

MidAmerican Energy Company

**MIDAMERICAN SMALL GENERATOR  
INTERCONNECTION PROCEDURES (MEC-SGIP) FOR MIDAMERICAN  
JURISDICTONAL GENERATION FACILITIES (RATED AT 501 – 20,000 kW), AND  
LINE / END USER INTERCONNECTIONS (RATED AT 4.16 – 99 KV) TO THE  
MIDAMERICAN ELECTRIC SYSTEM**

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**Section 1. Application**

**1.1 Applicability**

**1.1.1** A request to interconnect a certified Small Generating Facility or Net Billed Facility no larger than 500 kW shall be evaluated under a separate MidAmerican process. A request to interconnect a certified Small Generating Facility larger than 500 kW but less than 2,000 kW (2 MW) shall be evaluated under the section 2 Fast Track Process. A request to interconnect a Small Generating Facility larger than 2,000 kW but no larger than 20 MW or a Small Generating Facility that does not pass the Fast Track Process shall be evaluated under the section 3 Normal Study Process.

**1.1.2** Excess energy production from generators in Iowa with sales to MidAmerican rated at 500 kVA and less are governed by a Net Billing Tariff or Qualifying Facility Tariff. Iowa generators may choose between the Net Billing and Qualifying Facility tariffs. For excess energy production from generators in Iowa with sales to MidAmerican rated greater than 500 kVA, a separate negotiated power contract is required. The interconnection processes are summarized below:

1.1.2.1 For an installation rated from 0 – 500 kW. A separate, independent MidAmerican process applies. The interconnection application contained in Appendix 5 can be used to supply MidAmerican with an interconnection application and engineering data. For a contract and interconnection requirements contact the MidAmerican Electric System Planning Department

Terry Harbour  
MidAmerican Electric System Planning Department.  
106 E 2<sup>nd</sup> Street  
Davenport, IA. 52801  
Telephone, 563-333-8329

1.1.2.2 For an installation rated from 501 – 2,000 kW (2 MW). The interconnection application in Appendix 2 is used along with the Fast Track interconnection screens in

Section 2. Technical interconnection requirements are available upon request.

1.1.2.3 For an installation rated at 2,001 kW and greater, the interconnection application in Appendix 2 is used along with the normal interconnection screening process in Section 3. Technical interconnection requirements are available upon request.

**1.1.3** Excess energy production from generators in Illinois are governed by the MidAmerican Rate 57. Generators in Illinois may need to become certified by the Illinois Commerce Commission (ICC) to sell power in Illinois. For direct power sales to a customer in MidAmerican's Illinois service territory using facilities owned by the generator only (no use of MidAmerican facilities), a generation facility must:

1.1.3.1 Be certified by the Illinois Commerce Commission (ICC) to sell power in Illinois.

1.1.3.2 Register with MidAmerican to deliver power to a customer in MidAmerican's Illinois service territory under the MidAmerican Delivery Service Tariff (DST).

For power sales to an unbundled electric retail customer in MidAmerican's Illinois Service Territory using MidAmerican electric facilities and the MidAmerican Delivery Service Tariff (DST) a generator must:

1.1.3.3 Be certified by the Illinois Commerce Commission (ICC) to sell power in Illinois.

1.1.3.4 Register with MidAmerican to deliver power to a MidAmerican customer under the MidAmerican DST. (See the attached Supplier Guide in Attachment 7 of the SGIA)

1.1.3.5 As an Alternate Retail Electric Supplier (ARES) sign a DST Service Agreement.

1.1.3.6 Become a transmission customer under MidAmerican's Open Access Transmission Tariff (OATT).

1.1.3.7 Submit a Direct Access Service Request (DASR) for service to the unbundled electric retail customer.

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Power sales to an unbundled electric retail customer in MidAmerican's Illinois Service Territory using MidAmerican electric facilities, the MidAmerican Delivery Services Tariff, and the MidAmerican OATT, a generation facility must:

- 1.1.3.8 Be certified by the Illinois Commerce Commission (ICC) to sell power in Illinois.
  - 1.1.3.9 Register with MidAmerican to deliver power to a MidAmerican customer under the MidAmerican DST.
  - 1.1.3.10 As an ARES sign a DST Service Agreement
  - 1.1.3.11 Become a transmission customer under MidAmerican's OATT.
  - 1.1.3.12 Submit a DASR for service to the unbundled electric retail customer.
- 1.1.4** Excess energy production from generators in South Dakota with sales to MidAmerican with a design capacity of 100 kW and less are governed by the MidAmerican Tariff Rider No 54. Excess energy production from generators in South Dakota with sales to MidAmerican with a design capacity greater than 100 kW a separate negotiated power contract is required.
- 1.1.5** Capitalized terms used herein shall have the meanings specified in the Glossary of Terms in Attachment 1 or the body of these procedures.
- 1.1.6** Neither these procedures nor the requirements included hereunder apply to Small Generating Facilities interconnected or approved for interconnection prior to the latest revision of this document as printed on the cover page.
- 1.1.7** Prior to submitting its Interconnection Request (Appendix 2), the Interconnection Customer may ask the Transmission Provider's interconnection contact employee or office whether the proposed interconnection is subject to these procedures. The Transmission Provider shall respond within thirty (30) Calendar Days.
- 1.1.8** Infrastructure security of electric system equipment and operations and control hardware and software is essential to ensure day-to-day reliability and operational security. MidAmerican expects all Transmission Providers, market participants, and Interconnection Customers interconnected with electric systems to comply with the

recommendations offered by the President's Critical Infrastructure Protection Board and best practice recommendations from the electric reliability authority. All public utilities are expected to meet basic standards for electric system infrastructure and operational security, including physical, operational, and cyber-security practices.

**1.1.9** References in these procedures to the interconnection agreement are to the MidAmerican Small Generator Interconnection Agreement (MSGIA).

**1.2 Pre-Application**

The Transmission Provider shall designate an employee or office from which information on the application process and on an Affected System can be obtained through informal requests from the Interconnection Customer presenting a proposed project for a specific site.

**1.3 Interconnection Request**

The Interconnection Customer shall submit its Interconnection Request to the Transmission Provider, together with the processing fee or deposit specified in the Interconnection Request. The Interconnection Request shall be date- and time-stamped upon receipt. The original date- and time-stamp applied to the Interconnection Request at the time of its original submission shall be accepted as the qualifying date and time-stamp for the purposes of any timetable in these procedures. The Interconnection Customer shall be notified of receipt by the Transmission Provider within thirty (30) Calendar Days of receiving the Interconnection Request. The Transmission Provider shall notify the Interconnection Customer within thirty (30) Calendar Days of the receipt of the Interconnection Request as to whether the Interconnection Request is complete or incomplete. If the Interconnection Request is incomplete, the Transmission Provider shall provide along with the notice that the Interconnection Request is incomplete, a written list detailing all information that must be provided to complete the Interconnection Request. The Interconnection Customer will have thirty (30) Calendar Days after receipt of the notice to submit the listed information or to request an extension of time to provide such information. If the Interconnection Customer does not provide the listed information or a request for an extension of time within the deadline, the Interconnection Request will be deemed withdrawn. An Interconnection Request will be deemed complete upon submission of the listed information to the Transmission Provider.

