BEFORE

THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Commission's Response to Provisions of the Federal Energy Policy Act of 2005 Regarding Net Metering, Smart Metering and Demand Response, Cogeneration and Power Production Purchase and Sale Requirements, and Interconnection.	)))))))	Case No. 05-1500-EL-COI

FINDING AND ORDER

The Commission, having considered the staff report, the comments and reply comments in response to the technical conferences and to the staff report, and being otherwise fully advised, hereby issues its finding and order.

OPINION:

I. Background

On August 8, 2005, President George W. Bush signed the Energy Policy Act of 2005 (EPAct) into law. EPAct amends the Public Utility Regulatory Policies Act of 1978 (PURPA) and requires state regulatory authorities, with respect to electric utilities, to consider and make a determination regarding five issues including: net metering, smart metering, cogeneration and small power production purchase and sale requirements, and interconnection. PURPA was a law passed in 1978 by the United States Congress as part of the National Energy Act and was intended to increase the use of renewable energy, encourage conservation of energy supplied by electric utilities, optimize efficiency of electric utility facilities and resources, and provide equitable rates for electric consumers. In PURPA, there were six standards to be considered but not required to be adopted by the state regulatory authority. These included cost of service, declining block rates, time-of-day rates, seasonal rates, interruptible rates and load management techniques.

Since its enactment, PURPA has been amended at various times. The Energy Policy Act of 1992 amended PURPA and added four additional standards including integrated resource planning, conservation and demand side management investment, energy efficiency investment in power generation and supply, and consideration of wholesale power purchases on utility cost of capital, effect of leveraged capital structures on the reliability or wholesale power sellers and assurance of adequate fuel supplies. EPAct also amended PURPA and added five new standards including net metering, fuel diversity, fossil fuel generation efficiency, time-based metering and communications, and

interconnection standards. In addition, under EPAct, state regulatory commissions were directed to begin consideration of these standards and make a determination of whether to adopt the new standards.

By entry of December 14, 2005, this Commission opened an investigation to review its actions with respect to net metering; smart metering and demand response; cogeneration and small power production, particularly the sale of stand-by power; and interconnection. In that entry, staff was directed to conduct a series of technical conferences for all interested persons to discuss these issues. Between February 24, 2006, and April 6, 2006, the Commission hosted a series of four technical conferences to discuss these issues. The December 14, 2005 entry also requested that interested parties file comments regarding these issues.

On June 28, 2006, the Commission directed its staff to review the comments submitted in this proceeding and the information exchanged at the technical conferences and issue a report that included recommendations that would advance the state's interest in EPAct. On August 28, 2006, the staff filed its report. The staff recommendations addressed the areas of net metering, smart metering, demand response, cogeneration and small power production, including stand-by-power, interconnection, and the development of an advanced energy portfolio standard. Comments and reply comments in response to the staff report were filed by a variety of interested parties, including Ohio's electric distribution utilities (EDUs), consumer groups, energy marketers, industrial energy users and manufacturing associations, environmental councils, alternative energy corporations, farming associations, universities, and state and federal agencies. The Commission has reviewed the recommendations made by staff and the comments filed in response to staff's recommendations and has determined that certain rules need to be revised, that EDUs will need to file tariff revisions that conform with the rules, and that some additional studies need to occur.

II. Net Metering

Net metering allows an electric customer to provide to the EDU electricity that the customer generates using certain facilities on the customer's site. Section 1251 of EPAct requires that each EDU make net metering available upon the request of a customer. As noted in the staff report, net metering is governed under Chapter 4928, Revised Code, which outlines definitions regarding net metering. Section 4928.01, Revised Code, defines net metering as measuring the difference in an applicable billing period between the electricity supplied by an electric service provider and the electricity generated by a customer generator which is fed back to the electric service provider. Section 4928.01, Revised Code, also defines a net metering system as a facility for the production of electrical energy that uses as its fuel either solar, wind, biomass, landfill gas, or hydropower or uses a microturbine or fuel cell; is located on a customer-generator's

premises; operates in parallel with the electric utility's transmission and distribution facilities; and is intended primarily to offset part or all of the customer generator's requirements for electricity.

Several aspects in the area of net metering were highlighted in the staff report. Staff considered expanding the definition of eligible fuels and using an output-based approach, the deletion of the definition of mircroturbine in the current Ohio Administrative Code (O.A.C.) rules, and the use of 12 months for crediting. The staff also reviewed Chapters 4901:1-10 and 4901:1-21, O.A.C., to determine whether these rules should be revised.

(A) Definition of Eligible Fuels and an Output-Based Approach

In the area of an output-based approach, staff recommended that, while the commenters' opinions regarding an output-based approach for net metering that meets specific emission requirements rather than specifying technologies appears to have merit, the request for the Commission to implement this approach is misplaced. Staff noted that the Commission has no jurisdiction to waive environmental or air pollution control standards.

In response to the staff report, some commenters suggested that the Commission's net metering rules be modified to change the definition of what fuels or technology would be eligible for net metering and others suggested expanding the definitions so as to specifically identify technology in the rules. Other commenters were opposed to any expansion of the definition of eligible fuels.

The energy policy of Ohio set forth in Section 4928.02, Revised Code, includes ensuring diversity of electricity supplies and suppliers, by giving consumers effective choices over the selection of those supplies and suppliers and by encouraging the development of distributed and small generation facilities. The Commission is concerned that if our rules prescribed specific technology, this could inhibit the deployment of new net metering technology. We also recognize that a customer-generator whose net metering system meets all applicable safety and performance standards established by the National Electrical Code, the Institute of Electrical and Electronics Engineers, and Underwriters Laboratories as required by Sections 4928.67(C)(1) and (D), Revised Code, cannot be required by the electric service provider to comply with additional safety and performance standards. Thus if any new technology meets the recognized industry safety and performance standards applicable to the type, size and location of the customer-generator on the electric distribution facilities as required by the Ohio Revised Code, the electric service provider is to take such compliance into account.

Although some commenters expressed the desire to define net metering equipment based on compliance with specific emissions requirements, the Commission cannot

assume the authority to test for compliance with local Ohio air or water pollution control standards. The Commission understands that compliance with any federal or State environmental standard can be affected by the amount and quality of the fuel used by a generator and the location of the generator, as well as the Ohio Environmental Protection Agency (OEPA) air and water quality standards applicable to the specific location of the installation, particularly if it were to be located in a non-attainment area of the State. Any questions regarding environmental requirements in any part of Ohio are more properly directed by the customer and the electric distribution utility to the attention of the OEPA.

(B) Microturbines

The staff report recommended that the definition for "microturbine" in Rules 4901:1-21-01(A)(22), O.A.C., as well as the parenthetical reference to "capacity of not more than one hundred kW" in Rule 4901:1-21-13(1)(a), O.A.C., should be eliminated. In response to the staff's recommendation, some commenters believed that a definition for "microturbine" needed to remain part of the net metering rules while others agreed with the elimination of such definitions from the rules. Those opposed to deleting the term suggested that the General Assembly intended to limit the use of microturbines for the purpose of net metering to a single unit. Those agreeing with staff recommended that the definition of fuel cells should be reworded to include one or more fuel cells or microturbines.

The Commission agrees with staff that the size-limiting definition of microturbine should be eliminated from O.A.C. As noted by staff, a definition regarding the size of a microturbine is not found in the Ohio Revised Code and there is no limitation on the number of distributed generators that can be installed by a single customer to use the generating technology for solar, wind, biomass, landfill gas, or hydropower, or a microturbine or a fuel cell. The limits provided by Section 4928.01(32), Revised Code, instead, include requiring that the customer-generator be located on a customer-generator's premises; operated in parallel with the electric utility's transmission and distribution facilities; and is intended primarily to offset part or all of the customer-generator's electricity requirements. We also believe that an implied limitation on the size or number of generators would occur only with regard to their intended use primarily to offset part or all of the customer generator's electricity requirements as noted here. Accordingly, this Commission will revise its rules as discussed above. The revisions are set forth in the appendix to this finding and order.

(C) Crediting

Currently, Rule 4901:1-10-28(E)(3), O.A.C., provides, in part, that if the customer generator feeds more electricity back to the system than the EDU supplies to the customer generator, only the excess generation component shall be allowed to accumulate as a credit

until netted against the customer generator's bill or until after three consecutive months of such accumulation the customer generator requests a refund. The staff report recommended that net metering customers have the ability to request a refund of balances up to but no longer than one year. Staff recommended that Rule 4901:1-10-28(E)(3), O.A.C., should be revised to eliminate the language "after three consecutive months of such accumulation" and that language be added that provides for refunds in amounts up to, but no greater than an annual true-up of accumulated credits over a 12-month period. Those commenters who believed that this rule required no modification generally stated that the language in the existing net metering rules does not prohibit the accumulation of monthly credits for more than three months. Other commenters suggested that some clarification was needed to account for seasonal rates and recommended that the Commission adopt rules that would credit the facility for energy at the same rate that the utility would charge for energy during the same period.

We have considered the comments regarding customer compensation and see no basis in the law to limit the accumulation of monthly credits to three consecutive months. Section 4928.67(A)(1), Revised Code, however, does specifically state that a contract or tariff for net energy metering "shall be identical in rate structure, all retail rate components, and any monthly charges, to the contract or tariff to which the same customer would be assigned if that customer were not a customer-generator." Also, in *FirstEnergy Corp. v. Pub. Util. Comm.*, 95 Ohio St. 3d 401, (2002), the Supreme Court further clarified this language in stating that the Commission's net metering rules require the utility to credit or pay to a net generator only the tariff charges for generation of electricity by the net generator and supplied to the utility. In addition, the court stated that customers that were net metering generators of electricity were not entitled to credit from the EDU for the costs of transmission, distribution, ancillary service, transition (the regulatory transition charge and the generation transition charge), the Universal Service Fund, and the Energy Efficiency Fund.

However, we see no indication in the court's clarification that an electric distribution utility or certified electric service provider is prohibited from calculating the annual true-up for net metering using month-by-month seasonal prices, if it can do so at less cost. Accordingly, we find that Rule 4901:1-10-28(E)(3), O.A.C., should be revised to eliminate the language "after three consecutive months of such accumulation" and that language should be added that provides for refunds of amounts up to, but no greater than, an annual true-up of accumulated credits over a 12-month period. The revisions are set forth in the appendix to this finding and order.

