STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

Illinois Commerce Commission On its Own Motion	))))	Docket No. 06-0525
Consideration of the federal standard on interconnection in Section 1254 of the Energy Policy Act of 2005	))))	

STAFF INITIAL VERIFIED COMMENTS

NOW COMES the Staff of the Illinois Commerce Commission ("Staff"), by and through its attorneys, and pursuant to Section 200.800 of the Illinois Administrative Code, (83 Ill. Adm. Code 200.800), and the schedule the Administrative Law Judge ("ALJ") set at the March 19, 2008 status hearing, respectfully submits its Initial Verified Comments in the above-captioned matter.

Procedural Background

On July 26, 2006, the Illinois Commerce Commission ("Commission") issued an Order initiating this proceeding ("*Initiating Order*"). In its Initiating Order, the Commission ordered:

> [A] determination concerning whether or not this Commission will adopt the standard established under new Section 111(d)(15) of PURPA (16 U.S.C. 2621(d)(15)) shall be made through the issuance of an interim or final order no later than [August] 8, 2007.[1]
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> [A] rulemaking proceeding [be] instituted to consider, and make a determination concerning, whether or not this Commission will adopt the policies prescribed in the standard established under new Section

[1] In response to a Joint Motion To Amend The Initiating Order, filed on September 5, 2006, the Commission issued an Amendatory Order on September 26, 2006, which changed the February 8 date to August 8 in finding number 7 and in this quoted ordering paragraph.

> 111(d)(15) of PURPA (16 U.S.C. 2621(d)(15)) for the electric utilities that meet the retail sales criteria in PURPA.

Initiating Order, (ordering paragraphs) at 3.

The Commission also noted that on August 8, 2005, the federal Energy Policy Act of 2005 ("EPAct") (Pub. L. 109-58) was signed into law. Certain provisions of EPAct amend the federal Public Utility Regulatory Policies Act of 1978 ("PURPA") to mandate certain considerations by state regulatory agencies. *Initiating Order*, at 1.

Section 2621(a) of PURPA, as amended by EPAct, and codified in the United States Code, provides, in relevant part, that:

> Each State regulatory authority (with respect to each electric utility for which it has ratemaking authority) and each nonregulated electric utility shall consider each standard established by subsection (d) and make a determination concerning whether or not it is appropriate to implement such standard to carry out the purposes of this title.

16 U.S.C. 2621(a).

For purposes of this proceeding, the relevant portion of Subsection (d), referenced above, is Subsection (d)(15), which provides the following:

> (15) Interconnection. – Each electric utility shall make available, upon request, interconnection service to any electric consumer that the electric utility serves. For purposes of this paragraph, the term 'interconnection service' means service to an electric consumer under which an on-site generating facility on the consumer's premises shall be connected to the local distribution facilities. Interconnection services shall be offered based upon the standards developed by the Institute of Electrical and Electronics Engineers: IEEE Standard 1547 for Interconnecting Distributed Resources with Electric Power Systems, as they may be amended from time to time. In addition, agreements and procedures shall be established whereby the services are offered **shall promote current best practices of interconnection for distributed generation, including but not limited to practices stipulated in model codes adopted by associations of state regulatory agencies**. All such agreements and procedures shall be just and reasonable, and not unduly discriminatory or preferential.

16 U.S.C. 2621(d)(15) (emphasis added).

In its Initiating Order, the Commission also found that it was "appropriate to take administrative notice of the amendments to PURPA contained in Pub. L. 109-58" and to make part of the record in this proceeding the Staff Report, dated July 17, 2006 ("Staff Report"). *Initiating Order*, at 2. In the Staff Report, the Staff of the Energy Division, among other things, explained that:

> [T]he application of the federal standards is intended for electric utilities with total sales of electric energy for purposes other than resale exceeded 500 million kilowatthours during any calendar year beginning after December 31, 1975, and before the immediately preceding calendar year (16 U.S.C. 2612(a)). On the basis of the annual reports submitted to the Commission for calendar year 2005, the Illinois utilities subject to this sales threshold are Commonwealth Edison Company, Central Illinois Public Service Company, Central Illinois Light Company, Illinois Power Company, and MidAmerican Energy Company.
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> *Id*.

As required by EPAct, the Commission needed to consider application of IEEE Standard 1547 by August 8, 2007. On July 25, 2007, the Commission issued an *Interim Order* in which it adopted IEEE Standard 1547.

