DEPARTMENT OF ENERGY, LABOR AND ECONOMIC GROWTH

PUBLIC SERVICE COMMISSION

ELECTRIC INTERCONNECTION AND NET METERING STANDARDS

(By authority conferred on the public service commission by section 6 of 1909 PA 106, MCL 460.556, section 5 of 1919 PA 419, MCL 460.55, sections 4, 6, and 10e of 1939 PA 3, MCL 460.4, 460.6, and 460.10e, and section 173 of 2008 PA 295, MCL 460.1173.)

PART 1. GENERAL PROVISIONS

R 460.601a Definitions; A-I.

Rule 1a. As used in these rules:

(a) "Alternative electric supplier" means that term as defined in section 10g of 2000 PA 141, MCL 460.10g.

(b) "Alternative electric supplier net metering program plan" means a document supplied by an alternative electric supplier that provides detailed information to an applicant about the alternative electric supplier's net metering program.

(c) "Applicant" means the legally responsible person applying to an electric utility to interconnect a project with the electric utility's distribution system or a person applying for a net metering program. An applicant shall be a customer of an electric utility and may be a customer of an alternative electric supplier.

(d) "Application review" means a review by the electric utility of the completed application for interconnection to determine if an engineering review is required.

(e) "Area network" means a location on the distribution system served by multiple transformers interconnected in an electrical network circuit.

(f) "Category 1" means an inverter based project of 20 kW or less that uses equipment certified by a nationally recognized testing laboratory to IEEE 1547.1 testing standards and in compliance with UL 1741 scope 1.1A.

(g) "Category 2" means a project of greater than 20 kW and not more than 150 kW.

(h) "Category 3" means a project of greater than 150 kW and not more than 550 kW.

(i) "Category 4" means a project of greater than 550 kW and not more than 2 MW.

(j) "Category 5" means a project of greater than 2 MW.

(k) "Certified equipment" means a generating, control, or protective system that has been certified as meeting acceptable safety and reliability standards by a nationally recognized testing laboratory in conformance with UL 1741.

(l) "Commission" means the Michigan public service commission.

(m) "Commissioning test" means the procedure, performed in compliance with IEEE 1547.1, for documenting and verifying the performance of a project to confirm that the project operates in conformity with its design specifications.

(n) "Customer" means a person who receives electric service from an electric utility's distribution system or a person who participates in a net metering program through an alternative electric supplier or electric utility.

(o) "Customer-generator" means a person that uses a project on-site that is interconnected to an electric utility distribution system.

(p) "Distribution system" means the structures, equipment, and facilities operated by an electric utility to deliver electricity to end users, not including transmission facilities that are subject to the jurisdiction of the federal energy regulatory commission.

(q) "Distribution system study" means a study to determine if a distribution system upgrade is needed to accommodate the proposed project and to determine the cost of an upgrade if required.

(r) "Electric provider" means any person or entity whose rates are regulated by the commission for selling electricity to retail customers in this state.

(s) "Electric utility" means as that term is defined in section 2 of 1995 PA 30, MCL 460.562.

(t) "Eligible electric generator" means a methane digester or renewable energy system with a generation capacity limited to the customer's electric need and that does not exceed the following:

(i) 150 kW of aggregate generation at a single site for a renewable energy system.

(ii) 550 kW of aggregate generation at a single site for a methane digester.

(u) "Engineering review" means a study to determine the suitability of the interconnection equipment including any safety and reliability complications arising from equipment saturation, multiple technologies, and proximity to synchronous motor loads.

(v) "Full retail rate" means the power supply and distribution components of the cost of electric service. Full retail rate does not include a system access charge, service charge, or other charge that is assessed on a per meter basis.

(w) "IEEE" means institute of electrical and electronics engineers.

(x) "IEEE 1547" means IEEE "Standard for Interconnecting Distributed Resources with Electric Power Systems."

(y) "IEEE 1547.1" means IEEE "Standard Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems."

(z) "Interconnection" means the process undertaken by an electric utility to construct the electrical facilities necessary to connect a project with a distribution system so that parallel operation can occur.

(aa) "Interconnection procedures" mean the requirements that govern project interconnection adopted by each electric utility and approved by the commission.

History: 2009 AACS.