**1.4 Modification of the Interconnection Request**

Any modification to machine data or equipment configuration or to the interconnection site of the Small Generating Facility not agreed to in writing by the Transmission Provider and the Interconnection Customer may be deemed a withdrawal of the Interconnection Request and may require submission of a new Interconnection Request, unless proper notification of each Party by the other and a reasonable time to cure the problems created by the changes are undertaken.

**1.5 Site Control**

Documentation of site control must be submitted with the Interconnection Request. Site control may be demonstrated through:

- 1.5.1** Ownership of, a leasehold interest in, or a right to develop a site for the purpose of constructing the Small Generating Facility;
- 1.5.2** An option to purchase or acquire a leasehold site for such purpose;  
or
- 1.5.3** An exclusivity or other business relationship between the Interconnection Customer and the entity having the right to sell, lease, or grant the Interconnection Customer the right to possess or occupy a site for such purpose.

**1.6 Queue Position**

The Transmission Provider shall assign a Queue Position based upon the date- and time-stamp of the Interconnection Request. The Queue Position of each Interconnection Request will be used to determine the cost responsibility for the Upgrades necessary to accommodate the interconnection. The Transmission Provider shall maintain a single queue per geographic region. At the Transmission Provider's option, Interconnection Requests may be studied serially or in clusters for the purpose of the system impact study.

**1.7 Reserved for Future Use**

**Section 2. Fast Track Process (For Units Rated from 501 – 2,000 kW)**

**2.1 Applicability**

The Fast Track Process is available to an Interconnection Customer proposing to interconnect its Small Generating Facility with the



Transmission Provider's Transmission System if the Small Generating Facility is larger than 500 kW but less than 2,000 kW and if the Interconnection Customer's proposed Small Generating Facility meets the codes, standards, and certification requirements of Appendices 3 and 4 of these procedures, or the Transmission Provider has reviewed the design or tested the proposed Small Generating Facility and is satisfied that it is safe to operate.

## **2.2 Initial Review**

Within thirty (30) Calendar Days after the Transmission Provider notifies the Interconnection Customer it has received a complete Interconnection Request, the Transmission Provider shall perform an initial review using the screens set forth below, shall notify the Interconnection Customer of the results, and include with the notification copies of the analysis and data underlying the Transmission Provider's determinations under the screens.

### **2.2.1 Screens**

**2.2.1.1** The proposed Small Generating Facility's Point of Interconnection must be on a portion of the Transmission Provider's Distribution System that is subject to the Tariff.

**2.2.1.2** For interconnection of a proposed Small Generating Facility to a radial distribution circuit, the aggregated generation, including the proposed Small Generating Facility, on the circuit shall not exceed 15 % of the line section annual peak load as most recently measured at the substation. A line section is that portion of a Transmission Provider's electric system connected to a customer bounded by automatic sectionalizing devices or the end of the distribution line.

**2.2.1.3** For interconnection of a proposed Small Generating Facility to the load side of spot network protectors, the proposed Small Generating Facility must utilize an inverter-based equipment package and, together with the aggregated other inverter-based generation, shall not exceed the smaller of 5 % of a spot network's maximum load or 50 kW<sup>1</sup>. MidAmerican network projectors shall be

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<sup>1</sup> A spot Network is a type of distribution system found within modern commercial

rated appropriately for the secondary fault capability including generation and the vault transformer size. This includes situations where generation may be installed on grid or spot networks.

**2.2.1.4** The proposed Small Generating Facility, in aggregation with other generation on the distribution circuit, shall not contribute more than 10 % to the distribution circuit's maximum fault current at the point on the high voltage (primary) level nearest the proposed point of change of ownership.

**2.2.1.5** The proposed Small Generating Facility, in aggregate with other generation on the distribution circuit, shall not cause any distribution protective devices and equipment (including, but not limited to, substation breakers, fuse cutouts, and line reclosers), or Interconnection Customer equipment on the system to exceed 87.5 % of the short circuit interrupting capability; nor shall the interconnection proposed for a circuit that already exceeds 87.5 % of the short circuit interrupting capability.

**2.2.1.6** Using the table below, determine the type of interconnection to a primary distribution line. This screen includes a review of the type of electrical service provided to the Interconnecting Customer, including line configuration and the transformer connection to limit the potential for creating over-voltages on the Transmission Provider's electric power system due to a loss of ground during the operating time of any anti-islanding function.

<b>Primary Distribution Line Type</b>	<b>Type of Interconnection to Primary Distribution Line</b>	<b>Result/Criteria</b>
Three-phase, three wire	3-phase or single phase, phase-to-phase	Pass screen
Three-phase, four wire	Effectively-grounded 3 phase or Single-phase,	Pass screen

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buildings to provide high reliability of service to a single customer. (Standard Handbook for Electrical Engineers, 11<sup>th</sup> edition, Donald Fink, McGraw Hill Book Company)

	line-to-neutral	
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- 2.2.1.7** If the proposed Small Generating Facility is to be interconnected on single-phase shared secondary, the aggregate generation capacity on the shared secondary, including the proposed Small Generating Facility, shall not exceed 20 kW.
- 2.2.1.8** If the proposed Small Generating Facility is single-phase and is to be interconnected on a center tap neutral of a 240 volt service, its addition shall not create an imbalance between the two sides of the 240 volt service of more than 20 % of the nameplate rating of the service transformer.
- 2.2.1.9** The Small Generating Facility, in aggregate with other generation interconnected to the transmission side of a substation transformer feeding the circuit where the Small Generating Facility proposes to interconnect shall not exceed 10 MW in an area where there are known, or posted, transient stability limitations to generating units located in the general electrical vicinity (e.g., three or four transmission busses from the point of interconnection).
- 2.2.1.10** No construction of facilities by the Transmission Provider on its own system shall be required to accommodate the Small Generating Facility.
- 2.2.2** If the proposed interconnection passes the screens, the Interconnection Request shall be approved and the Transmission Provider will provide the Interconnection Customer an executable interconnection agreement within thirty (30) Calendar Days after the determination.
- 2.2.3** If the proposed interconnection fails the screens, but the Transmission Provider determines that the Small Generating Facility may nevertheless be interconnected consistent with safety, reliability, and power quality standards, the Transmission Provider shall provide the Interconnection Customer an executable interconnection agreement within thirty (30) Calendar Days after the determination.

**2.2.4** If the proposed interconnection fails the screens, but the Transmission Provider does not or cannot determine from the initial review that the Small Generating Facility may nevertheless be interconnected consistent with safety, reliability, and power quality standards unless the Interconnection Customer is willing to consider minor modifications or further study, the Transmission Provider shall provide the Interconnection Customer with the opportunity to attend a customer options meeting.