On August 24, 2007, the Illinois Legislature passed Public Act 95-420 ("Net Metering Act") (220 ILCS 5/16-107.5). The Net Metering Act states, in part, that "[w]ithin 120 days after the effective date of this amendatory Act… the Commission shall establish standards for net metering… and standards for the interconnection of eligible renewable generating equipment to the utility system." 220 ILCS 5/16-107.5(h). Section 16-107.5(i) further requires that "[a]ll electricity providers shall begin to offer net metering no later than April 1, 2008." 220 ILCS 5/16-107.5(i). Moreover, the Net Metering Act also mandated that:

> The interconnection standards shall address any procedural barriers,

> delays, and administrative costs associated with the interconnection of customer-generation while ensuring the safety and reliability of the units and the electric utility system. The Commission shall consider the Institute of Electrical and Electronics Engineers (IEEE) Standard 1547 and the issues of (i) reasonable and fair fees and costs, (ii) clear timelines for major milestones in the interconnection process, (iii) nondiscriminatory terms of agreement, and (iv) any best practices for interconnection of distributed generation.
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> 220 ILCS 5/16-107.5(h).

Staff has endeavored to fulfill its obligations under both federal law and state law through the numerous workshops and conference calls to fully consider and make informed decisions regarding "the issues of (i) reasonable and fair fees and costs, (ii) clear timelines for major milestones in the interconnection process, (iii) nondiscriminatory terms of agreement, and (iv) any best practices for interconnection of distributed generation." Staff's decisions on these issues were first reflected in the DG interconnection emergency rule.

On March 26, 2008, the Commission adopted an emergency rule, entitled 83 Ill. Adm. Part 466 Illinois Distributed Generation Interconnection Standard, to be effective April 1, 2008, and which was published in the Illinois Register on April 18, 2008. In light of the short time span and the burdens imposed on the utilities to quickly comply with the new standards in the emergency rule, Staff inserted a "safe harbor" provision (Section 466.20) to be effective throughout the 150 days of the emergency rule. Section 466.20 of the emergency rule allows for utilities to offer interconnection on just and reasonable terms, while reporting any deviations from the new standards, during the 150 day time period.

At the same time the emergency rule was published, a proposed general rule was also published in the Illinois Register on April 18, 2008. There are changes in the

published proposed general rule that were neither contemplated nor made by Staff. In particular, the changes occur in Sections 466.70 and 466.80. Staff's Initial Verified Comments are not made based on the *published* proposed general rule; instead, they rely specifically on the proposed general rule which was attached to the Commission's Order of March 26, 2008 as Appendix 2.

The proposed general rule was developed in consultation with interested parties including Commonwealth Edison Company, the Ameren Illinois Utilities (AmerenCIPS, AmerenIP and AmerenCILCO), MidAmerican, the Attorney General's Office, the Environmental Law and Policy Center (ELPC), the Interstate Renewable Energy Council, and various elements of the federal bureaucracy. The interconnection rules developed by the Maryland Commission Staff were used as a template for the emergency and proposed general rule. The proposed general rule and attachments, with red-line changes, are attached as Attachment A. Before discussing the specifics of Staff's proposed rule for interconnection, however, Staff first addresses the implementation issue.

Implementation

The parties to this docket have not reached consensus on the best procedure for implementing the federal interconnection standards. This is seen in Comments filed in this proceeding on September 5, 2006 (Initial Comments), November 2, 2006 (Reply Comments), and January 30, 2007 (New Initial Comments).

For example, Environmental Law and Policy Center (and workshop advocates for distributed generation) argued that the Commission should adopt a rule under the Commission's general rulemaking procedures to implement the standards. The electric

utilities argued that their existing practices and procedures, adopted in a Commission order, would be the best approach. Staff, however, advocated that the standards be implemented through tariffs filed by each utility, which it termed a tariffing regime. Staff argued, in November of 2006, that it was "premature" to enter into a rulemaking for DG Interconnection. Staff Initial Verified Comments (Nov. 2, 2006), at 5. Staff viewed this as a compromise position, and one that did not preclude a future rulemaking. The parties, as noted in the Interim Order, agreed to include the implementation method in the workshops. They also agreed that if the workshop stakeholders did not reach a consensus, the issue would be presented to the Commission for decision. *Interim Order* (July 25, 2007), at 3.

On August 27, 2007, the Illinois General Assembly passed into law the Net Metering Act. The Net Metering Act contains a public policy statement in Subsection (a), in which the Illinois General Assembly clearly intends to "encourage private investment in renewable energy resources, stimulate economic growth, enhance the continued diversification of Illinois' energy resource mix, and protect the Illinois environment." 220 ILCS 5/16-107.5(a). Although this public policy statement does not specifically reference DG interconnection, the Illinois General Assembly's intentions are directly relevant to DG interconnection and, in fact, its intent seems to be to promote DG interconnections.