R 460.601b Definitions; J-Z.

Rule 1b. As used in these rules

(a) "kW" means kilowatt.

(b) "kWh" means kilowatt-hours.

(c) "Material modification" means a modification that changes the maximum electrical output of a project or changes the interconnection equipment, including either of the following:

(i) Changing from certified to noncertified equipment.

(ii) Replacing a component with a component of different functionality or UL listing.

(d) "Methane digester" means a renewable energy system that uses animal or agricultural waste for the production of fuel gas that can be burned for the generation of electricity or steam.

(e) "Modified net metering" means a utility billing method that applies the power supply component of the full retail rate to the net of the bidirectional flow of kWh across the customer interconnection with the utility distribution system during a billing period or time-of-use pricing period.

(f) "MW" means megawatt.

(g) "Nationally recognized testing laboratory" means any testing laboratory recognized by the accreditation program of the U.S. department of labor occupational safety and health administration.

(h) "Parallel operation" means the operation, for longer than 100 milliseconds, of a project while connected to the energized distribution system.

(i) "Project" means electric generating equipment and associated facilities that are not owned or operated by an electric utility.

(j) "Renewable energy credit" means a credit granted pursuant to the commission's renewable energy credit certification and tracking program in section 41 of 2008 PA 295, MCL 460.1041.

(k) "Renewable energy resource" means that term as defined in section 11(i) of 2008 PA 295, MCL 460.1011(i).

(l) "Renewable energy system" means that term as defined in section 11(k) of 2008 PA 295, MCL 460.1011(k).

(m) "Spot network" means a location on the distribution system that uses 2 or more inter-tied transformers to supply an electrical network circuit.

(n) "True net metering" means a utility billing method that applies the full retail rate to the net of the bidirectional flow of kW hours across the customer interconnection with the utility distribution system, during a billing period or time-of-use pricing period.

(o) "UL" means underwriters laboratory.

(p) "UL 1741" means the "Standard for Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources."

(q) "UL 1741 scope 1.1A" means paragraph 1.1A contained in chapter 1, section 1 of UL 1741.

(r) "Uniform interconnection application form" means the standard application forms, approved by the commission under R 460.615, to be used for category 1, category 2, category 3, category 4, and category 5 projects.

(s) "Uniform interconnection agreement" means the standard interconnection agreements, approved by the commission under R 460.615 and used for all category 1, category 2, category 3, category 4, and category 5 projects.

(t) "Uniform net metering application" means the net metering application form approved by the commission under R 460.642 and used by all electric utilities and alternative electric suppliers.

(u) "Working days" means days excluding Saturdays, Sundays, and other days when the offices of the electric utility are not open to the public.

History: 2009 AACS.

R 460.602 Adoption of standards by reference.

Rule 2. (1) The standards specified in these rules are adopted in these rules by reference.

(a) UL 1741 Standard for Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources, November 7, 2005 revision, is available from COMM 2000, 1414 Brook Drive, Downers Grove, IL 60515, USA, telephone number: 1-888-853-3503 or via the internet website: www.comm-2000.com at a cost of $385.00 at the time of adoption of these rules.

(b) The following standards are available from IEEE by telephone at 1-800-678-4333 or from the internet website www.standards.ieee.org.

(i) The IEEE 1547, IEEE Standard for Interconnecting Distributed Resources with Electric Power Systems, 1/1/2003, is available at a cost of $70.00 at the time of adoption of these rules.

(ii) The IEEE 1547.1, IEEE Standard Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems, 1/1/2005, is available at a cost of $55.00 at the time of adoption of these rules.

(2) The standards specified in subrule (1) of this rule are also available for inspection and distribution at cost plus $25.00 shipping and handling from the Public Service Commission at 6545 Mercantile Way, Suite 7 Lansing, MI 48911.

History: 2009 AACS.

R 460.604 Prohibited practices.

Rule 4. (1) An electric provider shall not charge an applicant or customer-generator any fee or charge or require additional equipment, insurance, or any other requirement not specifically authorized by the interconnection standards in Part 2 of these rules or under the net metering standards in Part 3 of these rules, unless the fee, charge or other requirement would apply to other similarly situated customers who are not customer- generators.

