection requirements of FERC or PJM, the provisions of this subchapter that apply to interconnection should apply to that facility only to the extent that they do not conflict with the interconnection requirements of FERC or PJM.

(h) If an applicant for interconnection disagrees with an EDC's determination of fact or need regarding matters covered in this subchapter, or if any person has a complaint regarding matters covered herein, the applicant or other person should follow PUC's rules for complaint.