The General Assembly is also now considering a bill that directly subsidizes some expenses that certain DG interconnection applicants incur when seeking to interconnect with the electric utility system. In its current form, HB 5855 subsidizes net metering customers that use renewable resources to power their distributed generators.

Thus, it seems that state (and perhaps federal) promotion of renewable resources has become more likely. In particular, if either the state or federal government decides to subsidize either renewable energy or distributed generation, many more applicants are likely to seek DG interconnection with Illinois utilities than if there is no subsidization.

The price of energy also affects the potential for DG interconnection applications in Staff's view. As energy prices climb, electricity becomes more expensive to produce. As electricity produced by the utility gets more expensive, the demand for DG interconnections can reasonably be assumed to increase.

The demand for DG interconnection was always important for Staff's decision-making from the beginning, as Staff has struggled to anticipate the future and facilitate efficient DG interconnection here in Illinois. As demand for interconnection increases, convenient and efficient interconnection becomes more important. These and other factors have crystallized Staff's thinking. Thus, Staff has changed its opinion about and position on implementation and now supports a rulemaking for distributed generation. Staff believes that it has become more important to standardize the interconnection process and make it uniform across the state. Implementing the standards in a rule accomplishes these goals better than its previously proposed tariffing regime.

Staff now turns to the Staff proposed Illinois Distributed Generation Interconnection Standard itself.

Introduction

Staff proposes the attached rule (Att. A) after an extensive workshop process. It provides standards for interconnection to Illinois utilities' electric distribution systems for generators with capacities up to 10 MVA. These rules are intended to facilitate the

orderly interconnection of generators to electric distribution systems without compromising worker and customer safety or the stability of the electric utility's system.

As noted above, this proceeding was initiated in order to comply with EPAct. EPAct mandated that state commissions determine whether or not to adopt interconnection standards based upon IEEE 1547 and 'best practices.' The Staff recommended, with no party opposing Staff's recommendation, and the Commission agreed, that Illinois should adopt such a standard. Subsequent to that decision, Staff began a workshop process to determine exactly what that standard should be and how it should be implemented. The Staff invited all interested parties to the workshops to collaborate on the specific rule. To expedite this process, the workshop participants agreed to use the Maryland rules as a template.[2] However, all agreed that the Maryland rule would not conclusively be determinative for Illinois; that is, Maryland's decision about some specific procedure in its rule (*e.g.*, timelines) did not mandate what Illinois would do.

The distribution network delivers power from the transmission system to retail customers. The transmission system moves power from the generators to the distribution systems. In the past, generation was connected only to the transmission system which was, in turn, designed to accommodate large generators. Historically, large generation machines have delivered power at lower unit costs. Machines that have smaller capacity had higher per unit costs. But technological change has enabled smaller machines to produce power at more competitive costs. However, it is not convenient or practical to interconnect these smaller machines to the transmission

[2] When the Illinois workshops began, the 'Maryland rule' was not completed. The workshops used the Maryland rule in the state it was in at the time the Illinois workshops began.

system, and the distribution system is not designed to interconnect power sources. In order to insure that distributed generation does not adversely impact other distribution customers, cause damage to the distribution system, or impair utility worker safety, the electric utility must be careful about the machines it permits to interconnect and where on the distribution network it allows interconnection. In other words, the utility needs to mediate between permitting customers to install generation for their own benefit with protecting its workers and other customers from adverse impacts.

In order to facilitate safe and efficient interconnection to distribution systems, the electric industry needed to develop technical standards to ensure that generator manufacturers could make machines that complied with technical requirements for safe interconnection. The Institute for Electrical and Electronics Engineers (IEEE) adopted the technical standard, denoted IEEE 1547, in June 2003 and approved it as an American National Standard in October 2003. If a generation machine is certified by an authorized laboratory as compliant with IEEE 1547, it is called "lab-certified."

Staff is proposing these rules to streamline the interconnection process and make the process uniform across the state. Streamlining the process provides generation customers with a clear-cut and efficient method for installing their machines. It also provides the utility with a more established and transparent set of rights and responsibilities. By making the process uniform state-wide, producers of generation machines get access to a wider market.[3]

[3] If there are different rules for each utility, generator manufacturers will find it more difficult to make one type of machine for the whole state. With uniform rules, the manufacturer knows what it will take to get that machine installed no matter where its customer is located.