(2) An electric provider or alternative electric supplier shall provide to net metering customers electric service at nondiscriminatory rates that are identical, with respect to rate structure, retail rate components and any monthly charges, to the rates that the net metering customer would be charged if the net metering customer were not participating in the net metering program.

History: 2009 AACS.

R 460.606 Designated points of contact.

Rule 6. (1) Within 30 days of the effective date of these rules, each electric utility shall designate and maintain an initial point of contact for all customer inquiries related to interconnection and net metering

from which interested parties may obtain information about interconnection and net metering procedures and applications and agreement forms.

(2) Within 30 days of the effective date of these rules, each alternative electric supplier shall designate 1 initial point of contact for all customer inquiries related to net metering from which interested parties may obtain information about net metering programs, applications, and processing. Each electric utility and alternative electric supplier shall have current information concerning its initial point of contact on file with the commission.

(3) Each electric utility shall designate and maintain a point of contact for each applicant to address applicant inquiries about technical issues or interconnection status that may arise during the interconnection process.

(4) Each interconnection applicant or net metering customer shall designate a point of contact with sufficient technical expertise to address any questions regarding a proposed interconnection or net metering application.

History: 2009 AACS.

R 460.608 Alternative dispute resolution.

Rule 8. (1) If there is a dispute between an interconnection applicant and an electric utility or between a net metering applicant and an electric utility or alternative electric supplier, and with consent of all parties, the parties shall attempt alternative means of resolving the dispute.

(2) Any alternative means that will result in a settlement may be used including, but not limited to, settlement conferences, mediation, and other informal dispute resolution methods.

(3) If a party is dissatisfied with a recommended settlement resulting from the alternative dispute resolution process, the party may file a complaint with the commission as provided under R 460.17101 to R 460.17701.

History: 2009 AACS.

R 460.610 Appointment of experts.

Rule 10. (1) If a complaint is filed against an electric utility regarding a technical issue, the commission may appoint from 1 to 3 independent experts to investigate the complaint and report findings to the commission.

(2) The experts shall submit a report to the commission with the results and conclusions of their inquiry and may suggest corrective measures for resolving the complaint. The reports of the experts shall be received in evidence and the experts shall be made available for cross examination by the parties at any hearing.

(3) The reasonable expenses of experts, including a reasonable hourly fee or fee determined by the commission, shall be submitted to the commission for approval and, if approved, shall be funded under subrule (4) of this rule.

(4) The electric utility or alternative electric supplier shall reimburse the experts appointed by the commission for the reasonable expenses incurred in the course of investigating the complaint.

History: 2009 AACS.

R 460.612 Waivers.

Rule 12. An electric utility, alternative electric supplier, or applicant may apply for a waiver from 1 or more provisions of these rules. The commission may grant a waiver upon a showing of good cause and a finding that the waiver is in the public interest.

History: 2009 AACS.

PART 2. INTERCONNECTION STANDARDS

R 460.615 Electric utility interconnection procedures.

Rule 15. (1) Each electric utility shall file applications for approval of proposed interconnection procedures and forms within 90 days of the effective date of these rules or by August 3, 2009, whichever date is sooner. Two or more electric utilities may file a joint application proposing interconnection procedures for use by the joint applicants. All procedures and forms shall be written in plain English.

(2) The application for interconnection of a category 1 project shall contain all of the following:

(a) A description of the proposed procedure for an applicant to apply for interconnection of a category 1 project.

(b) A uniform interconnection application form for category 1 projects.

(c) A uniform interconnection agreement for category 1 projects.

(3) The application for interconnection of category 2 to category 5 projects shall contain all of the following:

(a) Uniform interconnection application forms for each of category 2 to category 5 projects.

(b) Uniform interconnection agreements for each of category 2 to category 5 projects.

(c) A description of the steps for processing an application for category 2 to category 5 projects that complies with R 460.620.

(d) Specific technical, engineering, and operational requirements that are suitable for the electric utility's distribution system.

(e) A schedule of application review fees, engineering review fees, distribution system study fees, and testing and site inspection fees that conforms to R 460.618(1).

(f) A timeline for notifications as required under R 460.620.