III. Advanced Metering Infrastructure and Demand Response

Demand response is enabled by three factors: metering technology that records usage on a time differentiated basis, a rate structure that allows customers to respond to

time sensitive price signals, and a billing system that allows the provider to account for the time differentiated pricing and usage. Since advanced metering infrastructure (AMI) encompasses a wide variety of technologies and communications protocols combined with varying types of customers (with different usage patterns and needs), there exists virtually an unlimited number of AMI service combinations. The EPAct requires that EDUs offer all customers a time differentiated rate.

In its report, staff proposed that the Commission require EDUs to have tariffs on file for all customers, which include time sensitive rates that reflect wholesale price differentials. Moreover, Staff proposed that each EDU be required to file a comprehensive list of AMI technologies and corresponding costs. Staff noted that McKinsey and Company (McKinsey), a consulting firm, is developing an AMI cost/benefit case model which will be available on the internet free of charge. Staff proposed that each EDU utilize the McKinsey Model to evaluate the costs and benefits of various AMI deployment strategies and that the Commission should require each EDU to identify a typology of customers based upon load shape and/or usage levels. Finally, public input was invited regarding the following issues: identification of the benefits realized, class of service availability, deployment, customer commitment, customer education, cost recovery, and cost allocations. Staff also proposed that all stakeholders identify the best way of grouping customers for purposes of AMI deployment and recommend how EDUs should define customer groups for purposes of conducting a cost/benefit analysis.

Generally, most of the EDUs maintained that their current tariffs meet the EPAct's time of use rate requirements and upon issuance of a finding and order in which the Commission opines on the need in Ohio for mandatory demand response programs, the Commission will have complied with the EPAct 2005 directive. These commenters suggested that no further action to meet EPAct standards was required or warranted, that there was little demand for AMI, and what little demand exists is being met. These EDUs also recommended that a cost-benefit analysis be performed to determine which, if any, of the advanced metering technologies with their attendant tariffs be deployed. However, they argued that it was premature to adopt the McKinsey model since it is not yet in its final stage of development. Finally, these commenters believed that the Commission must establish a cost recovery mechanism if mandatory AMI deployment is required.

Several commenters suggested that the Commission should proactively take steps to ensure retail customers have convenient and easy access to regional transmission organization demand response options by ensuring that EDU tariffs, policies, and operating practices are not used to maintain or erect barriers to such participation. Many of the commenters disagreed with staff's recommendations concerning the McKinsey analytical tool. While many commenters saw the staff's recommendation for each utility to file a comprehensive list of advanced metering technologies and costs as burdensome and duplicative, others were conditionally supportive. Some of those commenting

supported the staff's recommendation that EDU's be required to have time-sensitive tariffs on file for all customers that reflect current/wholesale energy price differential. Other commenters maintained that the EPAct did not require the state to mandate time-of-use rates or the installation of advanced metering technologies, but only required that states make an evaluation to determine whether or not to implement such rates or require such technologies.

We believe that there is wide latitude to interpret and specify for Ohio the standards of the EPAct. Based on the record in this proceeding, we agree with staff that there may be some questions as to whether many of the EDU's current tariffs comply with the EPAct. Consequently, all EDUs should offer tariffs to all customer classes which are, at a minimum, differentiated according to on and off-peak wholesale periods. Time-of-use meters should be made available to customers subscribing to the on and off-peak tariffs. We also agree that staff should analyze the cost benefit of AMI deployment strategies. Consistent with staff's original proposal, the analysis should include system benefits that may accrue to the EDU, customer benefits, and societal benefits. Issues should include: class of service availability, deployment, customer commitment, customer education, cost recovery, and cost allocations. Staff maintained that each EDU's first priority should be to conduct the cost/benefit analysis in a uniform, transparent format and recommended the McKinsey Model for such a purpose. While we agree with staff on the use of this particular model, EDUs may propose an alternative. Any alternative must be demonstrably superior to the McKinsey Model, must be transparent, and must be adopted for use by all of the EDUs. Since a rational strategy for AMI rollout cannot be developed without knowing and evaluating the choices of metering and telemetry equipment to be deployed and their relevant characteristics, we agree with staff's recommendation that proposes a single list of technologies with associated costs and capabilities, or if appropriate, a list of technology types or categories with associated cost ranges, be developed collectively through a working group in the context of this proceeding. Finally, regarding EDU expenditures, we agree with staff that a comprehensive review of any cost recovery mechanism must be included in the investigation to ensure that those benefiting from AMI pay a share of its costs. Accordingly, within 30 days of this finding and order, all electric utilities should file a copy of the sections of their tariffs which include daily time sensitive rates and a comprehensive list of AMI technologies and corresponding costs. Following the filing of such information, staff will schedule and hold a series of technical conferences to discuss further associated issues and cost sharing and recovery mechanisms (e.g., each EDU's detailed AMI business case analysis). Staff should develop recommendations based on the technical conferences.

IV. Interconnection

Section 1254 of EPAct requires that each electric utility make available upon customer request, interconnection services based on the Institute of Electrical and

Electronics Engineers (IEEE) Standard 1547 for distributed generation. This section also requires states to consider and determine this IEEE standard in accordance with paragraph 16 of section 11(D) of PURPA. The interconnection rules for Ohio are found in Chapter 4901:1-22, O.A.C. On April 7, 2000, the Commission issued a finding and order in Case No. 99-1613-EL-ORD, which directed all jurisdictional electric distribution utilities to file proposed interconnection tariffs as required by Rule 4901:1-22-03(A), O.A.C. Pursuant to the April 7, 2000 finding and order, in *In the Matter of the Application of The Toledo Edison Company's Interconnection Service Requirements*, Case No. 00-1257-EL-ATA et al., each of the EDUs filed an application for tariff approval regarding proposed interconnection tariffs. Staff conducted workshops to address the issues raised by the EDUs' proposed interconnection tariffs directed at establishing standard interconnection requirements that ensure safety and reliability without erecting barriers to distributed generation. On November 16, 2001, The Cleveland Electric Illuminating Company, The Cincinnati Gas & Electric Company, Dayton Power & Light Company, Columbus Southern Power Company, The Toledo Edison Company, Ohio Edison Company, Ohio Power Company and Monogahela Power Company dba Allegheny Power filed a stipulation that included a pro forma distribution interconnection tariff, interim technical requirements for interconnection, and an interconnection application screening process. By entry of November 20, 2001, the Commission approved the stipulation and directed the EDUs to amend their proposed interconnection tariffs. On August 22, 2002, the Commission found that the companies' proposed revised interconnection tariffs were substantially equivalent to the pro forma interconnection tariff.

In its report, staff noted that many customer-owned electric generators can change the basic function of the larger local electric distribution system in ways that the generator owner may not anticipate. As a result, the procedures and technical requirements of any interconnection rule or tariff must also support consumer safety and reliability of the wires that continue to deliver electricity service to all other retail consumers. In addition, staff explained that the Commission's current interconnection rules should be revised in order to make the Commission's interconnection process more comprehensive, streamlined, transparent, and accessible to interconnection service customers.

To that end, the staff found that all the elements which Ohio's electric distribution companies agreed to in the stipulation signed on November 16, 2001, are still appropriate. Additionally, these new rules will further assure that interconnection practices are standardized. Staff also determined that increasing the consistency and standardization of the process, not just across the EDUs in Ohio, but across a broader multi-state region, will encourage lower production costs of manufacturing distributed generation equipment, lower prices for new owners of customer generators, and increase the use of renewable energy and secondary clean fuel technologies. We agree with the recommendations of staff. Accordingly, the rules should be modified to allow a multi-level review of applications for interconnection based on the size and complexity of the customer's

system. Such a revision would bring the Commission's rules in line with both the Indiana and the Mid-Atlantic Distributed Resource Initiative (MADRI). In addition, the rules have been updated to include certification of equipment packages under IEEE 1547 standards, interconnection fees for each review path, recognition of combined heat and power or waste heat from industrial processes, application processing times and screening processes to shorten the review paths. Staff pointed out that the current rules recognize that EDUs can recover interconnection costs and that there are incentives to encourage the use of renewable energy. However, staff believed that cost recovery and relief applicable to all types of facilities, regardless of fuel source or societal and environmental benefits, should be sought by the EDU through a rate proceeding.

Several commenters supported staff's recommendation that the review procedures on applications for interconnection of customer-owned distributed generation should be based on the level of generation. There was also recognition that certain types of customer systems will impose fewer risks and less potential for interference with other customers on the distribution system. We support the staff's recommendation that the review process for customer-owned distribution should be based on level of generation. Several commenters raised concerns regarding staff's recommendation regarding the requirement for reverse power relays found in Rule 4901:1-22-06(A)(2)(g), O.A.C. This rule provides for simplified procedures and fees for application processing in compliance with IEEE standards. We agree that these are legitimate concerns and will revise the language in Rule 4901:1-22-06(A)(2)(g), O.A.C., to insure conformance with IEEE standards.

Many commenters expressed their concerns regarding who should bear cost responsibility for many aspects of interconnection. We note that the staff report does not propose to prohibit cost recovery in its recommendations. Many of the commenters expressed concerns that EDUs may face costs as a result of necessary modifications to electric distribution systems that may be necessitated from interconnection and that requiring the EDUs to conduct an area network impact study at its own expense was unreasonable. As proposed, the revised interconnection rules utilize standard interconnection processing fees that allow electric distribution companies to charge their actual costs for any minor modifications of their electric distribution system to accommodate the interconnection of the customer's equipment. The rules also allow for recovery of the actual costs incurred for engineering work done as part of any additional review as part of the impact or facilities studies. In addition, the language regarding fees for these studies (i.e., the interconnection feasibility study, system impact study, and facilities study) has not changed. The interconnection service standard fee schedules are to be included in the electric distribution company tariff to be approved by the Commission for each type of interconnection service study required.

In an effort to provide a simplified process for applications for interconnection, staff will be developing a checklist and a standard application for interconnection. The

checklist will be intended to assist applicants in their determination of whether to complete a short form or standard form application for interconnection with the EDU. The application will elicit information on the generation equipment to be used and the electric distribution system to which the interconnection is sought. Upon the completion of these forms, staff is directed to place them on the Commission's Website.

V. Stand-By Rates

Stand-by rates are charges to an electric utility customer owning distributed generation (DG), by an EDU to provide stand-by service to the customer when its DG equipment is either not operating, is down for maintenance, or out due to an emergency. Under PURPA, all Ohio electric utilities must have tariffs in place that provide rates for stand-by service. Currently, each utility has an approved tariff, which at the time of its approval, was found to be just and reasonable. In its report, staff made several recommendations on stand-by rate issues that fall into five categories including: options for taking stand-by power, tariff modifications, mediation and arbitration to self-generators, statewide power pool for stand-by rates, and an analysis of EDU's transmission and distribution systems.