The proposed rule uses the concept of screens to determine whether installing the generator[4] at a given location may have adverse impacts on the distribution system. A screen is a set of conditions. They are designed to ensure that if an interconnection proposal passes the screens, it is safe to install the generator at that location. If the proposal fails to pass the screens, the utility can safeguard its system by preventing its installation at that location.[5]

The other important factor in establishing standards is the length of time it takes to obtain the utility's approval to interconnect the generator. Customers want the utility to promptly approve their interconnection application since delay raises their costs and complicates their planning. Unnecessary delays discourage investment in distributed generation. However, it is critical to the distribution system's safety and reliability that decisions to allow interconnection be made correctly. It is also not prudent to force utilities to grant interconnection customers undue priority when deciding how to allocate scarce utility resources between load and interconnection customers. The timelines in the rules need to mediate between these competing considerations.

Distributed generation runs a wide gamut. It ranges from small photovoltaic cells that generate 1 kVA and can be installed on a house's roof to large gas turbines that generate as much as 10 MVA.[6] Because of this diversity, it is not feasible to develop one set of screens and timelines for all types of generation. Therefore, generators are divided into levels based upon the capacity of the generator and its type.

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[4] In this document, generator refers to the generation machine, while applicant and interconnection customer is used for the entity installing the generator.

[5] As discussed below, if a customer wants to install a machine that does not pass the screens, it may be able to fund system improvements that can then allow the installation to occur without adverse system impacts. See the discussion of Level 4.

[6] A typical household consumes at peak between 2½-5 kVA. A large wholesale generator connected to the transmission system can be 200 to 900 MVA.

There are four distinct generator levels. Level 1 is for lab-certified generators with capacity equal to or below 10 kVA and inverter-based. An inverter changes direct current ("DC") into alternating current ("AC"). An inverter-based generation machine produces DC electricity which is converted to AC. The utility cannot be required to make changes to its distribution system in order for the customer to qualify for Level 1 treatment. Machines typical of Level 1 are photovoltaics and windmills.

Level 2 is for generators above 10 kVA but less than or equal to 2 MVA. Generators must be interconnecting on a radial distribution circuit and be lab-certified. Again, the utility cannot be required to make changes to its distribution system in order for the customer to qualify for Level 2 treatment.[7]

Level 3 is for generators less than 10 MVA[8] that do not export power back onto the distribution system. This type of generator is typically for customers that want to produce power when their usage exceeds some set level (a process sometimes called "peak-shaving"). A Level 3 customer must use equipment called reverse power relays to prevent the power from flowing out into the distribution system. The Level 3 customer cannot be served by a shared transformer. The utility cannot be required to change its distribution system in order for the customer to qualify for Level 3 treatment.

Level 4 is for all other interconnection customers. Generators may have capacity up to 10 MVA and export power, but Level 4 customers must bear the cost for the utility to determine how much it costs to upgrade its facilities in order to safely and reliably interconnect the customer as well as the costs of the actual upgrades. That way, Level

[7] Interconnections under Level 2 can still occur if only minor modifications, such as relay setting or fuse size changes are necessary.
[8] This limit actually depends upon what kind of distribution system the customer wants to install its generator on. The limit for interconnecting distributed generation to an area network is lower.

4 customers do not impose a burden on other customers. Interconnection applications that failed to pass the screens for lower levels become Level 4 interconnection applicants.

Staff next discusses each section of the proposed rule and provides the Commission with some insight into how each respective section accommodates interconnection.

Specific Sections of the Rule

Section 466.10 Scope

In general, two opposing points of view exist regarding the appropriate scope for the Illinois Distributed Generation Interconnection Standard. On one side, large distributed generators argue that the rule should include all distributed generation not subject to FERC or RTO requirements. Limiting the scope of Illinois' rule to distributed generation of 10MVA or less creates a void in interconnection standards. Interconnection customers and EDCs will be left with no applicable rule to follow for interconnecting distributed generation with capacity larger than 10MVA if that distributed generation is not subject to existing FERC or RTO requirements. The opposing argument is essentially that since the technical standard for the Illinois Distributed Generation Interconnection Standard, IEEE Standard 1547, is applicable to distributed generation facilities of 10 MVA or less, it would be inappropriate for the Illinois Distributed Generation Interconnection Standard to cover distributed generation interconnections that exceed 10 MVA.