(4) The interconnection procedures shall include all of the following, if applicable:

(a) For projects interconnecting to a spot network circuit where the project or aggregate of total generation exceeds 5 percent of the spot network's maximum load, a requirement that the project must utilize a protective scheme that will ensure that its current flow will not affect the network protective devices, including reverse power relays or a comparable function.

(b) For projects that use inverter-based protective functions for an interconnection to an area network, a requirement that the project, in aggregate with other projects interconnected on the load side of network protective devices, shall not exceed the lesser of 10 percent of the minimum annual load on the network or 500 kW. For a photovoltaic project without batteries, the 10 percent minimum shall be determined as a function of the minimum load occurring during an off-peak daylight period.

(c) For projects interconnecting to area networks that do not use inverter-based protective functions or inverter-based projects that do not meet the requirements of subrule 4(b) of this rule, a requirement that the project use reverse power relays or other protection devices or methods that ensure no export of power from the customer's site including any inadvertent export (e.g. under fault conditions) that could adversely affect protective devices on the network circuit.

(5) The proposed procedures shall ensure all of the following:

(i) Consistency with generally accepted industry practices and guidelines.

(ii) Reliability of electric service and safety of customers, utility employees, and the general public.

(iii) Suitability for the size and capacity of a project as it affects the technical and engineering complexity of the interconnection.

(iv) Compliance with these rules.

(6) The proposed interconnection procedures may include an informal process for obtaining a waiver to technical requirements described in the interconnection procedures for a specific project provided compliance with these rules is ensured.

(7) The Commission shall provide a 30-day period for comment before approving the applications for interconnection procedures.

History: 2009 AACS.

R 460.618 Interconnection fees.

Rule 18. (1) Interconnection application and engineering review, distribution study, distribution upgrade, and testing and inspection fees shall not exceed the following amounts for projects that that do not participate in the net metering program:

	Application review	Engineering review	Distribution study	Distribution upgrades	Testing & inspection
Category 1	$75	$0	$0	$0	$0
Category 2	$100	$0	Actual or maximum approved by commission	Actual or maximum approved by commission	Actual or maximum approved by commission
Category 3	$150	$0	Actual or maximum approved by commission	Actual or maximum approved by commission	Actual or maximum approved by commission
Category 4	$250	Actual or maximum approved by commission	Actual or maximum approved by commission	Actual or maximum approved by commission	Actual or maximum approved by commission
Category 5	$500	Actual or maximum approved by commission	Actual or maximum approved by commission	Actual or maximum approved by commission	Actual or maximum approved by commission

(2) Net metering application fees for category 1 to category 3 projects that participate in the net metering program shall not exceed $25. Interconnection application and engineering review, distribution study, distribution upgrade, and testing and inspection fees shall not exceed the following amounts for projects that participate in the net metering program:

	Application review	Engineering review	Distribution study	Distribution upgrades	Testing & inspection
Category 1	$75	$0	$0	$0	$0
Category 2	$75	$0	Actual or maximum approved by commission	Actual or maximum approved by commission	$0
Category 3	$75	$0	Actual or maximum approved by commission	Actual or maximum approved by commission	$0

History: 2009 AACS.

R 460.620 Application and interconnection process.

Rule 20. (1) If requested by the applicant before or during the application process, an electric utility shall provide up to 2 hours of technical consultation at no additional cost to the applicant. Consultation may be limited to providing information concerning the utility system operating characteristics and location of system components.

(2) For category 2 and category 3 project applications, the applicant shall provide a one-line diagram that is signed and sealed by a licensed professional engineer, licensed in the State of Michigan or by an electrical contractor licensed by the state of Michigan with the electrical contractor's license number noted on the diagram.

(3) For category 4 and category 5 project applications, the applicant shall provide a one-line diagram that is sealed by a professional engineer licensed by the state of Michigan.

(4) Within 10 working days of receiving a new or revised interconnection application, the electric utility shall notify the applicant whether the interconnection application is complete. If the application is incomplete, the electric utility shall advise the applicant of the deficiency.

(5) Within 10 working days of determining that an application is complete, the electric utility shall complete its application review. For category 1 projects or if the application review shows that an engineering review is not required, the interconnection process shall proceed to subrule (11) of this rule. If the electric utility determines that an engineering review is required, it shall notify the applicant of the need for and cost of that review except for projects that are exempt for engineering review costs under R 460.618. An applicant shall have 6 months in which to request, in writing, that the utility proceed with an engineering review at the cost indicated. The applicant shall provide any changes or updates to the application before the engineering review begins.