With regard to options for taking stand-by power, staff noted that the costs to provide stand-by power are real and that, if an EDU holds power in reserve to cover the chance that it may have to provide energy to a self-generator, there is a lost opportunity for the EDU to sell that power on the market. Staff recommended that self-generators may have the option of either: (1) taking standby (or back-up) power and unscheduled maintenance power at the approved tariff or special contract rate for these services; or (2) waiving the generation capacity reservation charge and choosing among the following: (a) taking those services from the EDU at a market rate; (b) arranging for a third party supplier of its choosing to provide the EDU with power to be earmarked for delivery to the self-generator at a pre-determined price (or pricing formula); or (c) taking generation service from a CRES provider. We agree with these recommendations. Staff indicated it believes each utility should offer a market-based rate for DG in addition to its rates that are currently in its tariff. Generally, commenters were favorable to the alternative offering although many claimed that the tariff rates are overpriced and out-of-date. We agree that a market-based approach is a reasonable alternative for self-generators in addition to the current tariff.

Staff recommended that the Commission should take an active role not only in negotiation of contracts and in settling disputes, but also serving as a liaison to self-generators in interpreting tariff provisions and facilitating the interconnection process. Comments were mixed on these recommendations with some commenters supporting them and other commenters opposing this role for the Commission. We agree with the recommendations and believe our staff, acting as a liaison, will assist this process.

Staff recommended that if the EDU provides backup or unscheduled maintenance power at a market rate, the derivation of that rate should be explicitly specified in the EDU's tariff. The utilities, while generally supportive of the market-based alternative, maintain that such a service should be provided only by a CRES provider, not by the EDU.

The Commission finds that the main purpose of staff's recommendation is to "define" the derivation of the "market rate" to be charged to customers selecting the market-based option. We believe that any procedures regarding the market based option should be clearly and specifically defined in the utilities' stand-by tariffs. Finally, any "terms" pursuant to this recommendation should be expressly defined in the tariffs to avoid confusion.

Staff also recommended that a conference on statewide pooling of stand-by load be held. Those commenting generally support this idea. Accordingly, we direct staff to schedule a workshop to discuss the issue of statewide pooling of stand-by load. In addition, staff recommended that the Commission should investigate whether EDUs have already analyzed their transmission and distribution systems for the impact of DG. We agree. Accordingly, within 30 days of this finding and order, all electric utilities should file copies of any studies that have been performed on their behalf which address the issue of impacts of DG on transmission and distribution systems. In addition, the utilities should include analyses of their transmission and distribution systems and identify potential disadvantages of, or problems with locating DG resources in specific locations as well as any system benefits. We believe that a clear understanding of both positive and negative impacts of potential DG units will serve all stakeholders.

VI. Advanced Energy Portfolio Standard

Advanced portfolio standards require utilities to supply a certain percentage of electricity from specified renewable or advanced energy technologies. Utilities may meet these requirements through actual generation or by purchasing renewable energy generation or credits. Twenty states and the District of Columbia have a renewable energy standard including several of Ohio's neighbors and two states have a renewable goal. In an effort to secure diversified energy resources, use advanced technologies, develop energy markets for Ohio agriculture and manufacturing, protect natural resources, participate in the renewable energy credit trading market, and develop strategies for compliance with potential greenhouse gas emission limits, we believe that an advanced energy portfolio standard (AEPS) should be evaluated that would encompass a range of available renewable resources and advanced energy technologies.

Staff recommended that the Commission institute a stakeholder process to consider an advanced energy portfolio standard for Ohio. Most of the commenters supported a

stakeholder process, noting energy, environmental, and economic development benefits. Those opposed raised jurisdictional and cost issues. We believe that a voluntary stakeholder process should be commenced in this proceeding to evaluate an AEPS for Ohio and to provide recommendations to the Commission. The main purpose of the process is to evaluate the benefits, costs, structural and implementation issues with regard to an AEPS, and to develop recommendations to the Commission.

Staff also proposed that the Commission, through the proposed stakeholder process consider a requirement that electricity suppliers offer a voluntary green pricing option to consumers. All of the comments supported the idea of a green pricing option, including those who supported green pricing over an alternative energy portfolio standard. We find that the issues and concerns raised with respect to green pricing are better left to the stakeholder process for further examination and discussion of the technical issues. In its report, staff also proposed that the Commission direct each electric utility to submit its response regarding fuel sources and fossil fuel generation efficiency as required by EPAct. We agree and order that staff should elicit information from all electric utilities regarding fuel sources and fossil fuel generation efficiency as required by EPAct.

ORDER:

It is, therefore,

ORDERED, That the recommendations set forth in the staff report be approved and adopted as set forth in this Finding and Order. It is, further,

ORDERED, That within 30 days of this finding and order, all electric utilities should file copies of any studies that have been performed on their behalf which address the issue of impacts of DG on their transmission and distribution systems and a copy of the sections of their tariffs which include time sensitive rates and a comprehensive list of AMI technologies and corresponding costs. It is, further,

ORDERED, That staff develop interconnection application forms as discussed in this order and place them on the Commission's Website. It is, further,

ORDERED, That the existing rules in Chapter 4901:1-22 should be rescinded. It is, further,

ORDERED, That the attached amended Rules 4901:1-10-01, 4901:1-10-28, 4901:1-21-01, 4901:1-21-13, and attached new Chapter 4901:1-22 are adopted and should be filed with the Joint Committee on Agency Rule Review, the Secretary of State, and the Legislative Service Commission in accordance with divisions (D) and (E) of Section 111.15, Revised Code. It is, further,

ORDERED, That the final rules be effective on the earliest day permitted by law. Unless otherwise ordered by the Commission, the review date for Rules 4901:1-10-01, 4901:1-10-28, 4901:1-21-01, and 4901:1-21-13 will be September 30, 2007, which is the review date for the remaining rules in the chapters, and the review date for Chapter 4901:1-22 will be May 31, 2012. It is, further,

ORDERED, That all electric utilities file for Commission approval their revised tariffs to comport with the requirements and rules as set forth in this order. All electric utilities shall file their revised tariffs within 60 days after the effective date of these rules. It is, further,

ORDERED, That a copy of this finding and order be served upon all parties who filed comments in this proceeding, the Ohio Department of Development, the Ohio Department of Agriculture and any other interested persons.

THE PUBLIC UTILITIES COMMISSION OF OHIO

Alan R. Schriber, Chairman

Ronda Hartman Fergus

Judith A. Jones

Valerie A. Lemmie

Donald L. Mason

SEF:ct

Entered in the Journal
MAR 28 2007

Reneé J. Jenkins
Secretary

*** DRAFT – NOT FOR FILING ***

4901:1-10-01 **Definitions.**

As used in this chapter:

(A) "Applicant" means a person who requests or makes application for service.

(B) "Chief of the public interest center" means the chief of the public interest center of the commission's consumer services department.

(C) "Commission" means the public utilities commission of Ohio.

(D) "Consolidated billing" means that a customer receives a single bill for electric services provided during a billing period for both EDU and CRES provider services.

(E) "Consumer" means any person who receives service from an electric distribution company or electric service company.

(F) "CRES provider" means a provider of competitive retail electric service.

(G) "Critical customer" means any customer or consumer on a medical or life-support system who has provided appropriate documentation to the EDU that an interruption of service would be immediately life-threatening.

(H) "Customer" means any person who has an agreement, by contract and/or tariff with an EDU or by contract with an electric service company, to receive service.

(I) "Customer premises" means the residence(s), building(s), or office(s) of a customer.

(J) "Director of the consumer services department" means the commission's director of consumer services.

(K) "EDU" means an electric distribution utility as defined in division (A)(6) of section 4928.01 of the Revised Code.

(L) "Electric utility" as used in this chapter includes EDUs and electric transmission owners.

(M) "Fraudulent practice" means an intentional misrepresentation or concealment of a material fact that the EDU relies on to its detriment.

~~(N) "Microturbine" means a combustion turbine with a peak generation capacity of one hundred kW or less.~~

~~(O)~~(N) "Outage coordinator" means the emergency-outage coordinator of the commission's consumer services department.

~~(P)~~(O) "Person" includes an individual, corporation, company, co-partnership, association, or joint venture.

~~(Q)~~(P) "Slamming" means the transfer of or requesting the transfer of a customer's competitive electric service to another provider without obtaining the customer's consent.

~~(R)~~(Q) "Universal service fund" means a fund established pursuant to section 4928.51 of the Revised Code, for the purpose of providing funding for low-income customer assistance programs, including the percentage of income payment plan program, customer education, and associated administrative costs.

~~(S)~~(R) "Voltage excursions" are those voltage conditions that occur outside of the voltage limits as defined in the electric utility's tariffs that may result from: the operations of customer equipment (e.g. spot welders or motor starting), lightning, storms, winds, accidents, or other factors beyond the control of the electric utility; the electric utility's system operations (e.g., switching operations); or by emergency operations.

*** DRAFT – NOT FOR FILING ***

4901:1-10-28 **Net metering.**

(A) Each EDU shall develop a tariff for net metering. Such tariff shall be made available to qualifying customer generators, upon request, and on a first-come, first-served basis, whenever the total rated generating capacity used by customer generators is less than one per cent of the EDU's aggregate customer peak demand in the state.

(1) A qualifying customer generator is one whose generating facilities are:

(a) Fueled by solar, wind, biomass, landfill gas, or hydropower, or use a microturbine or a fuel cell;

(b) Located on a customer generator's premises;

(c) Operated in parallel with the electric utility's transmission and distribution facilities; and

(d) Intended primarily to offset part or all of the customer generator's electricity requirements.

(2) Net-metering arrangements shall be made available regardless of the date the customer's generating facility was installed.

(3) The generating facility's rated capacity shall be counted toward the EDU's one per cent aggregate customer peak demand limit as of the date the EDU receives the customer generator's net-metering application. Such date shall not be modified due to an incomplete application unless such application omits the generating facility's rated capacity. However, if the generating facility does not begin operation within six months from the date the application is received by the EDU, such application shall be considered void, and shall no longer count toward the one per cent limit.

(B) The EDU's tariff for net metering shall be identical in rate structure, all retail rate components, and any monthly charges, to the tariff to which the same customer would be assigned if that customer were not a customer generator. Such terms shall not change simply because a customer becomes a customer generator. Subject to paragraph (E)(3) of this rule, net metering applies to all charges that are based on a meter reading.