Staff concluded that limiting the rule to 10 MVA was the correct action after first considering the consequence of extending the applicability of the rule to distributed

generation with capacities larger than 10 MVA, perhaps a value as high as 20 MVA. But it soon became clear to Staff that there was no value above 10MVA that was obviously correct. For example, if the distribution circuit were operating at 21 kV, perhaps interconnections as high as 30 MVA might sometimes be appropriate. But if the interconnection were to occur on a 69 kV distribution line, it would be difficult to identify an appropriate maximum size for the interconnection. Staff eventually decided that since the Commission in its Interim Order had adopted the IEEE Standard 1547, it would be inappropriate for the Illinois Distributed Generation Interconnection Standard to assign procedures and timelines to interconnections for which its associated technical standard does not also apply. Interconnections of distributed generation with capacity greater than 10MVA certainly can still occur, but the technical standard, fees, and timelines for such interconnections are not included in this interconnection rule. For interconnecting distributed generation with capacity greater than 10MVA, nothing prevents the EDCs and interconnection customers from mutually agreeing to follow the procedures and timelines contained in the Illinois Distributed Generation Interconnection Standard. However, different procedures and timelines might also be acceptable to both parties due to additional studies and equipment necessitated by the larger size. Staff's proposed rule, consequently, accommodates only state-jurisdictional generators that are 10 MVA or less.

Section 466.30 Definitions[9]

This section defines terms that are used in the rule.

Section 466.40 Technical standards

[9] Section 466.20 is not contained in the general rule. It was present in the emergency version of this rule, but, in Staff's view, it is not appropriate for the general rule.

The technical standard that this rule uses is IEEE 1547. This is important, since as a technical standard, it can be revised over time. However, the rule is not automatically updated to the new standard. Thus, the rule will need to be amended to keep it current with the technical standard as it is updated.

Section 466.50 Interconnection requests

An interconnection request begins the formal interconnection process. The rule specifies a standard form that must be used (attached to the rule as Appendix A (Level 1) or Appendix C (Levels 2, 3 and 4)). It also provides that the interconnection request must be accompanied by the application fee, noted on the application. The rule grants the applicant the option to file the application electronically.

Section 466.60 General requirements

This section covers a range of issues that apply to all levels. Here, Staff makes note of the more important or controversial issues. For all levels, the utility has the option to perform a witness test. That is, the utility can be present when the generator is tested by the customer to ensure that the machine performs as advertised. Another item that Staff considers important to facilitate interconnection is that the utility is required to make information available to potential interconnection customers sufficient to allow the customer to develop a good idea about the likelihood that a proposed interconnection at a given location will be approved.

One issue that generated controversy was whether the interconnection customer should be required to install a device that would isolate the machine from the grid. This is a safety issue. The isolation device prevents the generator from powering up the distribution lines when the EDC intends for the lines to be de-energized. Sections

466.60(h) and (i), together, allow the EDC to require that interconnection customers install an isolation device and then use that device to disconnect the distributed generation from the distribution system. While there was little disagreement during workshops that a discrete isolation device was necessary for distributed generation interconnected at the primary voltage level, significant disagreement occurred regarding the need for external isolation devices for small capacity distributed generation that interconnects at the secondary voltage level, specifically Level 1 interconnections. For very small distributed generation, the EDC might be able to achieve a visible-break between the distributed generation and the distribution system simply by removing a self-contained electric meter, so that requiring the affected customer to bear the cost of an additional isolation device would serve no purpose. Ultimately, Staff determined that using language that allows the EDC to require an external isolation device was appropriate since contemplating every type of electric service entrance equipment and type of metering within the rule itself was improbable, unwieldy and unnecessary. Nothing in the rule prevents a meter from being used as the isolation device. If an interconnection customer believes that the EDC is unreasonably requiring an external isolation device, that customer can dispute the requirement using the procedures outlined in Section 466.130.

The rule allows the utility to monitor and control generators that are over 2 MVA. Subsection (k) is intended to limit the restriction that an EDC may place on distributed generation operations. An EDC may not control the operation of distributed generation if the capacity is below 2 MVA. For distributed generation above 2 MVA, an EDC might determine it must, as a condition of interconnection, be afforded some form of control in

order to limit the operation of the distributed generation under defined conditions. For example, if the EDC regularly temporarily reconfigured its distribution system in such a manner that the distributed generation interconnection facilities' protection equipment could no longer properly function, or the distributed generation would cause high or low voltage when connected to that temporarily reconfigured distribution system, then the EDC would be allowed to monitor and control the distributed generation's operations to be certain other customers would not be adversely affected by the distributed generation's operations. In Attachment 5 of the Levels 2 to 4 Contract (Appendix D), the EDC is required to provide a description of known circumstances under which such monitor and control would occur. Staff wished to clarify that in cases where transfer trip is necessary as part of the protection scheme for interconnection to safely occur even during normal circuit configuration, then automatic execution of that transfer trip function is not considered monitoring and control.