**2.3 Customer Options Meeting**

If the Transmission Provider determines the Interconnection Request cannot be approved without minor modifications at minimal cost; or a supplemental study or other additional studies or actions; or at significant cost to address safety, reliability, or power quality problems, within the thirty (30) Calendar Day period after the determination, the Transmission Provider shall notify the Interconnection Customer and provide copies of all data and analyses underlying its conclusion. Within thirty (30) Calendar Days of the Transmission Provider's determination, the Transmission Provider shall offer to convene a customer options meeting with the Transmission Provider to review possible Interconnection Customer facility modifications or the screen analysis and related results, to determine what further steps are needed to permit the Small Generating Facility to be connected safely and reliably. At the time of notification of the Transmission Provider's determination, or at the customer options meeting, the Transmission Provider shall:

- 2.3.1** Offer to perform facility modifications or minor modifications to the Transmission Provider's electric system (e.g., changing meters, fuses, relay settings) and provide a non-binding good faith estimate of the limited cost to make such modifications to the Transmission Provider's electric system; or
- 2.3.2** Offer to perform a supplemental review if the Transmission Provider concludes that the supplemental review might determine that the Small Generating Facility could continue to qualify for interconnection pursuant to the Fast Track Process, and provide a non-binding good faith estimate of the costs of such review; or
- 2.3.3** Obtain the Interconnection Customer's agreement to continue evaluating the Interconnection Request under the section 3 Study Process.

**2.4 Supplemental Review**

If the Interconnection Customer agrees to a supplemental review, the Interconnection Customer shall agree in writing within thirty (30) Business Days of the offer, and submit a deposit for the estimated costs. The Interconnection Customer shall be responsible for the Transmission Provider's actual costs for conducting the supplemental review. The Interconnection Customer must pay any review costs that exceed the deposit within thirty (30) Business Days of receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced costs, the Transmission Provider will return such excess within thirty (30) Calendar Days of the invoice without interest.

**2.4.1** Within sixty (60) Calendar Days following receipt of the deposit for a supplemental review, the Transmission Provider will determine if the Small Generating Facility can be interconnected safely and reliably.

**2.4.1.1** If so, the Transmission Provider shall forward an executable interconnection agreement to the Interconnection Customer within thirty (30) Calendar Days.

**2.4.1.2** If so, and Interconnection Customer facility modifications are required to allow the Small Generating Facility to be interconnected consistent with safety, reliability, and power quality standards under these procedures, the Transmission Provider shall forward an executable interconnection agreement to the Interconnection Customer within thirty (30) Calendar Days after confirmation that the Interconnection Customer has agreed to make the necessary changes at the Interconnection Customer's cost.

**2.4.1.3** If so, and minor modifications to the Transmission Provider's electric system are required to allow the Small Generating Facility to be interconnected consistent with safety, reliability, and power quality standards under the Fast Track Process, the Transmission Provider shall forward an executable interconnection agreement to the Interconnection Customer within thirty (30) Calendar Days that requires the Interconnection Customer to pay

the costs of such system modifications prior to interconnection.

- 2.4.1.4** If not, the Interconnection Request will continue to be evaluated under the section 3 Study Process.

**Section 3. Study Process (For Those Units Rated Greater than 2,000 kW (2MW) or did not Pass the Section 2 Fast Track Screens)**

**3.1 Applicability**

The Study Process shall be used by an Interconnection Customer proposing to interconnect its Small Generating Facility with the Transmission Provider's Transmission System if the Small Generating Facility (1) is larger than 2 MW but no larger than 20 MW, (2) is not certified, or (3) is certified but did not pass the Fast Track Process.

**3.2 Scoping Meeting**

**3.2.1** A scoping meeting will be held within thirty (30) Calendar Days after the Interconnection Request is deemed complete, or as otherwise mutually agreed to by the Parties. The Transmission Provider and the Interconnection Customer will bring to the meeting personnel, including system engineers and other resources as may be reasonably required to accomplish the purpose of the meeting.

**3.2.2** The purpose of the scoping meeting is to discuss the Interconnection Request and review existing studies relevant to the Interconnection Request. The Parties shall further discuss whether the Transmission Provider should perform a feasibility study or proceed directly to a system impact study, or a facilities study, or an interconnection agreement. If the Parties agree that a feasibility study should be performed, the Transmission Provider shall provide the Interconnection Customer, as soon as possible, but not later than thirty (30) Calendar Days after the scoping meeting, a feasibility study agreement (Appendix 6) including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study.

**3.2.3** The scoping meeting may be omitted by mutual agreement. In order to remain in consideration for interconnection, an Interconnection Customer who has requested a feasibility study

must return the executed feasibility study agreement within thirty (30) Calendar Days. If the Parties agree not to perform a feasibility study, the Transmission Provider shall provide the Interconnection Customer, no later than thirty (30) Calendar Days after the scoping meeting, a system impact study agreement (Appendix 7) including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study.

### **3.3 Feasibility Study**

- 3.3.1** The feasibility study shall identify any potential adverse system impacts that would result from the interconnection of the Small Generating Facility.
- 3.3.2** A deposit of the lesser of 50 percent of the good faith estimated feasibility study costs or earnest money of \$1,000 may be required from the Interconnection Customer.
- 3.3.3** The scope of and cost responsibilities for the feasibility study are described in the attached feasibility study agreement.
- 3.3.4** If the feasibility study shows no potential for adverse system impacts, the Transmission Provider shall send the Interconnection Customer a facilities study agreement, including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study. If no additional facilities are required, the Transmission Provider shall send the Interconnection Customer an executable interconnection agreement within thirty (30) Calendar Days.
- 3.3.5** If the feasibility study shows the potential for adverse system impacts, the review process shall proceed to the appropriate system impact study(s).

### **3.4 System Impact Study**

- 3.4.1** A system impact study shall identify and detail the electric system impacts that would result if the proposed Small Generating Facility were interconnected without project modifications or electric system modifications, focusing on the adverse system impacts identified in the feasibility study, or to study potential impacts, including but not limited to those identified in the scoping meeting. A system impact

study shall evaluate the impact of the proposed interconnection on the reliability of the electric system.

- 3.4.2** If no transmission system impact study is required, but potential electric power Distribution System adverse system impacts are identified in the scoping meeting or shown in the feasibility study, a distribution system impact study must be performed. The Transmission Provider shall send the Interconnection Customer a distribution system impact study agreement within thirty (30) Calendar Days of transmittal of the feasibility study report, including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study, or following the scoping meeting if no feasibility study is to be performed.
- 3.4.3** In instances where the feasibility study or the distribution system impact study shows potential for transmission system adverse system impacts, within thirty (30) Calendar Days following transmittal of the feasibility study report, the Transmission Provider shall send the Interconnection Customer a transmission system impact study agreement, including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study, if such a study is required.
- 3.4.4** If a transmission system impact study is not required, but electric power Distribution System adverse system impacts are shown by the feasibility study to be possible and no distribution system impact study has been conducted, the Transmission Provider shall send the Interconnection Customer a distribution system impact study agreement.
- 3.4.5** If the feasibility study shows no potential for transmission system or Distribution System adverse system impacts, the Transmission Provider shall send the Interconnection Customer either a facilities study agreement (Attachment 8), including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study, or an executable interconnection agreement, as applicable.
- 3.4.6** In order to remain under consideration for interconnection, the Interconnection Customer must return executed system impact study agreements, if applicable, within thirty (30) Calendar Days.