No EDU's tariff for net metering shall require customer generators to:

(1) Comply with any additional safety or performance standards beyond those established by the "National Electrical Code," the "Institute of Electrical and Electronics Engineers," "Underwriters Laboratories," and rules 4901:1-22-03 and 4901:1-22-04 of the Administrative Code;

(2) Perform or pay for additional tests beyond those required by paragraph (B)(1) of this rule; or

(3) Purchase additional liability insurance beyond that required by paragraph (B)(1) of this rule.

(C) Net metering shall be accomplished using a single meter capable of registering the flow of electricity in each direction. A customer's existing single-register meter that is capable of registering the flow of energy in both directions satisfies this requirement. If its existing electrical meter is not capable of measuring the flow of electricity in two directions, the customer generator shall be responsible for all expenses involved in purchasing and installing a meter that is capable of measuring electricity flow in two directions.

(D) The EDU, at its own expense and with the written consent of the customer generator, may install one or more additional meters to monitor the flow of electricity in each direction. No EDU shall impose, without commission approval, any additional interconnection requirement or additional charges on customer generators refusing to give such consent.

(E) The measurement of net electricity supplied or generated shall be calculated in the following manner:

(1) The EDU shall measure the net electricity produced or consumed during the billing period, in accordance with normal metering practices.

(2) If the EDU supplies more electricity than the customer generator feeds back to the system in a given billing period, the customer generator shall be billed for the net electricity that the EDU supplied, as measured in accordance with normal metering practices.

(3) If the customer generator feeds more electricity back to the system than the EDU supplies to the customer generator, only the excess generation component shall be allowed to accumulate as a credit until netted against the customer generator's bill, or until~~, after three consecutive months of such accumulation~~, the customer generator requests in writing a refund that amounts to, but is no greater than, an annual true-up of accumulated credits over a twelve-month period.

(F) In no event shall the EDU impose on the customer generator any charges that relate to the electricity the customer generator feeds back to the system.

*** DRAFT – NOT FOR FILING ***

4901:1-21-01 **Definitions.**

(A) As used within Chapter 4901:1-21 of the Administrative Code, these terms denote the following:

(1) "Aggregation" means combining the electric load of multiple retail customers via an agreement with the customers or formation of a governmental aggregation pursuant to section 4928.20 of the Revised Code for the purpose of purchasing retail electric generation service on an aggregated basis.

(2) "Aggregator" means a person, certified by the commission, who contracts with customers to combine the customers' electric load for the purpose of purchasing retail electric generation service on an aggregated basis.

(3) "Billing and collection agent" has the meaning set forth in division (A)(2) of section 4928.01 of the Revised Code.

(4) "Biomass power" means a renewable generation resource that is primarily derived from the combustion of organic matter. Biomass fuels may be solid, liquid, or gas and are derived from feedstocks. Examples of such feedstocks include, but are not limited to: agricultural crops and residues, industrial wood and logging residues, farm animal wastes, the organic portion of municipal solid waste, and methane gas from landfills.

(5) "Commission" means the public utilities commission of Ohio.

(6) "Competitive retail electric service" (CRES) has the meaning set forth in division (A)(4) of section 4928.01 of the Revised Code, and includes the services provided by retail electric generation providers, power marketers, power brokers, aggregators, and governmental aggregators.

(7) "Complaint" means any customer/consumer contact when such contact necessitates follow-up by or with the electric supplier or electric utility to resolve a point of contention..

(8) "Consumer" means a person who uses a competitive retail electric service.

(9) "Contract" means an agreement between a customer and competitive retail electric service provider that specifies the terms and conditions for provision of a competitive retail electric service or services.

(10) "CRES provider" means a person or entity, under certification by the commission, who supplies or offers to supply a competitive retail electric service. This term does not apply to an electric distribution utility in its provision of standard offer generation service.

(11) "Customer" means a person who contracts with or is solicited by a competitive retail electric service provider for the provision of a competitive retail electric service.

(12) "Deposit" means a sum of money a CRES provider collects from a customer as a precondition for initiating service.

(13) "Direct solicitation" means face-to-face solicitation of a customer initiated by a CRES provider at the home of a customer or at a place other than the normal place of business of the provider, and includes door-to-door solicitations.

(14) "Distribution service" means the physical delivery of electricity to consumers through facilities provided by an electric distribution utility.

(15) "Electric cooperative" has the meaning set forth in division (A)(5) of section 4928.01 of the Revised Code.

(16) "Electric distribution utility" (EDU) has the meaning set forth in division (A)(6) of section 4928.01 of the Revised Code.

(17) "Electric generation service" means retail electric generation service.

(18) "Electric utility" has the meaning set forth in division (A)(11) of section 4928.01 of the Revised Code.

(19) "Environmental disclosure data" means both generation resource mix and environmental characteristics.

(20) "Governmental aggregator" has the meaning set forth in division (A)(13) of section 4928.01 of the Revised Code.

(21) "Market development period" has the meaning set forth in division (A)(17) of section 4928.01 of the Revised Code.

~~(22) "Microturbine" means a combustion turbine with a peak generating capacity of one hundred kW or less.~~

~~(23)~~(22) "Net metering" has the meaning set forth in division (A)(31) of section 4928.01 of the Revised Code.

~~(24)~~(23) "OCC" means the Ohio consumers' counsel.

~~(25)~~(24) "Other sources" means known electric energy generation resources that cannot reasonably be included within any of the specific fuel categories.

~~(26)~~(25) "Person" has the same meaning as in section 1.59 of the Revised Code.

~~(27)~~(26) "Power broker" means a person certified by the commission, who provides power brokerage.

~~(28)~~(27) "Power brokerage" means assuming the contractual and legal responsibility for the sale and/or arrangement for the supply of retail electric generation service to a retail customer in this state without taking title to the electric power supplied.

~~(29)~~(28) "Power marketer" means a person, certified by the commission, who provides power marketing services.

~~(30)~~(29) "Power marketing" means assuming the contractual and legal responsibility for the sale and provision of retail electric generation service to a retail customer in this state and having title to electric power at some point during the transaction.

~~(31)~~(30) "Residential customer" means a customer who contracts for a competitive retail electric service for residential purposes.

~~(32)~~(31) "Retail electric service" has the meaning set forth in division (A)(27) of section 4928.01 of the Revised Code.

~~(33)~~(32) "Retail electric generation service" means the provision of electric power to a retail customer in this state through facilities provided by an electric distribution utility and/or a transmission entity in this state. The term encompasses the services performed by retail electric generation providers, power marketers, and power brokers, but does not encompass the service provided by an EDU pursuant to section 4928.14 or division (D) of section 4928.35 of the Revised Code.

~~(34)~~(33) "Small commercial customer" means a commercial customer that is not a mercantile commercial customer.

~~(35)~~(34) "Solicitation" means any communication intended to elicit a customer's agreement to purchase or contract for a competitive retail electric service.

~~(36)~~(35) "Staff" means the commission staff.

~~(37)~~(36) "Toll-free" means telephone access provided to a customer without toll charges to the customer.

~~(38)~~(37) "Unknown purchased resources" means electric energy generation resources neither owned nor operated by a competitive retail generation supplier where the electric energy generation source(s) or process cannot be identified after making

all reasonable efforts to identify the source or process used to produce the power.

*** DRAFT – NOT FOR FILING ***

4901:1-21-13 **Net-metering contracts.**

(A) Consistent with the requirements of rules 4901:1-21-11 and 4901:1-21-12 of the Administrative Code, CRES providers that supply retail electric generation service shall develop a standard contract for net metering. Such contract shall be made available upon request on a first come, first served basis, to qualifying customer generators whenever the total rated generating capacity used by customer generators is less than one per cent of the CRES provider's aggregate customer peak demand in the state.

(1) A qualifying customer generator is one whose generating facilities are:

(a) Fueled by solar, wind, biomass, landfill gas, or hydropower, or use a microturbine ~~(with capacity of not more than one hundred kW)~~ or a fuel cell;

(b) Located on a customer generator's premises;

(c) Operated in parallel with the EDU's transmission and distribution facilities; and

(d) Intended primarily to offset part or all of the customer generator's requirements for electricity.

(2) Net-metering arrangements shall be made available regardless of the date the customer's generating facility was installed.

(3) The generating facility's rated capacity shall be counted toward the one per cent limit as of the date the customer generator signs a CRES provider's net-metering contract. Conversely, such capacity shall no longer count toward the one per cent limit upon cancellation of a net-metering contract.

(B) The rate structure of a CRES provider's net-metering contracts, including retail rate components and any monthly charges, shall be identical to such aspects of the contracts for noncustomer generators.

(C) No contracts for net metering shall require customer generators to:

(1) Comply with any additional safety or performance standards beyond those established by the "2002 National Electrical Code," the "Institute of Electrical and Electronics Engineers," and "Underwriters Laboratories," and rules 4901:1-23-03 and 4901:1-23-04 of the Administrative Code;

(2) Perform or pay for additional tests beyond those required by paragraph (C)(1) of this rule; or

(3) Purchase additional liability insurance beyond that required by paragraph (C)(1) of this rule.

(D) Net metering shall be accomplished using a single meter capable of registering the flow of electricity in each direction. A customer's existing single-register meter that is capable of registering the flow of energy in both directions satisfies this requirement. Only if its existing electrical meter is not capable of measuring the flow of electricity in two directions, the customer generator shall be responsible for all expenses involved in purchasing and installing a meter that is capable of measuring electricity flow in two directions.

(E) The measurement of net electricity supplied or generated shall be calculated in the following manner:

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

(2) If the CRES provider supplies more electricity than the customer generator feeds back to the system in a given billing period, the customer generator shall be billed for the net electricity that the CRES provider supplied, as measured in accordance with normal metering practices.

(3) If the customer generator feeds more electricity back to the system than the CRES provider supplies to the customer generator, only the excess generation component shall be allowed to accumulate as a credit until netted against the customer generator's bill, or until, ~~after three consecutive months of such accumulation,~~ the customer generator requests in writing a refund that amounts to, but is no greater than, an annual true-up of accumulated credits over a twelve-month period..

*** DRAFT – NOT FOR FILING ***

4901:1-22-01 **Definitions.**

As used within this chapter:

(A) "Applicant" means the person requesting interconnection service and may be any of the following:

(1) The owner or operator of a small electric generation facility as defined by division (A)(28) of section 4928.01 of the Revised Code.