Section 466.70 Lab-certified equipment

This section details the steps required to certify to utilities that a generator meets the IEEE standards. Staff determined that only lab-certified equipment should qualify for expedited review procedures. The Maryland model rule that Staff utilized for this rulemaking suggested an additional provision for "field-approved" equipment, which allowed expedited treatment if the EDC had previously approved an interconnection that used the same non-lab-certified equipment in a materially identical system application.

Staff excluded the field approved language from the rule because the field-approved concept injects, in Staff's judgment, an unnecessary and contentious variable into what is intended to be an expedited interconnection procedure. Staff believes the

rule should make it clear to all parties that in order to qualify for expedited treatment an interconnection customer must use equipment that has been certified by a nationally recognized testing laboratory ("NRTL"). If an interconnection customer elects to use non-certified interconnection equipment, then the interconnection can still move forward, but will do so under the procedures outlined for Level 4 interconnections. EDCs pointed out that the time and effort necessary to determine whether the EDC itself had previously approved identical interconnection equipment in a materially identical system application would be similar to the time needed to execute a new study. Finally, even if the EDC confirmed that the interconnection equipment itself was identical to what was previously approved, whether or not the application of that equipment was "materially identical" could only be determined after conducting extensive analysis, and would ultimately likely be the cause of disputes. EDCs indicated that under no circumstances would they accept a study review conducted by a different EDC in order to accept equipment as "field-approved."

Ultimately, Staff was persuaded that providing expedited treatment for interconnections that utilize interconnection equipment that is not lab-certified would overly complicate the expedited process without reciprocal offsetting benefits. Staff believes that manufacturers of interconnection equipment should be encouraged to become certified through NRTL testing. NRTL certification is more likely to occur if interconnection customers create a demand for NRTL tested equipment because that equipment facilitates expedited interconnection. Staff, accordingly, agreed with the EDCs that each installation of a given machine has at least the potential to be a unique event and thus rejected the field-approved concept.

Section 466.80 Determining the review level

This Section outlines the characteristics necessary to apply for the various levels. Only an inverter-based distributed generation facility can qualify for Level 1 review. Level 2 review procedures can apply to interconnections to a radial distribution circuit that serves multiple customers, or a spot network that serves only one customer, and can occur if only minor modifications by the EDC are required. Level 3 has two criteria, depending on the type of distribution system involved, either radial or network.

Section 466.90 Level 1 expedited review

This section specifies the screens that the generator must pass in order to be approved at its specified location. This screen is included to assure the EDC that distributed generation will not affect the protection equipment at the distribution substation or even the source transmission circuit by limiting the percentage of load the distributed generation can supply. Some EDCs do not have facilities in place to record distribution circuit minimum load values but, instead, only measure maximum values, so an alternative measure of 15% of maximum load, though somewhat less useful, is also provided. Staff believes that these two values are similar in magnitude.

The most controversial issue in the workshops and in comments were the timelines and whether to require a disconnect switch for Level 1 customers. Staff proposes deadlines that it believes balance the customer's need for an expedited process and the utility's need for the time for proper consideration of the request. The disconnect switch is more controversial. The utility wants certainty that it can conveniently and quickly disconnect load from distribution facilities to protect other customers and its workers. But customers insist that the utility has several options to

disconnect the generator without installing a switch that completely isolates the machine from the distribution system. Utilities insist that the only alternative is to allow the utility to completely disconnect the machine. As discussed previously, Staff determined that if an interconnection customer believes that the EDC is unreasonably requiring an external isolation device for a Level 1 interconnection, that customer can dispute the requirement using the procedures outlined in Section 466.130.

Section 466.100 Level 2 expedited review

This Section details the screens that the generator must pass to receive approval to interconnect from the EDC and the timelines for the EDC and the customer.

Section 466.110 Level 3 expedited review

This Section explains the screens that the generator needs to pass to receive approval to interconnect from the EDC and the timelines for the EDC and the customer.

Workshop participants representing large non-exporting generators felt strongly that Section 466.100(a)(1) should not apply to non-exporting generators since there is no danger that the non-exporting generators would back-feed the EDC's distribution circuit and affect the EDC's protection equipment. While Staff understands the validity of that argument, Staff also considered the consequence of placing no such limitation on Level 3 interconnections, and it became clear that operational problems would be likely. If a large customer added load but offset that load by installing a non-exporting distributed generation facility, there would likely be no operating problems for the customer or EDC under normal conditions, since the distributed generation equipment would be supplying the added customer load. A serious problem would occur, however, if the distributed generation facility were to shut down while the customer's added load

remained connected. The EDC would have to suddenly absorb the customer's additional load with its existing distribution system. In order for the EDC to know it could do so, it would need to assure itself that its distribution circuit could handle the additional load, which would require studies similar to impact and feasibility studies, described for Level 4 interconnections.