(6) Upon receiving applicant's written notification to proceed with the engineering review and applicable payment, the electric utility shall complete an engineering review and notify the applicant of the results within the following time periods:

(a) Category 2 applications, 10 working days.

(b) Category 3 application, 15 working days.

(c) Category 4 application, 25 working days.

(d) Category 5 application, 45 working days.

(7) If the engineering review indicates that a distribution system study is necessary, the electric utility shall provide, in writing, the cost of the study in its engineering review findings, except for projects that are exempt from distribution study costs under R 460.618. The utility shall also provide the applicant with a list of distribution system upgrades that may be required for interconnection with an estimated cost of each system component if such information is reasonably ascertainable upon completion of the engineering study. This estimate shall be provided to assist the applicant in determining whether to proceed with the project and the utility shall not be bound by the estimate. The distribution system study cost is valid for 6 months and the applicant shall have 6 months from receipt of the engineering review findings in which to notify the electric utility to proceed with the distribution system study. Upon receiving written notification to proceed and payment of the applicable fee, the electric utility shall conduct the distribution system study.

(8) The electric utility shall complete the distribution system study and provide study results to the applicant within the following time periods:

(a) Category 2 applications, 10 working days.

(b) Category 3 application, 15 working days.

(c) Category 4 application, 45 working days unless a different time period is mutually agreed upon.

(d) Category 5 application, 60 working days unless a different time period is mutually agreed upon.

(9) The electric utility shall notify the applicant of its completed distribution system study findings along with any distribution system construction or modification costs to be paid by the applicant. The cost may include a contingency fee of not more than 10%. Any payment made in excess of actual costs shall be refunded to the applicant.

(10) If the applicant agrees, in writing, to pay the cost identified in subrule (9) of this rule, the electric utility shall complete the distribution system upgrades and the applicant shall pay for the upgrades and install the project within a mutually agreed upon time period.

(11) The applicant shall notify the electric utility when an installation and any required local code inspection and approval is complete and provide an opportunity for the electric utility to schedule a site visit to witness or perform commissioning tests required by IEEE 1547.1 and inspect the

project. The electric utility may provide a written waiver of its right to visit the site to inspect the project and witness or perform the commissioning tests. The utility shall notify the applicant of its intent to visit the site, inspect the project, witness or perform the commissioning tests, or of its intent to waive inspection within 10 working days after notification that the installation and inspections are complete.

(12) Within 5 working days of the receipt of the completed commissioning test report, the electric utility shall notify the applicant of its acceptance of the commissioning test report and shall notify the applicant of its approval or disapproval of the interconnection. If approved, the electric utility shall also provide to the applicant a written statement of final approval, cost reconciliation, and an interconnection agreement. The applicant shall sign and return the interconnection agreement to the electric utility before beginning parallel operation. If the electric utility does not approve the interconnection, the electric utility shall notify the applicant of the necessary corrective actions required for approval. The applicant, after taking corrective action, may request the electric utility to reconsider the interconnection request.

(13) An applicant for interconnection who receives generation service from an alternative electric supplier and who intends to participate in the alternative electric supplier's net metering program shall provide a copy of the complete interconnection application with the applicant's net metering application to the alternative electric supplier. The alternative electric supplier shall notify the applicant within 10 business days whether the applicant is accepted into the alternative electric supplier's net metering program.

History: 2009 AACS.

R 460.622 Modifications to project.

Rule 22. The applicant shall notify the electric utility of plans for any material modification to the project. The applicant shall provide this notification by submitting a revised uniform application form and application fee along with all supporting materials that are reasonably requested by the electric utility. The applicant may not begin any material modification to the project until the electric utility has approved the revised application, including any necessary engineering review or distribution system study. The application shall be processed in accordance with R 460.620.

History: 2009 AACS.

R 460.624 Insurance.

Rule 24. (1) An applicant interconnecting a category 1 or category 2 project to the distribution system of an electric utility shall not be required by the utility to obtain any additional liability insurance.