(2) A customer generator as defined by division (A)(30) of section 4928.01 of the Revised Code.

(3) A self-generator as defined by division (A)(33) of section 4928.01 of the Revised Code.

(4) The owner or operator of distributed generation as defined in paragraph (H) of this rule.

(B) "Application" means a request to an electric distribution utility (EDU) using the format set forth on the web site of the public utilities commission of Ohio for interconnection of distributed generation to the electric distribution system owned by the EDU.

(C) "Area network" means 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 highly reliable service. Area network has the same meaning as the term "distribution secondary grid network" found in Institute of Electrical and Electronics Engineers (IEEE) standard 1547 sub clause 4.1.4.

(D) "Backup electricity supply" means replacement electric power supplied to an applicant by the EDU at a tariff rate or alternatively, as a market-based option or by a competitive retail electric service provider of the applicant's choice at a rate to be determined between the provider and the applicant.

(E) "Commission" means the public utilities commission of Ohio.

(F) "Competitive retail electric service" means a component of retail electric service that is competitive as provided under division (B) of section 4928.01 of the Revised Code.

(G) "Cost recovery" means collection, upon approval by the commission pursuant to its authority under section 4909.15 of the Revised Code, of such documented EDU interconnection costs that are incurred at reasonable levels for prudent purposes and

that are over and above the review processing fees set forth in rules 4901:1-22-06 to 4901:1-22-08 of this chapter.

(H) Distributed generation" is a general term for all or part of a system of a distributed electrical generator or a static inverter either by itself or in the aggregate of twenty megawatts or less in size together with all protective, safety, and associated equipment installed at a point of common coupling on the EDU's distribution system in close proximity to the customer load.

(I) "Electric distribution utility" (EDU) means an investor-owned electric utility that owns and operates a distribution wires system and supplies at least retail electric distribution service.

(J) "Equipment package" means distributed generation facility assembled to include not only a generator or electric source but related peripheral devices that facilitate operation of the distributed generation.

(K) "Expedited procedure" means a review process for certified distributed generation that passes a certain prespecified review procedure, has a capacity rating of two megawatts or less, and does not qualify for simplified procedures.

(L) "Interconnection" means the physical connection of the applicant's facilities to the EDU's system for the purpose of electrical power transfers.

(M) "Interconnection point" means the point at which the applicant's distributed generation facility physically connects to the EDU's system.

(N) "Interconnection service" means the services provided by an EDU or transmission provider for the applicant's distributed generation facility.

(O) "Minor modification" to an interconnection application means a change in the technical characteristics that improves the reliability, safety and compatibility of the interconnection with the electric distribution system while not materially increasing the size or cost of the intended distributed generation facility installation.

(P) "Parallel operation with the EDU's system" means all electrical connections between the applicant's distributed generation facility and the EDU's system that are capable of operating in conjunction with each other.

(Q) "Point of common coupling" means the point which the distributed generation facility is connected to the EDU's system.

(R) "Reliability" means the degree of performance of the elements of the electric system that results in electricity being delivered to and from an applicant in the amount desired while avoiding adverse effects on the adequacy and security of the electric supply, defined respectively as:

(1) The ability of the electric system to supply the aggregate electrical demand and energy requirements at all times, taking into account scheduled and unscheduled outages of system elements.

(2) The ability of the electric system to withstand sudden disturbances such as electric short circuits or unanticipated loss of system elements.

(S) "Retail electric service provider" means any entity in this state that provides retail electric service as defined by division (A)(27) of section 4928.01 of the Revised Code.

(T) "Sale for resale" means a sale of energy to an energy supplier, electric utility or a public authority for resale purposes.

(U) "Scoping meeting" means a meeting between representatives of the applicant and the EDU conducted for but not limited to the following purposes:

(1) To discuss alternative interconnection options.

(2) To exchange information including any electric distribution system data and earlier study evaluations that would be expected to impact such interconnection options.

(3) To analyze such information.

(4) To determine the potential points of common coupling.

(V) "Simplified procedures" means a review process for interconnection of distributed generation fifty kilowatts or less in size on a radial or spot network system under certain conditions.

(W) "Standard procedure" means a review process for interconnection of any generating facility(s) that has a power rating of twenty megawatts or less, not qualifying for either simplified or expedited interconnection review processes.

(X) "Small electric generation facility" means an electric generation plant and associated facilities designed for, or capable of, operation at a capacity of less than two megawatts as defined in division (A)(33) of section 4928.01 of the Revised Code.

(Y) "Spot network," as defined by IEEE standard 1547 sub clause 4.1.4, means a type of electric distribution system that uses two or more inter-tied transformers to supply an electrical network circuit and is generally used to supply power to a single customer or a small group of customers.

*** DRAFT – NOT FOR FILING ***

4901:1-22-02 **Scope and application.**

(A) The rules in this chapter are intended to do all of the following:

(1) Make compliance within this chapter not unduly burdensome or expensive for any applicant in accordance with division (A) of section 4928.11 of the Revised Code.

(2) Establish uniform requirements for offering nondiscriminatory technology-neutral interconnection to customers who generate electricity, on the customer's side of the meter, to any electric distribution system that is owned and operated by a commission-regulated electric distribution utility (EDU) in Ohio, in a manner that protects public and worker safety and system reliability to the extent the commission's governing authority is not preempted by federal law.

(3) Apply in the entire territory where commission-approved tariffs apply to those situations where an applicant seeks to physically connect distributed generation to, and operate it in parallel with, the EDU's distribution system.

(4) Provide three review options for an applicant's request for interconnection with the EDU including simplified procedures, expedited procedures, and standard procedures.

(B) Each EDU in the state of Ohio shall file uniform interconnection service tariffs for commission review and approval pursuant to division (A) of section 4928.11 of the Revised Code, that includes the procedures and technical requirements set forth in this chapter for interconnection service on a first-come, first-served basis.

(C) The rules in this chapter shall not relieve any applicant from complying with all applicable federal, state, and local laws and ordinances.

*** DRAFT – NOT FOR FILING ***

4901:1-22-03 **Industry standards.**

The safety and performance standards established by the Institute of Electrical and Electronics Engineers, the Underwriters Laboratory, and the National Electric Code, as included in this chapter by reference, and as required consistent with division (C)(1) of section 4928.67 of the Revised Code, shall be the versions adopted in final form and effective as of March 31, 2007.

*** DRAFT – NOT FOR FILING ***

4901:1-22-04 **General provisions.**

(A) Prohibitions

(1) In accordance with the electric distribution utility's (EDU) code of conduct adopted pursuant to section 4928.17 of the Revised Code, an EDU or its affiliates shall not use, without the customer's consent, such knowledge of proposed interconnection service to prepare competing proposals to the interconnection service that offer either discounted rates in return for not providing the interconnection service or competing generation.

(2) No EDU shall reject, penalize, or discourage the use or development of new technology for interconnection service in accordance with division (A) of section 4928.11 of the Revised Code.

(B) Application processing

(1) EDUs shall process all applications for interconnection service and parallel operation with the EDU's system in a nondiscriminatory manner and in the order in which they are received.

(2) Where minor modifications to a pending application are required during the EDU's review of the application, such minor modifications shall not require a new or separate application to be filed by the applicant.

(3) The EDU shall automatically provide each applicant with a written notice of the EDU's receipt of an application within three business days after the application has been received. The notice of receipt shall include the following:

(a) A copy of the applicable review process.

(b) A target date for processing the application.

(4) If the EDU determines that the application is incomplete, the EDU personnel identified as being responsible for reviewing the application must provide the following:

(a) A written notice within ten business days after the application has been received indicating that the application is not complete.

(b) A checklist or description of the information needed to complete the application.

(c) A statement that processing the application cannot begin until the needed information is received.

(5) If an EDU determines that it cannot connect the applicant's facility within the time frames stated in this chapter, it will notify the applicant in writing of that fact within ten business days after the application has been received. The notification must include the following:

(a) The reason or reasons interconnection service could not be performed within the time frames stated in this rule.

(b) An alternative date for interconnection service.

(C) Compliance with national industry standards

An EDU shall file tariffs for uniform interconnection service with the commission that are consistent with the following:

(1) The Institute of Electric and Electronics Engineers 1547 standard.

(2) Underwriters Laboratory 1741 standard for inverters, converters, and controllers for use in independent power systems.

(3) The appropriate criteria and interconnection parameters for the customer's technology, so as not to impose technical and economic barriers to new technology or the development, installation, and interconnection of an applicant's facilities, pursuant to division (A) of section 4928.11 of the Revised Code.

(D) Metering

Any metering installation, testing, or recalibration performed by the EDU at the request of the applicant for installation of the applicant's distributed generation facility shall be provided consistent with the electric service and safety standards pursuant to Chapter 4928. of the Revised Code, and rule 4901:1-10-05 and, as applicable, paragraph (C) of rule 4901:1-10-28 of the Administrative Code. Interconnection requested by the applicant for the purposes of net metering must follow the commission's net metering rules promulgated pursuant to division (A)(32) of section 4928.01 of the Revised Code. Any exception to the net metering rules shall be implemented in accordance with any special metering or communication infrastructure ordered by the commission.

(E) Disposal of excess energy produced by the applicant's distributed generation

(1) An applicant proposing to install a self-generator as defined in division (A)(33) of section 4928.01 of the Revised Code, or a small generating facility with a capacity of two megawatts or less as defined in division (A)(28) of section 4928.01 of the Revised Code, for the purposes of selling excess electricity to

retail electric service providers as a competitive service to the extent not preempted by federal law must first seek certification of managerial, technical and financial capability consistent with section 4928.08 of the Revised Code.

(2) An applicant requesting interconnection for the purpose of selling energy to any party as a sale for resale or as a wholesale transaction may be subject to applicable rules for regional interstate sales at wholesale prices in markets operated by independent transmission system operators or regional transmission operators under the jurisdiction of the federal energy regulatory commission.

(F) Construction or system upgrades of the EDU's system

(1) Where construction or system upgrades of the EDU's system are required by the applicant's installation of a distributed generation facility, the EDU shall provide the applicant with an estimate of the timetable and the applicant's cost for the construction or system upgrades, consistent with the provisions of this chapter.

(2) If the applicant desires to proceed with the construction or system upgrades, the applicant and EDU shall enter into a contract for the completion of the construction or system upgrades.

(3) Interconnection service shall take place no later than two weeks following the completion of such construction or system upgrades.