- 3.4.7** A deposit of the good faith estimated costs for each system impact study may be required from the Interconnection Customer.
- 3.4.8** The scope of and cost responsibilities for a system impact study are described in the attached system impact study agreement.

### **3.5 Facilities Study**

- 3.5.1** Once the required system impact study(s) is completed, a system impact study report shall be prepared and transmitted to the Interconnection Customer along with a facilities study agreement within thirty (30) Calendar Days, including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the facilities study. In the case where one or both impact studies are determined to be unnecessary, a notice of the fact shall be transmitted to the Interconnection Customer within the same timeframe.
- 3.5.2** In order to remain under consideration for interconnection, or, as appropriate, in the Transmission Provider's interconnection queue, the Interconnection Customer must return the executed facilities study agreement or a request for an extension of time within thirty (30) Calendar Days.
- 3.5.3** The facilities study shall specify and estimate the cost of the equipment, engineering, procurement and construction work (including overheads) needed to implement the conclusions of the system impact study(s).
- 3.5.4** Design for any required Interconnection Facilities and/or Upgrades shall be performed under the facilities study agreement. The Transmission Provider may contract with consultants to perform activities required under the facilities study agreement. The Interconnection Customer and the Transmission Provider may agree to allow the Interconnection Customer to separately arrange for the design of some of the Interconnection Facilities. In such cases, facilities design will be reviewed and/or modified prior to acceptance by the Transmission Provider, under the provisions of the facilities study agreement. If the Parties agree to separately arrange for design and construction, and provided security and

confidentiality requirements can be met, the Transmission Provider shall make sufficient information available to the Interconnection Customer in accordance with confidentiality and critical infrastructure requirements to permit the Interconnection Customer to obtain an independent design and cost estimate for any necessary facilities.

- 3.5.5** A deposit of the good faith estimated costs for the facilities study may be required from the Interconnection Customer.
- 3.5.6** The scope of and cost responsibilities for the facilities study are described in the attached facilities study agreement.
- 3.5.7** Upon completion of the facilities study, and with the agreement of the Interconnection Customer to pay for Interconnection Facilities and Upgrades identified in the facilities study, the Transmission Provider shall provide the Interconnection Customer an executable interconnection agreement within thirty (30) Calendar Days.

#### **Section 4. Provisions that Apply to All Interconnection Requests**

##### **4.1 Reasonable Efforts**

The Transmission Provider shall make reasonable efforts to meet all time frames provided in these procedures unless the Transmission Provider and the Interconnection Customer agree to a different schedule. If the Transmission Provider cannot meet a deadline provided herein, it shall notify the Interconnection Customer and provide an estimated time by which it will complete the applicable interconnection procedure.

##### **4.2 Disputes**

**4.2.1** The Parties agree to attempt to resolve all disputes arising out of the interconnection process according to the provisions of this article.

**4.2.2** In the event of a dispute, either Party shall provide the other Party with a written Notice of Dispute. Such Notice shall describe in detail the nature of the dispute.

**4.2.3** Reserved for future use.

**4.2.4** Reserved for future use.

**4.2.5** Each Party agrees to conduct all negotiations in good faith.

**4.2.6** Reserved for future use.

**4.3 Interconnection Metering**

Any metering necessitated by the use of the Small Generating Facility shall be installed at the Interconnection Customer's expense in accordance with MidAmerican, state, or local regulatory requirements.

**4.4 Commissioning**

Commissioning tests of the Interconnection Customer's installed equipment shall be performed pursuant to applicable codes and standards. The Transmission Provider must be given at least five (5) Calendar Days written notice, or as otherwise mutually agreed to by the Parties, of the tests and may be present to witness the commissioning tests.

**4.5. Confidentiality**

**4.5.1** Confidential information shall mean any confidential and/or proprietary information provided by one Party to the other Party that is clearly marked or otherwise designated "Confidential." For purposes of this Agreement all design, operating specifications, and metering data provided by the Interconnection Customer shall be deemed confidential information regardless of whether it is clearly marked or otherwise designated as such.

**4.5.2** Confidential Information does not include information previously in the public domain, required to be publicly submitted or divulged by Governmental Authorities (after notice to the other Party and after exhausting any opportunity to oppose such publication or release), or necessary to be divulged in an action to enforce this Agreement. Each Party receiving Confidential Information shall hold such information in confidence and shall not disclose it to any third party nor to the public without the prior written authorization from the Party providing that information, except to fulfill obligations under this Agreement, or to fulfill legal or regulatory requirements.

**4.5.2.1** Each Party shall employ at least the same standard of care to protect Confidential Information obtained from the other Party as it employs to protect its own Confidential Information.

**4.5.2.2** Each Party is entitled to equitable relief, by injunction or otherwise, to enforce its rights under this provision to prevent the release of Confidential Information without bond or proof of damages, and may seek other remedies available at law or in equity for breach of this provision.

**4.5.3** During the course of an investigation or otherwise, requests for information from one of the Parties that is otherwise required to be maintained in confidence pursuant to this Agreement shall be treated as confidential and non-public.

**4.6 Comparability**

The Transmission Provider shall receive, process and analyze all Interconnection Requests in a timely manner as set forth in this document. The Transmission Provider shall use the same reasonable efforts in processing and analyzing Interconnection Requests from all Interconnection Customers, whether the Small Generating Facility is owned or operated by the Transmission Provider, its subsidiaries or affiliates, or others.

**4.7 Record Retention**

The Transmission Provider shall maintain for records for three years.

**4.8 Interconnection Agreement**

After receiving an interconnection agreement from the Transmission Provider, the Interconnection Customer shall have thirty (30) Business Days or another mutually agreeable timeframe to sign and return the interconnection agreement. If the Interconnection Customer does not sign the interconnection agreement, or ask that it be filed unexecuted by the Transmission Provider within thirty (30) Business Days, the Interconnection Request shall be deemed withdrawn. After the interconnection agreement is signed by the Parties, the interconnection of the Small Generating Facility shall proceed under the provisions of the interconnection agreement.

**4.9 Coordination with Affected Systems**

The Transmission Provider shall coordinate the conduct of any studies required to determine the impact of the Interconnection Request on Affected Systems with Affected System operators and, if possible, include those results (if available) in its applicable interconnection study within the time frame specified in these procedures. The Transmission Provider will include such Affected System operators in all meetings held with the Interconnection Customer as required by these procedures. The Interconnection Customer will cooperate with the Transmission Provider in all matters related to the conduct of studies and the determination of modifications to Affected Systems. A Transmission Provider which may be an Affected System shall cooperate with the Transmission Provider with whom interconnection has been requested in all matters related to the conduct of studies and the determination of modifications to Affected Systems.