Staff concluded that the Section 466.100(a)(1) screen effectively protects the EDC's distribution system and the EDC's other customers from operating problems, including overloads and low voltage, that might occur if the screen was not utilized. Interconnection of non-exporting distributed generation facilities that do not meet the Section 466.100(a)(1) screen can still proceed as a Level 4 interconnection rather than a Level 3.

Section 466.120 Level 4 review

This Section explains the screens that the generator needs to pass to get the interconnection application approved by the EDC and the timelines for the EDC and the customer. Level 4 reviews are fundamentally different from the other three levels. This is because the other levels presume that the EDC does not have to install facilities in order to accommodate interconnection. However, Level 4 procedures are designed for machines that require the ability to install and/or upgrade local distribution facilities. Therefore, a Level 4 review is not expedited.

In addition, since facilities will need to be installed for a Level 4 interconnection, the EDC needs to engage in studies to determine the proper design for the additional facilities, how much it will cost, and the time needed to install them. The studies are, in order: interconnection feasibility (Appendix E), interconnection system impact (Appendix

F), and interconnection facilities (Appendix G) studies. While studies can be combined, the utility is given time after finishing the last study to develop the study agreement for the next study to determine what is studied, how it is being studied, and how much the study will cost. Finally, after the additional facilities have been designed, they need to be installed. The rule requires that the utility be paid in full before each study because this prevents load customers from funding interconnections.

Distributed generation advocates wanted a provision for partial payments or payment plans for the studies and facilities construction. However, Staff believed it was better practice for the EDC not to be a creditor to its interconnection customers.

Section 466.130 Disputes

This Section details how the parties can resolve any disputes that they may have. The only controversy is whether distributed generation interconnection should be granted special Commission dispute resolution resources. Customer groups want the Commission to have a separate procedure available for interconnection disputes, while Staff opposes this proposal at this time.

Section 466.140 Records

This Section details the information that utilities need to retain. In particular, the utilities will need to keep interconnection records for at least 3 years. The utilities will also need to issue a report each year on the past year's activities. Additionally, the utilities are required to preserve copies of interconnection studies.

Appendices

The appendices contain the standardized interconnection applications and agreements for all four levels as well as the study agreements for Level 4. Level 1

applicants will use a separate application and contract than Levels 2 through 4 applicants. Levels 2 through 4 applicants will use the same application and contract, but the fees for each level are different. There is also a standardized certificate of completion that all applicants must complete and return to the utility prior to the interconnection agreement becoming final.

As proposed, all of these documents are required as part of the proposed general rule and are meant to be standard applications and contracts for the EDCs and the distributed generators. As an alternative, however, Staff would not necessarily object to making the Levels 2-4 Contract (Appendix D) discretionary, as long as both parties agree to any different terms. Staff believes that this discretion will allow the EDCs and the customers to negotiate in good faith and encourage interconnection to take place. The Levels 2-4 Application should remain mandatory. In addition, the Level 1 Application and Contract (Appendix A) is meant to be a mandatory form due to the potential lack of commercial sophistication that Level 1 applicants might have relative to the presumed higher level of commercial sophistication of Levels 2 through 4 applicants. This mandatory standard document, Staff believes, will protect both the EDC and the Level 1 applicant. The study agreements (Appendices E, F, and G) are meant to be discretionary, as is indicated in the rule itself, because these studies should be a cooperative effort between the EDCs and the distributed generators.

Indemnification and Insurance

Indemnification and insurance both relate to promoting current best practices required under PURPA and the Net Metering Act. Indemnification will be addressed first, followed by insurance.