*** DRAFT – NOT FOR FILING ***

4901:1-22-05 **Application requirements for interconnection.**

(A) *Application forms*

(1) Each applicant for interconnection to an electric distribution utility (EDU) system shall complete either of the following:

(a) A "short form" application for interconnection of generating equipment fifty kilowatts or less.

(b) A standard application for interconnection of generation equipment that does not qualify for a "short form" application.

(2) The application form shall follow the format and content set forth on the commission's website, and must be submitted to the EDU from which the applicant receives retail electric distribution service. Application forms will be available from the applicant's local EDU. The applicant's completed application form should not be sent to the commission for the purposes of review and approval.

(3) The applicant also is advised to refer to the "applicant's checklist" found on the commission website to determine whether to complete the "short form" or the standard form to request interconnection service.

(B) Certified equipment

(1) Each applicant shall provide the EDU a description of the applicant's distributed generation equipment package that is consistent with the following:

(a) An applicant's equipment package shall be considered certified for interconnected operation if it has been:

(i) Submitted by a manufacturer to a nationally recognized testing laboratory for certification.

(ii) Type-tested consistent with the Institute of Electrical and Electronics Engineers 1547.1 standard.

(iii) Listed by a nationally recognized testing and certification laboratory for continuous interactive operation with a utility grid in compliance with the applicable codes and standards listed in rule 4901:1-22-03 of this chapter.

(b) Certified equipment does not include equipment provided by the EDU.

(C) Equipment packages

(1) An applicant's equipment package shall include the following:

(a) All interface components including switchgear, inverters, or other interface devices.

(b) An integrated generator or electric source.

(c) Access for the EDU for commissioning purposes.

(d) A schedule for periodic compliance testing.

(2) If the applicant's equipment package includes only the interface components (switchgear, inverters, or other interface devices), then the applicant must show in writing that the generator or electric source to be used with the equipment package meets the following criteria:

(a) Compatibility with the equipment package.

(b) Consistency with the testing and listing specified for the package.

(D) Disconnect switch

A disconnect switch provided, installed by, and paid for by the applicant, whether or not it is an integrated feature of the equipment package or a compatible external device, must meet the following criteria:

(1) The applicant's disconnect switch must be capable of isolating the distributed generation facility for the purposes of safety during EDU system maintenance and during emergency conditions.

(2) If the applicant's disconnect switch is external to the equipment package, it must be accessible to and lockable by the EDU personnel at either the primary voltage level, which may include load-break cutouts, switches and elbows, or the secondary voltage level, which may include a secondary breaker or switch.

(3) The applicant's disconnect switch must be clearly labeled as a distributed generation facility disconnect switch.

(E) Solar equipment

(1) In the case of solar equipment, the photovoltaic power source shall be clearly labeled in accordance with the requirements of the National Electric Code article 690 to identify the following:

(a) Operating current (a system maximum-power current).

(b) Operating voltage (system maximum-power voltage).

(c) Maximum system voltage.

(d) Short-circuit current.

(2) In the case of solar units with internal switching devices, a customer lock box containing a key to the applicant's premises where the solar unit is installed should be accessible to EDU personnel.

(F) The EDU's review processing fees

(1) Each applicant shall pay the EDU's interconnection fees in accordance with the EDU's tariff for the EDU review and processing of an application, established at levels consistent with the distributed generation size and technology as well as the location on the electric distribution system of the interconnection.

(2) The EDU's review processing fee levels will apply in accordance with the EDU's tariff to all interconnections, including those for the purposes of net metering, combined heat and power or waste heat from industrial processes, as well as any customer-generator used for energy efficiency or the promotion and utilization of renewable or clean secondary fuels.

(3) Exception to the EDU's fee schedule may be determined by the EDU if the EDU invokes a fee-free feature at no cost to other Ohio ratepayers.

*** DRAFT – NOT FOR FILING ***

4901:1-22-06 **Simplified procedures and fees for application processing.**

(A) Level 1 simplified review procedure

(1) The electric distribution utility (EDU) shall review an applicant's completed interconnection service application that meets the criteria set forth in paragraph (A)(2) of this rule within four weeks of receiving the completed application.

(2) In order for the application to be approved by the EDU under the level 1 simplified review procedure, the applicant's generating facility must be an inverter-based system with a maximum nameplate capacity of ten kilowatts or less that uses renewable energy as fuel and the results of interconnecting the applicant's generating facility to the EDU's distribution system must comply with the following parameters:

(a) The applicant's proposed distributed generation facility's point of common coupling is not on a transmission line.

(b) The aggregated generation on the circuit, including the proposed distributed generation facility, may not exceed fifteen per cent of the peak load on the smallest part of the primary distribution system that could remain connected after operation of sectionalizing devices.

(c) The proposed distributed generation facility, in aggregation with other generation on the distribution circuit, shall not contribute more than ten per cent to the distribution circuit's maximum fault current at the point on the high voltage (primary) level nearest the proposed point of common coupling.

(d) The proposed distributed generation facility in aggregation with other generation located on the load side of a spot network shall not exceed five per cent of the spot network's maximum load when aggregated with other inverter-based generation.

(e) Direct current injection shall be maintained at or below five-tenths of a per cent of full rated inverter output current into the point of common coupling.

(f) When a proposed distributed generation facility is single phase and is to be interconnected on a center tap neutral of a two hundred forty volt service, its addition shall not create an imbalance between the two sides of the two hundred forty volt service of more than twenty per cent of the nameplate rating of the service transformer.

(g) The proposed distributed generation facility installation is certified to pass an applicable non-islanding test, or uses reverse power relays or other means to

meet the unintentional islanding requirements of the Institute of Electrical and Electronics Engineers (IEEE) 1547 standard.

(h) The proposed distributed generation facility installation complies with the IEEE 1547 standard and Underwriters Laboratory 1741 standard.

(3) Having complied with the parameters set forth in paragraph (A)(2) of this rule, the applicant's proposed distributed generation facility installation requires no further study by the EDU for the purpose of interconnection to the EDU's distribution system.

(4) The EDU's tariff for a level 1 fee will be based on actual costs per one-tenth of an hour of time spent on the simplified review, and not on a flat rate.

(5) Construction of facilities by the EDU on its own system is not required to accommodate the distributed generation facility.

(6) Within five days after completion of the level 1 simplified procedure leading to the EDU's approval for interconnection of the applicant's distributed generation facility, the EDU shall provide the applicant with a standard interconnection agreement. The standard interconnection agreement shall be consistent with the uniform requirements for an interconnection agreement enumerated in rule 4901:1-22-10 of this chapter and include a timetable for the physical interconnection of the applicant's proposed distributed generation facility to the EDU's system.

(B) Level 1.1 simplified review procedure

(1) The EDU shall review an applicant's completed interconnection service application that meets the criteria set forth in paragraph (B)(2) of this rule within four weeks of receiving a completed application, except that the EDU shall have an additional twenty business days to conduct an area network impact study to determine potential adverse impacts of interconnecting to its area network.

(2) In order for the application to be approved by the EDU under the level 1.1 simplified review procedure, the generating unit must be an inverter-based system with a maximum nameplate capacity of ten kilowatts or less and the results of interconnecting the applicant's generating facility to the EDU's distribution system must comply with the following parameters:

(a) The proposed distributed generation facility's point of common coupling is not on a transmission line.

(b) The interconnection is to be located on the load side of an area network.

(c) The aggregated other generation on the area network does not exceed five per cent of an area network's maximum load.

(d) The proposed distributed generation facility installation is certified to pass an applicable non-islanding test, or uses reverse power relays or other means to meet IEEE 1547 standard unintentional islanding requirements.

(3) The EDU's tariff for a level 1.1 fee will be based on actual costs per one-tenth of an hour of time spent on the simplified review, and not on a flat rate.

(4) Any area network impact study shall be conducted at the EDU's own expense.

(5) Construction of facilities by the EDU on its own system is not required to accommodate the distributed generation facility.

(6) Within five days after completion of the level 1.1 simplified procedure leading to the EDU's approval for interconnection of the applicant's distributed generation facility, the EDU shall provide the applicant with a standard interconnection agreement. The standard interconnection agreement shall be consistent with the uniform requirements for an interconnection agreement enumerated in rule 4901:1-22-10 of this chapter and include a timetable for the physical interconnection of the applicant's proposed distributed generation facility to the EDU's system.

(7) When an area network impact study identifies potential adverse system impacts, the EDU may determine that it is inappropriate for the distributed generation facility to interconnect to the area network and the application filed for level 1.1 review shall be denied.

(a) When the EDU denies a level 1.1 application, it shall provide the applicant with a copy of the area network impact study and a written justification for denying the interconnection request.

(b) Upon denial of the level 1.1 interconnection request, the applicant may elect to submit a new application for consideration under level 2 or level 3 procedures, in which case the queue position assigned to the level 1.1 application shall be retained.

(C) Level 1.2 simplified review procedure

(1) The EDU shall review a completed interconnection service application that meets the criteria set forth in paragraph (C)(2) of this rule within four weeks of receiving a completed application, except that the EDU shall have an additional twenty-five days to conduct an area network impact study to determine any potential adverse impacts of interconnecting to its area network.

(2) In order for the application to be approved by the EDU under the level 1.2 simplified review procedure, the generating unit must be a certified inverter-based system with a maximum nameplate capacity of equal to fifty kilowatts or less and the results of interconnecting the applicant's generating facility to the EDU's distribution system must comply with the following parameters:

(a) The interconnection is to be to an area network distribution system.

(b) The proposed distributed generation facility installation is certified to pass an applicable non-islanding test, or uses reverse power relays or other means to meet IEEE 1547 standard unintentional islanding requirements.

(c) The proposed level 1.2 distributed generation facility meeting level 1.1 parameters in division (B)(2)(a) to (B)(2)(d) of this rule shall be presumed to be appropriate for interconnecting to an area network

(3) The EDU's tariff for a level 1.2 fee will be based on actual costs per one-tenth of an hour of time spent on the simplified review, and not on a flat rate.

(4) Any area network impact study shall be conducted at the EDU's own expense.

(5) Within five days after completion of the level 1.2 simplified procedure leading to the EDU's approval for interconnection of the applicant's distributed generation facility, the EDU shall provide the applicant with a standard interconnection agreement. The standard interconnection agreement shall be consistent with the uniform requirements for an interconnection agreement enumerated in rule 4901:1-22-10 of this chapter and include a timetable for the physical interconnection of the applicant's proposed distributed generation facility to the EDU's system.