#### **4.10 Capacity of the Small Generating Facility**

- 4.10.1** If the Interconnection Request is for an increase in capacity for an existing Small Generating Facility, the Interconnection Request shall be evaluated on the basis of the new total capacity of the Small Generating Facility.
- 4.10.2** If the Interconnection Request is for a Small Generating Facility that includes multiple energy production devices at a site for which the Interconnection Customer seeks a single Point of Interconnection, the Interconnection Request shall be evaluated on the basis of the aggregate capacity of the multiple devices.
- 4.10.3** The Interconnection Request shall be evaluated using the maximum rated capacity of the Small Generating Facility.

## Glossary of Terms

**500 kW Inverter Process** – The separate MidAmerican procedure for evaluating an Interconnection Request for a Small Generating Facility or Net Billed Facility no larger than 500 kW that uses a separate MidAmerican process. The application process uses an all-in-one document that includes a simplified Interconnection Request, simplified procedures, and a brief set of terms and conditions.

**Affected System** – An electric system other than the Transmission Provider's Transmission System that may be affected by the proposed interconnection.

**Business Day** – Monday through Friday, excluding Federal Holidays.

**Distribution System** – The Transmission Provider's facilities and equipment used to transmit electricity to ultimate usage points such as homes and industries directly from nearby generators or from interchanges with higher voltage transmission networks which transport bulk power over longer distances. The voltage levels at which Distribution Systems operate differ among areas.

**Distribution Upgrades** – The additions, modifications, and upgrades to the Transmission Provider's Distribution System at or beyond the Point of Interconnection to facilitate interconnection of the Small Generating Facility and render the transmission service necessary to effect the Interconnection Customer's wholesale sale of electricity in interstate commerce. Distribution Upgrades do not include Interconnection Facilities.

**Fast Track Process** – The procedure for evaluating an Interconnection Request for a certified Small Generating Facility larger than 500 kW but less than 2,000 kW (2 MW) that includes the section 2 screens, customer options meeting, and optional supplemental review.

**Interconnection Customer** – Any entity, including the Transmission Provider, the Transmission Owner or any of the affiliates or subsidiaries of either, that proposes to interconnect its Small Generating Facility with the Transmission Provider's Transmission System.

**Interconnection Facilities** – The Transmission Provider's Interconnection Facilities and the Interconnection Customer's Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the Small Generating Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Small Generating Facility to the Transmission Provider's Transmission System. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades or Network Upgrades.

**Interconnection Request** – The Interconnection Customer's request, in accordance with the Tariff, to interconnect a new Small Generating Facility, or to increase the capacity of, or make a Material Modification to the operating characteristics of, an existing Small Generating Facility that is interconnected with the Transmission Provider's Transmission System.

**Material Modification** – A modification that has a material impact on the cost or timing of any Interconnection Request with a later queue priority date.

**Network Upgrades** – Additions, modifications, and upgrades to the Transmission Provider's Transmission System required at or beyond the point at which the Small Generating Facility interconnects with the Transmission Provider's Transmission System to accommodate the interconnection with the Small Generating Facility to the Transmission Provider's Transmission System. Network Upgrades do not include Distribution Upgrades.

**Party or Parties** – The Transmission Provider, Transmission Owner, Interconnection Customer or any combination of the above.

**Point of Interconnection** – The point where the Interconnection Facilities connect with the Transmission Provider's Transmission System.

**Queue Position** – The order of a valid Interconnection Request, relative to all other pending valid Interconnection Requests, that is established based upon the date and time of receipt of the valid Interconnection Request by the Transmission Provider.

**Small Generating Facility** – The Interconnection Customer's device for the production of electricity identified in the Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

**Study Process** – The procedure for evaluating an Interconnection Request that includes the section 3 scoping meeting, feasibility study, system impact study, and facilities study.

**Transmission Owner** – The entity that owns, leases or otherwise possesses an interest in the portion of the Transmission System at the Point of Interconnection and may be a Party to the Small Generator Interconnection Agreement to the extent necessary.

**Transmission Provider** – The public utility (or its designated agent) that owns, controls, or operates transmission or distribution facilities used for the transmission of electricity in interstate commerce and provides transmission service under the Tariff. The term Transmission Provider should be read to

include the Transmission Owner when the Transmission Owner is separate from the Transmission Provider.

**Transmission System** – The facilities owned, controlled or operated by the Transmission Provider or the Transmission Owner that are used to provide transmission service under the Tariff.

**Upgrades** – The required additions and modifications to the Transmission Provider's Transmission System at or beyond the Point of Interconnection. Upgrades may be Network Upgrades or Distribution Upgrades. Upgrades do not include Interconnection Facilities.



**SMALL GENERATOR INTERCONNECTION REQUEST**  
**(Application Form for Units Rated from 501 kW – 20,000 kW)**

**Transmission Provider:** \_\_\_\_\_

Designated Contact Person: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Fax: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

An Interconnection Request is considered complete when it provides all applicable and correct information required below.

**Preamble and Instructions**

An Interconnection Customer who requests a MidAmerican interconnection must submit this Interconnection Request by hand delivery, mail, e-mail, or fax to the Transmission Provider.

**Processing Fee or Deposit:**

If the Interconnection Request is submitted under the Fast Track Process, meaning an aggregated combined nameplate capacity of 501 – 20,000 kW, whether a new submission or an existing Interconnection Request, the Interconnection Customer shall submit to the Transmission Provider a deposit not to exceed \$500 towards the cost of the feasibility study. If the Interconnection Request is submitted under the Normal Study Process, whether a new submission or an Interconnection Request that did not pass the Fast Track Process, the Interconnection Customer shall submit to the Transmission Provider a deposit not to exceed \$1,000 towards the cost of the feasibility study.

**Interconnection Customer Information**

Legal Name of the Interconnection Customer (or, if an individual, individual's name)

MidAmerican Energy Company

Name: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Facility Location (if different from above): \_\_\_\_\_

Telephone (Day): \_\_\_\_\_ Telephone (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

Alternative Contact Information (if different from the Interconnection Customer)

Contact Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone (Day): \_\_\_\_\_ Telephone (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

Application is for: \_\_\_\_\_ New Small Generating Facility  
\_\_\_\_\_ Capacity addition to Existing Small Generating Facility

If capacity addition to existing facility, please describe: \_\_\_\_\_

Will the Small Generating Facility be used for any of the following?

Net Metering? Yes \_\_\_ No \_\_\_

To Supply Power to the Interconnection Customer? Yes \_\_\_ No \_\_\_

To Supply Power to Others? Yes \_\_\_ No \_\_\_

For installations at locations with existing electric service to which the proposed Small Generating Facility will interconnect, provide:

\_\_\_\_\_

MidAmerican Energy Company

(Local Electric Service Provider\*)  
Number\*)

(Existing Account

[\*To be provided by the Interconnection Customer if the local electric service provider is different from the Transmission Provider]

Contact Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone (Day): \_\_\_\_\_ Telephone (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

Requested Point of Interconnection: \_\_\_\_\_

Interconnection Customer's Requested In-Service Date: \_\_\_\_\_

**Small Generating Facility Information**

Data apply only to the Small Generating Facility, not the Interconnection Facilities.