(2) An electric utility shall not require an applicant interconnecting a category 1 or category 2 project to name the utility as an additional insured party.

(3) For category 3 to category 5 projects, the applicant shall obtain and maintain general liability insurance of a minimum of $1,000,000.

History: 2009 AACS.

R 460.626 Disconnection.

Rule 26. An electric utility may refuse to connect or may disconnect a project from the distribution system if any of the following conditions apply:

(a) Lack of a fully executed interconnection agreement.

(b) Termination of interconnection by mutual agreement.

(c) Noncompliance with technical or contractual requirements in the interconnection agreement after notice is provided to the applicant of the technical or contractual deficiency.

(d) Distribution system emergency.

(e) Routine maintenance, repairs, and modifications, but only for a reasonable length of time necessary to perform the required work and upon reasonable notice.

History: 2009 AACS.

R 460.628 Easements and rights-of-way.

Rule 28. If an electric utility line extension is required to accommodate an interconnection, the applicant is responsible for the cost of providing or obtaining easements or rights-of-way.

History: 2009 AACS.

PART 3. NET METERING STANDARDS

R 460.640 Application process.

Rule 40. (1) Each electric provider shall file initial net metering program tariff sheets within 30 days of the effective date of these rules or by June 30, 2009, whichever date is sooner.

(2) Each alternative electric supplier shall file an alternative electric supplier net metering program plan within 30 days of the effective date of these rules or by June 30, 2009, whichever date is sooner.

(3) Electric providers and alternative electric suppliers shall file annual net metering program reports in a form to be determined by the commission, not later than March 31 of each year.

(4) Each electric provider shall maintain records of all applications and up-to-date records of all active eligible electric generators located within its service area. Each alternative electric supplier shall maintain records of all applications and up-to-date records of all eligible electric generators participating in its net metering program.

(5) Selection of customers for participation in the net metering program shall be based on the order in which the applications for the net metering program are received by the electric provider or alternative electric supplier.

(6) An electric provider or alternative electric supplier shall not refuse to provide or discontinue electric service to a customer solely for the reason that the customer participates in the net metering program.

(7) Net metering programs provided by electric providers and alternative electric suppliers shall limit each applicant to generation capacity designed to meet the customer's electric needs.

(a) At the customer's option, the generation capacity shall be determined by 1 of the following methods:

(i) Aggregate nameplate capacity of the generator(s).

(ii) An estimate of the expected annual kWh output of the generator(s) determined in a manner approved by the commission and specified on the electric provider's net metering tariff sheet or in the alternative electric supplier's net metering program plan.

(b) At the customer's option, the customer's electric needs shall be determined by 1 of the following methods:

(i) The customer's annual energy usage, measured in kWh, during the previous 12-month period.

(ii) For a customer with metered demand data available, the maximum integrated hourly demand measured in kW during the previous 12-month period.

(iii) In cases where there is no data, incomplete data, or incorrect data for the customer's energy usage or the customer is making changes on-site that will affect total usage, the electric provider or alternative electric supplier and the customer shall mutually agree on a method to determine the customer's electric needs.

History: 2009 AACS.

R 460.642 Net metering application and fees.

Rule 42. (1) A uniform net metering application form and process shall be used by all electric providers and alternative electric suppliers. The uniform net metering application form shall be approved by the commission.

(2) Net metering application processing for electric providers shall be conducted in the following manner:

(a) An applicant applying for net metering shall at the same time apply for an electric provider interconnection or shall indicate on the net metering application that the applicant has applied for interconnection with the electric provider.

(b) If an applicant has an executed interconnection agreement at the time of filing the net metering application, the electric provider shall have 10 working days to complete its review of the net metering application. All other net metering applications shall be processed within 10 days after the applicant's interconnection agreement is executed.

(c) As part of the review, the electric provider shall determine whether the appropriate meter(s) are installed for net metering.

(d) After completing the review, the electric provider shall notify the customer whether the net metering application is approved or disapproved.

(e) If an applicant approved for net metering requires new or additional meters, the electric provider shall make arrangements with the customer to install the meters at a mutually agreed upon time.

(f) Within 10 working days after the necessary meters are installed, the electric provider shall complete changes to the applicant's account to permit net metering credit to be applied to the account.