*** DRAFT – NOT FOR FILING ***

4901:1-22-07 **Expedited procedures.**

(A) Level 2 expedited review process

(1) The electric distribution utility (EDU) shall review an applicant's completed interconnection service application that meets the criteria set forth in paragraph (A)(2) of this rule on an expedited basis.

(2) In order for the application to be approved by the EDU under the level 2 expedited review procedure, the applicant's proposed certified inverter-based or synchronous distributed generation facility in aggregation with all other generators on the EDU's circuit must be two megawatts or less and the results of interconnecting the applicant's generating facility to the EDU's distribution system must comply with the following parameters:

(a) The proposed distributed generation facility's point of interconnection shall not be on a transmission line

(b) The interconnection is to a radial distribution circuit.

(c) The proposed distributed generation facility complies with Institute of Electrical and Electronics Engineers (IEEE) 1547 standard and Underwriters Laboratory 1741 standard.

(d) The proposed distributed generation facility, in aggregation with other generation interconnected to the distribution side of a substation transformer feeding the circuit where the distributed generation facility proposes to interconnect, shall not exceed two megawatts in an area where there are known or posted transient stability limitations to generating units located in the general electrical vicinity (for example, three or four distribution busses from the point of interconnection).

(e) The proposed distributed generation's capacity in aggregation with other generation on the circuit shall not exceed fifteen per cent of the total circuit peak load as most recently measured at the substation; nor will it exceed fifteen per cent of a distribution circuit line section annual peak load.

(f) The proposed distributed generation facility, in aggregation with other generation on the distribution circuit, shall not contribute more than ten per cent to the distribution circuit's maximum fault current at the point on the primary voltage distribution line nearest the point of common coupling.

(g) The proposed distributed generation facility, in aggregation with other generation on the distribution circuit, may not cause any distribution protective devices and equipment (including substation breakers, fuse

cutouts, and line reclosers), or other customer equipment on the electric distribution system to be exposed to fault currents exceeding eighty-five per cent of the short circuit interrupting capability.

(h) The applicant shall not request interconnection on a circuit that already exceeds eighty-five per cent of the short circuit interrupting capability.

(i) When a proposed distributed generation facility is single phase and is to be interconnected on a center tap neutral of a two hundred forty volt service, its addition shall not create an imbalance between the two sides of the two hundred forty volt service of more than twenty per cent of the nameplate rating of the service transformer.

(j) The proposed distributed generation facility installation is certified to pass an applicable non-islanding test, or uses reverse power relays or other means to meet IEEE 1547 standard unintentional islanding requirements.

(k) On a three-phase, three-wire primary electric distribution line, a three- or single-phase generator shall be connected phase-to-phase.

(l) When the applicant's facility is to be connected to three-phase, four-wire primary EDU distribution lines, a three- or single-phase generator will be connected line-to-neutral and will be effectively grounded.

(m) A review of the type of electrical service provided to the applicant, including line configuration and the transformer connection, will be conducted to limit the potential for creating over voltages on the EDU's electric distribution system due to a loss of ground during the operating time of any anti-islanding function.

(n) When the proposed distributed generation facility is to be interconnected on single-phase shared secondary line, the aggregate generation capacity on the shared secondary line, including the proposed distributed generation facility, will not exceed ten kilowatts.

(o) Construction of facilities by the EDU on its own system is not required to accommodate the distributed generation facility.

(3) The EDU's tariff for level 2 expedited review processing fees will include the following:.

(a) An application fee of up to fifty dollars, plus one dollar per kilowatt of the applicants' system nameplate capacity rating.

(b) The cost of engineering work done as part of any impact or facilities study, billed at actual costs incurred.

(c) The actual cost of any minor modification of the electric distribution utility's system that would otherwise not be done but for the applicant's interconnection request

(4) When an EDU determines that the application passes the level 2 review process, or fails one or more of the level 2 criteria set forth in paragraph (A)(2) of this rule but the EDU determines that the distributed generation facility can be interconnected safely and reliably, the EDU shall provide the applicant with a standard distributed generation interconnection agreement within five business days after such determination. The standard interconnection agreement shall be consistent with the uniform requirements for an interconnection agreement enumerated in rule 4901:1-22-10 of this chapter and include a timetable for the physical interconnection of the applicant's proposed distributed generation facility to the EDU's system.

(5) When additional review by the EDU may be appropriate for an application failing to meet one or more of the level 2 criteria, the EDU shall offer to do the following for the applicant:

(a) Perform additional review to determine whether minor modifications to the electric distribution system would enable the interconnection to be made consistent with safety, reliability and power quality criteria.

(b) Provide the applicant with a nonbinding, good faith estimate of the EDU's costs of additional review and minor modifications.

(c) Notify the applicant that the additional review or modifications will be undertaken only after the applicant consents in writing to pay for the review and modifications.

(6) Within five days after completion of the level 2 expedited procedure leading to the EDU's approval for interconnection of the applicant's proposed distributed generation facility installation and collection by the EDU of the applicant's payment pursuant to paragraph (A)(5)(c) of this rule, the EDU shall provide the applicant with a standard interconnection agreement. The standard interconnection agreement shall be consistent with the uniform requirements for an interconnection agreement enumerated in rule 4901:1-22-10 of this chapter and include a mutually agreed upon timetable for the physical interconnection of the applicant's proposed distributed generation facility to the EDU's system.

*** DRAFT – NOT FOR FILING ***

4901:1-22-08 **Standard procedure.**

(A) Level 3 standard review procedure

(1) Level 3 standard review procedure shall use the determinations made in the scoping meeting and the interconnection studies defined in rule 4901:1-22-09 of this chapter for technical analysis of the applicant's proposed distributed generation facility installation.

(2) Level 3 is applicable for systems that do not qualify for either level 1 or level 2 review procedures. In order for the application to be approved under the level 3 standard review procedure, the applicant's inverter-based or synchronous distributed generation facility, either individually or in the aggregate, must have a nameplate capacity of twenty megawatts or less, and the results of interconnecting the applicant's generating facility to a radial distribution circuit on the electric distribution utility's (EDU) distribution system must comply with any of the following applicable parameters:

(a) The distributed generation facility is less than two megawatts and is not certified or the distributed generation facility is less than two megawatts and non-inverter based.

(b) Known or posted transient stability limits to generating units located in the general electrical vicinity of the proposed point of common coupling require the proposed application to be subject to a level 3 standard review process.

(c) The application's failure to meet any criteria under level 2 for the expedited process requires the EDU to use the level 3 interconnection procedures.

(d) The application was considered but not approved under a level 2 review and the applicant is submitting a new interconnection request for consideration under a level 3 review procedure. The queue position assigned to the level 2 interconnection application in accordance with paragraph (C) of rule 4901:1-22-09 of this chapter shall be retained.

(3) The EDU's tariff for level 3 standard review fees will include the following:

(a) An application fee of up to one hundred dollars, plus two dollars per kilowatt of the system's nameplate capacity.

(b) In addition to the level 3 standard review application fee, any or all of the following fees may be assessed by the EDU:

(i) The cost of engineering work done as part of any feasibility, system impact or facilities study, billed at actual cost.

(ii) The actual cost of any modifications of the EDU's system that would otherwise not be done but for the applicant's interconnection request.

(4) Within five days after completion of the level 3 standard procedure including any applicable feasibility, system impact or facilities studies leading to the EDU's approval for interconnection of the applicant's proposed distributed generation facility installation and collection by the EDU of all the actual costs for the studies as billed to the applicant, the EDU shall provide the applicant with a standard interconnection agreement. The standard interconnection agreement shall be consistent with the uniform requirements for an interconnection agreement enumerated in rule 4901:1-22-10 of this chapter, and a mutually agreed upon timetable for the physical interconnection of the applicant's proposed distributed generation facility to the EDU's system.

*** DRAFT – NOT FOR FILING ***

4901:1-22-09 **Scoping meeting and interconnection studies.**

(A) The electric distribution utility (EDU) will designate an employee or office from which information on the requirements for EDU's application review process can be obtained through an informal request by the applicant during a scoping meeting that includes discussion of the following:

(1) The applicant's proposed interconnection of a distributed generation facility at a specific location on the EDU's distribution system.

(2) Qualifications under EDU's level 1, level 2 or level 3 review procedures.

(3) Existing EDU studies relevant to the interconnection request.

(4) Reasonable requests from the applicant for EDU information including relevant system studies as well as other material useful to an understanding of an interconnection at a particular point on the system to the extent such information does not violate confidentiality provisions of prior agreements or critical infrastructure requirements.

(B) Scheduling of a scoping meeting will be established within ten business days after the scoping meeting has been requested by the applicant or as agreed to by the parties.

(C) Queuing

(1) When an interconnection request is complete, the EDU shall assign the application a queue position to establish the order in which the interconnection request will be reviewed in relation to other interconnection requests on the same or nearby sections of the EDU's distribution system.

(2) The queue position of an interconnection request shall be used to determine the cost responsibility necessary for the construction of any facilities to accommodate the interconnection in relation to other interconnection requests on the same or nearby sections of the EDU's distribution system.

(3) The EDU shall notify the applicant at the scoping meeting about other higher-queued applicants.

(D) Interconnection study requirements

(1) A specific interconnection study may be required by the EDU prior to interconnection service that will include the following:

(a) Each type of study required will include an EDU interconnection tariff fee schedule approved by the commission.

(b) Each type of study will be the subject of a written agreement between the applicant and the EDU that includes the following:

(i) A target date for completion of any required feasibility study, system impact study, and facilities study.

(ii) A provision to share the results of the study by the EDU with the applicant.

(c) The written agreement discussed in paragraph (D)(1)(b) of this rule may include an alternative provision that allows the required studies related to the interconnection of the generating facility(s) to be conducted by a qualified third party with the consent of the EDU.

(d) A written statement provided to the applicant by the EDU prior to the study that includes the following:

(i) A clear explanation of all charges.

(ii) A good faith estimate of the number of hours that will be needed to complete the study.

(iii) An estimate of the total interconnection study fee.

(2) By mutual agreement of the parties, a feasibility study, a system impact study, or a facilities study under level 3 procedures may be waived by the EDU.

(3) When the EDU determines, as a result of the studies conducted under a level 3 review, that it is appropriate to interconnect the distributed generation facility, the EDU shall provide the applicant with a standard distributed generation interconnection agreement. The standard interconnection agreement shall incorporate the uniform requirements for an interconnection agreement enumerated in rule 4901:1-22-10 of this chapter, and a mutually agreed upon timetable for the physical interconnection of the applicant's proposed distributed generation facility to the EDU's system.