Energy Source: \_\_\_ Solar \_\_\_ Wind \_\_\_ Hydro \_\_\_ Hydro Type (e.g. Run-of-River): \_\_\_\_\_

Diesel \_\_\_ Natural Gas \_\_\_ Fuel Oil \_\_\_ Other (state type) \_\_\_\_\_

Prime Mover: \_\_\_ Fuel Cell \_\_\_ Recip Engine \_\_\_ Gas Turb \_\_\_ Steam Turb  
\_\_\_ Microturbine \_\_\_ PV \_\_\_ Other

Type of Generator: \_\_\_ Synchronous \_\_\_ Induction \_\_\_ Inverter

Generator Nameplate Rating: \_\_\_\_\_ kW (Typical)

Generator Nameplate kVAR: \_\_\_\_\_

Interconnection Customer or Customer-Site Load: \_\_\_\_\_ kW (if none, so state)

Typical Reactive Load (if known): \_\_\_\_\_

Maximum Physical Export Capability Requested: \_\_\_\_\_ kW

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List components of the Small Generating Facility equipment package that are currently certified:

Equipment Type	Certifying Entity
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____

Is the prime mover compatible with the certified protective relay package?

\_\_\_ Yes \_\_\_ No

Generator (or solar collector)

Manufacturer, Model Name & Number: \_\_\_\_\_

Version Number: \_\_\_\_\_

Nameplate Output Power Rating in kW: (Summer) \_\_\_\_\_ (Winter) \_\_\_\_\_

Nameplate Output Power Rating in kVA: (Summer) \_\_\_\_\_ (Winter) \_\_\_\_\_

Individual Generator Power Factor

Rated Power Factor: Leading: \_\_\_\_\_ Lagging: \_\_\_\_\_

Total Number of Generators in wind farm to be interconnected pursuant to this

Interconnection Request: \_\_\_\_\_ Elevation: \_\_\_\_\_

\_\_\_ Single phase \_\_\_ Three phase

Inverter Manufacturer, Model Name & Number (if used):

\_\_\_\_\_

List of adjustable set points for the protective equipment or software:

\_\_\_\_\_

Note: A completed Power Systems Load Flow data sheet must be supplied with the Interconnection Request.

Small Generating Facility Characteristic Data (for inverter-based machines)

Max design fault contribution current: \_\_\_\_\_ Instantaneous \_\_\_ or RMS? \_

Harmonics Characteristics: \_\_\_\_\_

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Start-up requirements: \_\_\_\_\_

Small Generating Facility Characteristic Data (for rotating machines)

RPM Frequency: \_\_\_\_\_

(\*) Neutral Grounding Resistor (If Applicable): \_\_\_\_\_

Synchronous Generators:

Direct Axis Synchronous Reactance,  $X_d$ : \_\_\_\_\_ P.U.

Direct Axis Transient Reactance,  $X'_d$ : \_\_\_\_\_ P.U.

Direct Axis Subtransient Reactance,  $X''_d$ : \_\_\_\_\_ P.U.

Negative Sequence Reactance,  $X_2$ : \_\_\_\_\_ P.U.

Zero Sequence Reactance,  $X_0$ : \_\_\_\_\_ P.U.

KVA Base: \_\_\_\_\_

Field Volts: \_\_\_\_\_

Field Amperes: \_\_\_\_\_

Induction Generators:

Motoring Power (kW): \_\_\_\_\_

$I_2^2t$  or K (Heating Time Constant): \_\_\_\_\_

Rotor Resistance,  $R_r$ : \_\_\_\_\_

Stator Resistance,  $R_s$ : \_\_\_\_\_

Stator Reactance,  $X_s$ : \_\_\_\_\_

Rotor Reactance,  $X_r$ : \_\_\_\_\_

Magnetizing Reactance,  $X_m$ : \_\_\_\_\_

Short Circuit Reactance,  $X_d''$ : \_\_\_\_\_

Exciting Current: \_\_\_\_\_

Temperature Rise: \_\_\_\_\_

Frame Size: \_\_\_\_\_

Design Letter: \_\_\_\_\_

Reactive Power Required In Vars (No Load): \_\_\_\_\_

Reactive Power Required In Vars (Full Load): \_\_\_\_\_

Total Rotating Inertia, H: \_\_\_\_\_ Per Unit on kVA Base

Note: Please contact the Transmission Provider prior to submitting the Interconnection Request to determine if the specified information above is required.

Excitation and Governor System Data for Synchronous Generators Only

Provide appropriate IEEE model block diagram of excitation system, governor system and power system stabilizer (PSS) in accordance with the regional reliability council criteria. A PSS may be determined to be required by applicable studies. A copy of the manufacturer's block diagram may not be substituted.

**Interconnection Facilities Information**

Will a transformer be used between the generator and the point of common coupling?  
\_\_\_Yes \_\_\_No

Will the transformer be provided by the Interconnection Customer? \_\_\_Yes \_\_\_No

Transformer Data (If Applicable, for Interconnection Customer-Owned Transformer):

Is the transformer: \_\_\_single phase \_\_\_three phase?

Size: \_\_\_\_\_kVA

Transformer Impedance: \_\_\_\_\_% on \_\_\_\_\_kVA Base

If Three Phase:

Transformer Primary: \_\_\_\_\_ Volts \_\_\_\_\_ Delta \_\_\_\_\_ Wye \_\_\_\_\_ Wye Grounded

Transformer Secondary: \_\_\_\_\_ Volts \_\_\_\_\_ Delta \_\_\_\_\_ Wye \_\_\_\_\_ Wye Grounded

Transformer Tertiary: \_\_\_\_\_ Volts \_\_\_\_\_ Delta \_\_\_\_\_ Wye \_\_\_\_\_ Wye Grounded

Transformer Fuse Data (If Applicable, for Interconnection Customer-Owned Fuse):

(Attach copy of fuse manufacturer's Minimum Melt and Total Clearing Time-Current Curves)

Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Size: \_\_\_\_\_

Speed: \_\_\_\_\_

Interconnecting Circuit Breaker (if applicable):

Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_

Load Rating (Amps): \_\_\_\_\_ Interrupting Rating (Amps): \_\_\_\_\_ Trip Speed

(Cycles): \_\_\_\_\_

Interconnection Protective Relays (If Applicable):

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If Microprocessor-Controlled:

List of Functions and Adjustable Set points for the protective equipment or software:

Set point Function	Minimum	Maximum
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____

If Discrete Components:

(Enclose Copy of any Proposed Time-Over-current Coordination Curves)

Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Style/Catalog No.: \_\_\_\_\_ Proposed Setting: \_\_\_\_\_  
Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Style/Catalog No.: \_\_\_\_\_ Proposed Setting: \_\_\_\_\_  
Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Style/Catalog No.: \_\_\_\_\_ Proposed Setting: \_\_\_\_\_  
Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Style/Catalog No.: \_\_\_\_\_ Proposed Setting: \_\_\_\_\_  
Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Style/Catalog No.: \_\_\_\_\_ Proposed Setting: \_\_\_\_\_

Current Transformer Data (If Applicable):

(Enclose Copy of Manufacturer's Excitation and Ratio Correction Curves)

Manufacturer: \_\_\_\_\_  
Type: \_\_\_\_\_ Accuracy Class: \_\_\_\_\_  
Proposed Ratio Connection: \_\_\_\_\_

Manufacturer: \_\_\_\_\_  
Type: \_\_\_\_\_ Accuracy Class: \_\_\_\_\_  
Proposed Ratio Connection: \_\_\_\_\_

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Potential Transformer Data (If Applicable):

Manufacturer: \_\_\_\_\_  
Type: \_\_\_\_\_ Accuracy Class: \_\_\_\_\_  
Proposed Ratio Connection: \_\_\_\_\_

Manufacturer: \_\_\_\_\_  
Type: \_\_\_\_\_ Accuracy Class: \_\_\_\_\_  
Proposed Ratio Connection: \_\_\_\_\_

**General Information**

Enclose copy of site electrical one-line diagram showing the configuration of all Small Generating Facility equipment, current and potential circuits, and protection and control schemes. This one-line diagram must be signed and stamped by a licensed Professional Engineer if the Small Generating Facility is larger than 501 kW. Is One-Line Diagram Enclosed? \_\_\_Yes \_\_\_No

Enclose copy of any site documentation that indicates the precise physical location of the proposed Small Generating Facility (e.g., USGS topographic map or other diagram or documentation).

Proposed location of protective interface equipment on property (include address if different from the Interconnection Customer's address)

\_\_\_\_\_

Enclose copy of any site documentation that describes and details the operation of the protection and control schemes.  
Is Available Documentation Enclosed? \_\_\_Yes \_\_\_No

Enclose copies of schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits (if applicable).  
Are Schematic Drawings Enclosed? \_\_\_Yes \_\_\_No

**Applicant Signature**

I hereby certify that, to the best of my knowledge, all the information provided in this Interconnection Request is true and correct.

For Interconnection Customer: \_\_\_\_\_  
Date: \_\_\_\_\_



## Certification Codes and Standards

**For all small units rated up to 100 kW, MidAmerican requires the following:**

1. IEEE Standard 1547 for Interconnecting Distributed Resources with Electric Power Systems
2. IEEE Std 929-2000 IEEE Recommended Practice for Utility Interface of Photovoltaic (PV) Systems
3. IEEE Std 519-1992, IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems
4. MidAmerican Standard P820-100 on distribution voltages
5. MidAmerican Standard P820-200 on allowable motor flicker
6. IEEE Std C37.108-1989 (R2002), IEEE Guide for the Protection of Network Transformers
7. IEEE C57.12.44-2000, IEEE Standard Requirements for Secondary Network Protectors
8. ANSI C84.1-1995 Electric Power Systems and Equipment – Voltage Ratings (60 Hertz)
9. IEEE Std 100-2000, IEEE Standard Dictionary of Electrical and Electronic Terms  
NEMA MG 1-1998, Motors and Small Resources, Revision 3
10. NFPA 70 (2002), National Electrical Code
11. NEMA MG 1-2003 (Rev 2004), Motors and Generators, Revision 1

**For small units rated from 101 kW to 500 kW, MidAmerican requires the following:**

1. IEEE Standard 1547 for Interconnecting Distributed Resources with Electric Power Systems
2. IEEE Std 929-2000 IEEE Recommended Practice for Utility Interface of Photovoltaic (PV) Systems
3. IEEE Std 519-1992, IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems
4. MidAmerican Standard P820-100 on distribution voltages
5. MidAmerican Standard P820-200 on allowable motor flicker
6. IEEE Std C37.108-1989 (R2002), IEEE Guide for the Protection of Network Transformers
7. IEEE C57.12.44-2000, IEEE Standard Requirements for Secondary Network Protectors
8. ANSI C84.1-1995 Electric Power Systems and Equipment – Voltage Ratings (60 Hertz)
9. IEEE Std 100-2000, IEEE Standard Dictionary of Electrical and Electronic Terms  
NEMA MG 1-1998, Motors and Small Resources, Revision 3
10. NFPA 70 (2002), National Electrical Code
11. NEMA MG 1-2003 (Rev 2004), Motors and Generators, Revision 1

12. ANSI/IEEE C37.91, Guide for Protective Relay Applications to Power Transformers
13. ANSI/IEEE C37.95, Guide for Protective Relaying of Utility-Customer Interconnections
14. ANSI/IEEE C37.97, Guide for Protective Relay Applications to Power System Busses
15. ANSI/IEEE C37.101, Guide for Generator Ground Protection
16. ANSI/IEEE C37.102, Guide for AC Generator Protection
17. ANSI/IEEE C37.106, Guide for Abnormal Frequency Protection for Power Generating Plants

**For units rated from 501 kW to 20,000 kW, MidAmerican requires the following:**

1. IEEE Standard 1547 for Interconnecting Distributed Resources with Electric Power Systems
2. IEEE Std 929-2000 IEEE Recommended Practice for Utility Interface of Photovoltaic (PV) Systems
3. IEEE Std 519-1992, IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems
4. MidAmerican Standard P820-100 on distribution voltages
5. MidAmerican Standard P820-200 on allowable motor flicker
6. IEEE Std C37.108-1989 (R2002), IEEE Guide for the Protection of Network Transformers
7. IEEE C57.12.44-2000, IEEE Standard Requirements for Secondary Network Protectors
8. ANSI C84.1-1995 Electric Power Systems and Equipment – Voltage Ratings (60 Hertz)
9. IEEE Std 100-2000, IEEE Standard Dictionary of Electrical and Electronic Terms  
NEMA MG 1-1998, Motors and Small Resources, Revision 3
10. NFPA 70 (2002), National Electrical Code
11. NEMA MG 1-2003 (Rev 2004), Motors and Generators, Revision 1
12. ANSI/IEEE C37.91, Guide for Protective Relay Applications to Power Transformers
13. ANSI/IEEE C37.95, Guide for Protective Relaying of Utility-Customer Interconnections
14. ANSI/IEEE C37.97, Guide for Protective Relay Applications to Power System Busses
15. ANSI/IEEE C37.101, Guide for Generator Ground Protection
16. ANSI/IEEE C37.102, Guide for AC Generator Protection
17. ANSI/IEEE C37.106, Guide for Abnormal Frequency Protection for Power Generating Plants
18. ANSI C50.10-1990, General Requirements for Synchronous Machines
19. ANSI C50.12-1982, Requirements for Salient Pole Synchronous Generators and Condensers
20. ANSI C50.13-1982, Requirements for Cylindrical-Rotor Synchronous Generators