(3) Net metering application processing for alternative electric suppliers shall be conducted in the following manner:

(a) A customer receiving retail electric service from an alternative electric supplier shall submit the completed net metering application form to the alternative electric supplier and a copy of the form to the electric provider that provides distribution services.

(b) Within the time periods in subrule (2) of this rule, the electric provider shall determine whether the appropriate meter(s) are installed for net metering and, if necessary, contact the customer to arrange for meter installation.

(c) The electric provider shall notify the alternative electric supplier when the interconnection agreement for the eligible generator is executed and installation of the appropriate meter(s) is completed.

(d) Within 10 working days of notification, the alternative electric supplier shall complete changes to the applicant's account to permit net metering credit to be applied to the account.

(4) If a net metering application is disapproved, the electric provider or alternative electric supplier shall notify the customer of the reasons for the disapproval. The customer shall have an opportunity to correct the net metering application. If the application is withdrawn by the customer, the electric provider or alternative electric supplier shall refund the net metering application fee to the customer.

(5) Customers participating in the net metering program under the commission's March 29, 2005 order in case no. U-14346 shall be transferred to the statewide net metering program established under these rules within 30 days of commission approval of the electric provider's net metering tariff. Any remaining net excess generation credits shall be credited to the customer in accordance with R 460.652. Additional application, interconnection, installation fees, or system requirements are waived for customers who transfer to the net metering program authorized by these rules.

(6) The net metering application fee for electric providers and alternative electric suppliers shall not exceed $25. The fee shall be specified on the electric provider's net metering tariff sheet or in the alternative electric supplier's net metering program plan. The combined total of net metering application fees and interconnection application review fees shall not exceed $100.

History: 2009 AACS.

R 460.644 Net metering program size.

Rule 44. If an electric provider or alternative electric supplier reaches the net metering program size limits in section 173(2) of 2008 PA 295, MCL 460.1173(2), the electric provider or alternative electric supplier shall provide notice to the commission and to all customers that its net metering program is closed and that no new applications will be accepted. All completed applications that are pending at the time the net metering program closes shall be processed and the applicants shall be allowed to participate in the net metering program.

History: 2009 AACS.

R 460.646 Generation and net metering equipment.

Rule 46. (1) New generation and net metering equipment and its installation must meet all current local and state electric and construction code requirements. Any equipment that is certified by a nationally recognized testing laboratory to IEEE 1547.1 testing standards and in compliance with UL 1741 scope 1.1A and installed in compliance with this part is considered eligible equipment. Within the time provided by the commission in R 460.620 and consistent with good provider practice, protection of electric provider workers, protection of electric provider equipment, and protection of the general public, an electric provider may study, confirm, and ensure that an eligible electric generator installation at the customer's site meets the IEEE 1547 anti-islanding requirements.

(2) Customers with executed interconnection agreements on the effective date of these rules shall be considered eligible generators provided the customer's project complies with R 460.601a(t) and R 460.640(7).

History: 2009 AACS.

R 460.648 Meters.

Rule 48. (1) For a customer with a generation system capable of generating 20 kW or less, the provider may determine the customer's net usage using the customer's existing meter if it is capable of reverse registration or may install a single meter with separate registers measuring power flow in each direction. If the provider uses the customer's existing meter, the provider shall test and calibrate the meter to assure accuracy in both directions. If the customer's meter is not capable of reverse registration and if meter upgrades or modifications are required, the following apply:

(a) An electric provider serving over 1,000,000 customers in this state shall provide a meter or meters capable of measuring the flow of energy in both directions at no additional charge to the net metering customer. The cost of the meter(s) or meter modification shall be considered a cost of operating the net metering program.

(b) An electric provider serving fewer than 1,000,000 customers in this state shall provide a meter or meters capable of measuring the flow of energy in both directions to customers at cost. Only the incremental cost above that for meter(s) provided by the electric provider to similarly situated nongenerating customers shall be paid by the eligible customer.

(c) An electric provider shall provide a generator meter, if requested by the customer, at cost.