Indemnification

Indemnification is compensating another for a loss suffered due to a third-party's act, failure to act or default. The electric utilities argued against a two-way indemnification. The DG generator advocates argued for a two-way indemnification. Staff's research reveals that most states that have addressed, or are in the process of addressing, indemnification in DG rules have concluded that two-way indemnification was appropriate. *See e.g.*, In the Matter of Establishing generic Standards for Utility Tariff's for Interconnection and Operation of Distributed Generation Facilities under Minnesota Laws 2001, Chapter 212, Docket No. E-999/CI-01-1023, Minnesota Public Utilities Commission, 2004 Minn. PUC LEXIS 133, Opinion (Sept. 28, 2004), at *179-180; In the Matter of Petition of Progress Energy Carolina, Inc., et al. for Approval of "Model" Small Generation Interconnection Standard and Associated Application to Interconnect and Interconnection Contract Forms, Docket No. E-100, SUB 101, North Carolina Utilities Commission, *2005 N.C. PUC LEXIS 373; 240 P.U.R.4th 533*, *Opinion* (March 22, 2005), at *20-21; In Re: Inquiry Into PURPA Interconnection Standard, Docket No. NOI-06-4, Iowa Utilities Board, *2007 Iowa PUC LEXIS 163, Opinion (*April 25, 2007), at *19-21; In The Matter Of The Proposed Rules Regulating Electric Utilities, 4 Code Of Colorado Regulations 723-3, Decision No. C07-0381; Docket No. 06R-492E, Colorado Public Utilities Commission, *2007 Colo. PUC LEXIS 327, Opinion*, (April 25, 2007), at *296; In The Matter Of The Investigation Of Implementation Of Interconnection Standards In The District Of Columbia, Formal Case No. 1050; Order No. 14333, District of Columbia Public Service Commission, *2007 D.C. PUC LEXIS 149, Opinion* (June 13, 2007), at *60; Approval of Adoption of Rule Concerning Customer-generator

Interconnection Standards 170 IAC 4-4.3, Approval of Amendment of Rule Concerning Cogeneration and Alternate Energy Production Facilities and Net Metering 170 IAC 4-4.1 and 170 IAC 4-4.2, LSA Document # 05-130(F); IURC RM # 05-02, Indiana Utility Regulatory Commission, *2005 Ind. PUC LEXIS 392, Opinion (*November 22, 2005), at *31; Rules and Procedures for Interconnecting Customer-Owned Distribution Generators to Electric Distribution Systems, 1-AC-207, Public Service Commission Of Wisconsin, *2003 Wisc. PUC LEXIS 765; 230 P.U.R.4th 461, Opinion (*December 5, 2003), at *13. Staff, accordingly, after considering the best practices of other states on indemnification concluded that a two-way indemnification should be included in the contractual documents.

Insurance

Staff, in reaching the decisions it made on the issue of insurance, assessed whether the amounts of insurance were adequate to insure against all reasonably foreseeable liabilities, in light of the nature and size of the generating equipment. Staff's research reveals that its proposed insurance requirements are within the general range of the insurance requirements that most states that have addressed, or are in the process of addressing DG interconnection insurance requirements, have adopted. For other state jurisdictional discussions of insurance see generally the string citation Staff provided above for indemnification. Indemnification and insurance are either discussed together or in close proximity in those state opinions.

Conclusion

WHEREFORE, the Staff of the Illinois Commerce Commission respectfully requests that its recommendations be adopted in their entirety consistent with the arguments set forth herein.

Respectfully submitted,

/s/_____

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April 25, 2008

Counsel for the Staff of the
Illinois Commerce Commission

STATE OF ILLINOIS)
) SS.
COUNTY OF SANGAMON)

VERIFICATION

David Rearden, on oath, states that he is employed by the Illinois Commerce Commission as a Senior Economist in the Policy Program; that he is authorized to make this Verification on behalf of the Staff of the Illinois Commerce Commission; that he has read the foregoing Staff Initial Verified Comments, and is familiar with the contents thereof; and that the matters set forth in the attached Staff Initial Verified Comments are true and correct to the best of his knowledge, information and belief.

David Rearden
Name

Subscribed and sworn before me
This 25th day of April

Mary Ellen Ruffner
Notary Public

OFFICIAL SEAL
MARY ELLEN RUFFNER
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES:02/04/09

STATE OF ILLINOIS)
) SS.
COUNTY OF SANGAMON)

VERIFICATION

Greg Rockrohr, on oath, states that he is employed by the Illinois Commerce Commission as a Senior Electrical Engineer in the Electric Section of the Engineering Department of the Energy Division; that he is authorized to make this Verification on behalf of the Staff of the Illinois Commerce Commission; that he has read the foregoing Staff New Reply Verified Comments, and is familiar with the contents thereof; and that the matters set forth in the attached Staff New Reply Verified Comments are true and correct to the best of his knowledge, information and belief.

Name

Subscribed and sworn before me
This 25th day of April

OFFICIAL SEAL
MARY ELLEN RUFFNER
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES:02/04/09

Mary Ellen Ruffner
Notary Public