(4) If the interconnection request is denied, the EDU shall provide a written explanation within five days from the denial. The EDU must allow the applicant thirty days to cure the reasons for denial while the applicant's position in the queue is maintained.

(E) The feasibility study

(1) No later than five business days after the scoping meeting, the EDU shall provide the applicant with a feasibility study agreement in accordance with the EDU's

tariff to determine the feasibility of interconnecting the applicant's proposed distributed generation facility at a particular point on the EDU's system. The study shall include both of the following:

(a) An outline of the scope of the study.

(b) A non-binding good faith estimate of the cost to perform the study.

(2) A feasibility study shall include the following analyses for the purpose of identifying a potential adverse system impact to the EDU's system that would result from the interconnection:

(a) Initial identification of any circuit, breaker, short-circuit and capability limits exceeded as a result of the interconnection.

(b) Initial identification of any thermal overload or voltage limit violations resulting from the interconnection.

(c) Initial review of grounding requirements and system protection.

(d) A description and nonbinding estimated cost of facilities required to interconnect the distributed generation facility to the EDU's system in a safe and reliable manner.

(3) When an applicant requests that the feasibility study evaluate multiple potential points of interconnection, additional evaluations may be required.

(4) The actual cost of the EDU's additional evaluations shall be paid by the applicant.

(F) The system impact study

(1) No later than five business days after the completion of or a waiver of the feasibility study, the EDU shall provide a distribution system impact study agreement to the applicant, using a form of system impact study agreement in accordance with the EDU's tariff that includes an outline of the scope of the study and a nonbinding good faith estimate of the cost to perform the study.

(2) If the feasibility study concludes there is no adverse system impact, or the study identifies an adverse system impact but the EDU is able to identify a remedy, no system impact study is required.

(3) A system impact study shall evaluate the impact of the proposed interconnection on the safety and reliability of the EDU's system. The study shall:

(a) Identify and detail the system impacts that result when a distributed generation facility is interconnected without project or system modifications.

(b) Consider the adverse system impacts identified in the feasibility study, or potential impacts including those identified in the scoping meeting.

(c) Consider all generating facilities that, on the date the system impact study is commenced, are directly interconnected with the EDU's system.

(d) Consider pending higher queue position of facilities requesting interconnection to the system, or consider pending higher queue position of facilities requesting interconnection having a signed interconnection agreement.

(4) A system impact study performed by the EDU shall consider the following criteria:

(a) A load flow study.

(b) A short circuit analysis.

(c) A stability analysis.

(d) Voltage drop and flicker studies.

(e) Protection and set point coordination studies.

(f) Grounding reviews.

(5) The EDU shall state the underlying assumptions of the study and show the results of the analyses to the applicant, including the following:

(a) Any potential impediments to providing the requested interconnection service.

(b) Any required distribution system upgrades and provide a nonbinding good faith estimate of cost and time to construct the system upgrades.

(G) The facilities study

(1) Within five business days of completion of the system impact study, a report will be transmitted by the EDU to the applicant with a facilities study agreement in accordance with the EDU's interconnection tariff.

(2) When the parties agree at the scoping meeting that no system impact study is required, the EDU shall provide to the applicant, no later than five business days after the scoping meeting, a facilities study agreement in accordance with the EDU's interconnection tariff that enables the EDU to determine the interconnection facilities needed to interconnect the applicant's proposed distributed generation facility at a particular point on the EDU's system.

(3) The facilities study agreement shall include both of the following:

(a) An outline of the scope of the study.

(b) A nonbinding good faith estimate of the cost to perform the study to cover the cost of the equipment, engineering, procurement and construction work, including overheads, needed to implement the conclusions of the feasibility study and/or the system impact study to interconnect the distributed generation facility.

(4) The facilities study shall identify all of the following:

(a) The electrical switching configuration of the equipment, including transformer, switchgear, meters, and other station equipment.

(b) The nature and estimated cost of the EDU's interconnection facilities and distribution upgrades necessary to accomplish the interconnection.

(c) An estimate of the time required to complete the construction and installation of such facilities.

(5) The parties may agree to permit an applicant to separately arrange for a third party to design and construct the required interconnection facilities under the following conditions:

(a) The EDU may review the facilities to be designed and constructed by a third party under provisions included in the facilities study agreement for that purpose.

(b) The applicant and the third party separately arranging for design and construction agree to comply with security and confidentiality requirements.

(c) The EDU shall provide the applicant with all relevant information and required specifications available to permit the applicant to obtain an independent design and cost estimate for the facilities, which must be built in accordance with the specifications.

*** DRAFT – NOT FOR FILING ***

4901:1-22-10 **Uniform requirements for interconnection agreements.**

(A) The electric distribution utility (EDU) shall provide the applicant with a standard interconnection agreement for distributed generation within five business days. If applicable, the applicant must pay for the interconnection facilities and distribution upgrades identified in the facilities study.

(B) The applicant shall have thirty business days or another mutually agreeable time frame after the standard interconnection agreement is received to sign and return the interconnection agreement to the EDU.

(C) When the applicant does not sign the agreement within thirty business days, the interconnection request will be deemed withdrawn unless the applicant requests an extension of the deadline in writing. The request for extension shall not be denied by the EDU, unless conditions on the EDU system have changed.

(D) Milestones for construction

(1) When construction is required, the interconnection of the distributed generation will proceed according to any milestones agreed to by the parties in the standard interconnection agreement.

(2) The interconnection agreement may not become effective until the milestones agreed to in the standard interconnection agreement are satisfied, including the following:

(a) The distributed generation is approved by electric code officials with jurisdiction over the interconnection.

(b) The applicant provides a certificate of completion to the EDU; or there is a successful completion of an on-site operational test within ten business days or at a mutually convenient time, unless waived. The operational test shall be observed by EDU personnel or a qualified third party with sufficient expertise to verify that the criteria for testing have been met.

(E) Insurance

(1) Any EDU interconnection agreement with the applicant shall not require additional liability insurance beyond proof of insurance or any other suitable financial instrument sufficient to meet its construction, operating and liability responsibilities in accordance with the EDU's tariff with respect to this rule.

(2) At no time shall the EDU require the applicant to negotiate any policy or renewal of any policy covering any liability through a particular insurance agent, solicitor, or broker.

(F) Alternative dispute resolution

The EDU or the applicant who is a nonmercantile, nonresidential customer may seek resolution of any disputes which may arise out the EDU tariffs filed under these rules, in accordance with Chapter 4901:1-26 of the Administrative Code, for alternative dispute resolution procedures.

(G) Site testing

The applicant must provide the EDU a reasonable opportunity to witness the testing of installed switchgear, protection system, and generator as included in the applicant's installation test plan and maintenance schedule that has been reviewed and approved by the EDU.

(H) Periodic testing

(1) Any periodic tests of the interconnection equipment (including any relays, interrupting devices, control schemes, and batteries that involve protection of the EDU's system) as recommended by the applicant's equipment manufacturer or required by the Institute of Electrical and Electronics Engineers (IEEE) 1547 standards shall be the responsibility of the applicant.

(2) Such periodic tests shall be included in the applicant's installation test plan and maintenance schedule that has been reviewed and approved by the EDU.

(3) The applicant shall make copies of the periodic test reports or inspection logs available to the EDU for review.

(4) Upon a written request, the EDU is to be informed of the next scheduled maintenance and be able to witness the maintenance program and any associated testing.

(I) Disconnection of the applicant's facility

Except as provided for in paragraph (J)(2) of this rule, when the EDU discovers the applicant's equipment is not in compliance with IEEE 1547 standards and such noncompliance has the potential to adversely affect the safety and reliability of the electric system, the EDU may disconnect the applicant's facility according to the following procedures:

(1) The EDU shall provide a notice to the applicant with a description of the specific noncompliance condition.

(2) The disconnection can only occur after a reasonable time to cure the noncompliance condition has elapsed.

(J) Other disconnection of the unit

(1) The applicant retains the option to temporarily disconnect from the EDU's system at any time. Such temporary disconnection shall not be a termination of the interconnection agreement unless the applicant exercises its termination rights under the interconnection agreement.

(2) The EDU shall have the right to disconnect the applicant's unit(s) without notice in the event of an emergency or to eliminate conditions that constitute a potential hazard to the EDU personnel or the general public. The EDU shall notify the applicant of the emergency as soon as circumstances permit.

(K) Service interruption

During routine maintenance and repairs on the EDU's system consistent with Chapter 4901:1-23 of the Administrative Code, or other commission order, the EDU shall provide the applicant with a seven-day notice of service interruption.

(L) Effective term and termination rights of an interconnection agreement

(1) An interconnection agreement becomes effective when executed by both parties and shall continue in force until terminated under any of the following conditions:

(a) The applicant terminates the interconnection agreement at any time by giving the EDU sixty days prior notice.

(b) The EDU terminates the interconnection agreement upon failure of the applicant to generate energy from the applicant's facility in parallel with the EDU's system by the later of two years from the date of the executed interconnection agreement or twelve months after completion of the interconnection.

(c) Either party terminates by giving the other party at least sixty days prior written notice that the other party is in default of any of the material terms and conditions of the interconnection agreement, so long as the notice specifies the basis for the termination and there is reasonable opportunity to cure the default.

(2) All applicants' installations existing on or before the effective date of this rule are exempted from the changes instituted by this rule.

(3) Upon termination of an interconnection agreement, the applicant's facilities will be disconnected from the EDU's system.

(4) The termination of the interconnection agreement shall not relieve either party of its liabilities and obligations, owed or continuing at the time of the termination.

*** DRAFT – NOT FOR FILING ***

4901:1-22-11 **Backup electricity supply.**

Replacement electric power for the applicant shall be supplied in accordance with division (C) of section 4928.15 of the Revised Code, by either of the following:

(A) The electric distribution utility either at a tariff rate or at the market price as provided for in its tariff.

(B) By the applicant's competitive retail electric service provider at a rate to be determined by contract.

*** DRAFT – NOT FOR FILING ***

4901:1-22-12 **Complaints.**

All formal complaints brought by applicants or interconnection service customers pursuant to section 4905.26 of the Revised Code, will be handled according to the procedural standards set forth in Chapters 4901-1 and 4901-9 of the Administrative Code. Each electric distribution utility must provide to the commission utilities department the name and telephone number of a contact person to assist the commission staff with the resolution of informal complaints regarding provisions in Chapter 4901:1-22 of the Administrative Code.