(2) For a customer with a generation system capable of generating more than 20 kW and up to 150 kW, the provider shall utilize a meter or meters capable of measuring the flow of energy in both directions and the generator output. If meter upgrades are necessary to provide such functionality, the following applies:

(a) An electric provider serving over 1,000,000 customers in this state shall provide a meter or meters capable of measuring the flow of energy in both directions at no additional charge to a net metering customer. If the provider provides the upgraded meter(s) at no additional charge to the customer, the cost of the meter(s) shall be considered a cost of operating the net metering program.

(b) An electric provider serving fewer than 1,000,000 customers in this state shall provide a meter or meters capable of measuring the flow of energy in both directions to customers at cost. Only the incremental cost above that for meters provided by the electric provider to similarly situated nongenerating customers shall be paid by the eligible customer.

(c) An electric provider shall provide a generator meter. The cost of the meter shall be considered a cost of operating a net metering program.

(3) For a customer with a generation system capable of generating more than 150 kW, the provider shall utilize a meter or meters capable of measuring the flow of energy in both directions and the generator output. If meter upgrades are necessary to provide such functionality the customer shall pay the cost of providing any new meters.

(4) An electric provider deploying advanced metering infrastructure shall not charge the cost of advanced meters to a net metering customer or the net metering program.

History: 2009 AACS.

R 460.650 Billing and credit for true net metering customers.

Rule 50. (1) Net metering customers with a system capable of generating 20 kW or less shall qualify for true net metering. For customers who qualify for true net metering, the net of the bidirectional flow of kWh across the customer interconnection with the utility distribution system during the billing period or during each time-of-use pricing period within the billing period, including excess generation, shall be credited at the full retail rate.

(2) The credit for excess generation, if any, shall appear on the next bill. Any excess credit not used to offset current charges shall be carried forward for use in subsequent billing periods.

(3) If a customer leaves the provider's system or service is terminated for any reason, an electric provider or alternative electric supplier shall refund to the customer the remaining credit amount.

History: 2009 AACS.

R 460.652 Billing and credit for modified net metering customers.

Rule 52. (1) Net metering customers with a system capable of generating more than 20 kW qualify for modified net metering. For customers who qualify for modified net metering, a negative net metered quantity during the billing period or during each time-of-use pricing period within the billing period reflects net excess generation for which the customer is entitled to receive credit. Standby charges for modified net metering customers on an energy rate schedule shall equal the retail distribution charge applied to the imputed customer usage during the billing period. The imputed customer usage is calculated as the sum of the metered on-site generation and the net of the bidirectional flow of power across the customer interconnection during the billing period. The commission shall establish standby charges for modified net metering customers on demand-based rate schedules that provide an equivalent contribution to provider system costs. Standby charges shall not be applied to customers with systems capable of generating 150 kW or less.

(2) The credit for excess generation shall appear on the next bill. Any excess kWh not used to offset current charges shall be carried forward for use in subsequent billing periods.

(3) A customer qualifying for modified net metering shall not have net metering credits applied to distribution charges.

(4) If a customer leaves the provider's system or service is terminated for any reason, an electric provider or alternative electric supplier shall refund to the customer the remaining credit amount.

(5) The credit per kWh for kWh delivered into the provider's distribution system shall be 1 of the following as determined by the commission:

(a) The monthly average real-time locational marginal price for energy at the commercial pricing node within the electric provider's distribution service territory, or for a net metering customer on a time-based rate schedule, the monthly average real-time locational marginal price for energy at the commercial pricing node within the electric provider's distribution service territory during the time-of-use pricing period.

(b) The electric provider or alternative electric supplier's power supply component of the full retail rate during the billing period or time-of-use pricing period.

History: 2009 AACS.

R 460.654 Renewable energy credits.

Rule 54. (1) An eligible electric generator shall own any renewable energy credits granted for electricity generated under the net metering program.

(2) An electric provider may purchase or trade renewable energy certificates from a net metering customer if agreed to by the net metering customer.

(3) The commission may develop a program for aggregating renewable energy certificates from net metering customers.

History: 2009 AACS.

R 460.656 Penalties.

Rule 56. Upon a complaint or on the commission's own motion, if the commission finds after notice and hearing that an electric provider has not complied with a provision or order issued under part 5 of 2008 PA 295, the commission shall order remedies and penalties as necessary to make whole a customer or other person who has suffered damages as a result of the violation.

History: 2009 AACS.