21. ANSI C50.14-1977, Requirements for Combustion Gas Turbine Driven Cylindrical-Rotor Synchronous Generators
22. ANSI/IEEE Std 1001, Guide for Interfacing Dispersed Storage and Generation Facilities with Electric Utility Systems
23. IEEE 1547, Standard for Interconnecting Distributed Resources with Electric Power Systems,
24. IEEE Std C62.41.2-2002, IEEE Recommended Practice on Characterization of Surges in Low Voltage (1000V and Less) AC Power Circuits
25. IEEE Std C62.45-1992 (R2002), IEEE Recommended Practice on Surge Testing for Equipment Connected to Low-Voltage (1000V and Less) AC Power Circuits
26. ANSI / IEEE Std C37.90.1-1989 (R1994), IEEE Standard Surge Withstand Capability (SWC) Tests for Protective Relays and Relay Systems
27. ANSI / IEEE Std. C37.90.2 (1995), Standard for Withstand Capability of Relay Systems to Radiated Electromagnetic Interference from Transceivers
28. IEEE 80, IEEE Guide for Safety in AC Substation Grounding Document Number
29. IEEE 142, Recommended Practice for Grounding of Industrial and Commercial Power Systems
30. ANSI/IEEE C37.2, Device Numbers
31. IEEE Standard 421.2-1990, IEEE Guide for Identification, Testing, and Evaluation of the Dynamic Performance of Excitation Control Systems

**Reserved for Future Use**

**Application for Interconnecting a Small Generating Facility or Net Billed Facility No Larger than 500 kW**

This Application is considered complete when it provides all applicable and correct information required below. Additional information to evaluate the Application may be required.

Processing Fee

If the Interconnection Request is submitted under this Process for Small Generating Facilities or Net Billed facilities no larger than 500 kW, meaning an aggregated combined nameplate capacity of 500 kW or less, whether a new submission or an Interconnection Request, the Interconnection Customer shall submit to the Transmission Provider a deposit of \$100 towards the cost of the feasibility study.

Interconnection Customer

Name: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone (Day): \_\_\_\_\_ (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

Contact (if different from Interconnection Customer)

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone (Day): \_\_\_\_\_ (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

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Owner of the facility (include % ownership by any electric utility): \_\_\_\_\_

Small Generating Facility Information

Location (if different from above): \_\_\_\_\_

Electric Service Company: \_\_\_\_\_

Account Number: \_\_\_\_\_

Inverter Manufacturer: \_\_\_\_\_ Model \_\_\_\_\_

Nameplate Rating: \_\_\_\_ (kW) \_\_\_\_ (kVA) \_\_\_\_ (AC Volts)

Single Phase \_\_\_\_\_ Three Phase \_\_\_\_\_

System Design Capacity: \_\_\_\_\_ (kW) \_\_\_\_\_ (kVA)

Prime Mover: Photovoltaic  Reciprocating Engine  Fuel Cell

Turbine  Other \_\_\_\_\_

Energy Source: Solar  Wind  Hydro  Diesel  Natural Gas

Fuel Oil  Other (describe) \_\_\_\_\_

Is the equipment UL1741 Listed? Yes \_\_\_\_ No \_\_\_\_

If Yes, attach manufacturer's cut-sheet showing UL1741 listing

Estimated Installation Date: \_\_\_\_\_

Estimated In-Service Date: \_\_\_\_\_

The 500 kW Process is available only for Small Generating Facilities or Net Billed facilities no larger than 500 kW that meet the codes, standards, and certification requirements for such an interconnection.

List components of the Small Generating Facility equipment package that are currently certified:

Equipment Type	Certifying Entity
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____

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Interconnection Customer Signature

I hereby certify that, to the best of my knowledge, the information provided in this Application is true. I agree to abide by the Terms and Conditions for Interconnecting an Inverter-Based Small Generating Facility No Larger than 500kW and return the Certificate of Completion when the Small Generating Facility has been installed.

Signed: \_\_\_\_\_

Title: \_\_\_\_\_ Date: \_\_\_\_\_

## Feasibility Study Agreement

**THIS AGREEMENT** is made and entered into this \_\_\_\_ day of \_\_\_\_\_, 20\_\_ by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State of \_\_\_\_\_, ("Interconnection Customer,") and \_\_\_\_\_, a \_\_\_\_\_ existing under the laws of the State of \_\_\_\_\_, ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS**, Interconnection Customer is proposing to develop a Small Generating Facility or generating capacity addition to an existing Small Generating Facility consistent with the Interconnection Request completed by Interconnection Customer on \_\_\_\_\_; and

**WHEREAS**, Interconnection Customer desires to interconnect the Small Generating Facility with the Transmission Provider's Transmission System; and

**WHEREAS**, Interconnection Customer has requested the Transmission Provider to perform a feasibility study to assess the feasibility of interconnecting the proposed Small Generating Facility with the Transmission Provider's Transmission System, and of any Affected Systems;

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0** When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the standard Small Generator Interconnection Procedures.
- 2.0** The Interconnection Customer elects and the Transmission Provider shall cause to be performed an interconnection feasibility study consistent the MidAmerican standard Small Generator Interconnection Procedures.
- 3.0** The scope of the feasibility study shall be subject to the assumptions set forth in Attachment A to this Agreement.



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- 4.0** The feasibility study shall be based on the technical information provided by the Interconnection Customer in the Interconnection Request, as may be modified as the result of the scoping meeting. The Transmission Provider reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the feasibility study and as designated in accordance with the standard Small Generator Interconnection Procedures. If the Interconnection Customer modifies its Interconnection Request, the time to complete the feasibility study may be extended by agreement of the Parties.
- 5.0** In performing the study, the Transmission Provider shall rely, to the extent reasonably practicable, on existing studies of recent vintage. The Interconnection Customer shall not be charged for such existing studies; however, the Interconnection Customer shall be responsible for charges associated with any new study or modifications to existing studies that are reasonably necessary to perform the feasibility study.
- 6.0** The feasibility study report shall provide the following analyses for the purpose of identifying any potential adverse system impacts that would result from the interconnection of the Small Generating Facility as proposed:
- 6.1** Initial identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
  - 6.2** Initial identification of any thermal overload or voltage limit violations resulting from the interconnection;
  - 6.3** Initial review of grounding requirements and electric system protection; and
  - 6.4** Description and non-bonding estimated cost of facilities required to interconnect the proposed Small Generating Facility and to address the identified short circuit and power flow issues.
- 7.0** The feasibility study shall model the impact of the Small Generating Facility regardless of purpose in order to avoid the further expense and interruption of operation for reexamination of feasibility and impacts if the Interconnection Customer later changes the purpose for which the Small Generating Facility is being installed.
- 8.0** The study shall include the feasibility of any interconnection at a proposed project site where there could be multiple potential Points of Interconnection, as

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requested by the Interconnection Customer and at the Interconnection Customer's cost.

- 9.0** A deposit of the lesser of 50 percent of good faith estimated feasibility study costs or earnest money of \$1,000 may be required from the Interconnection Customer.
- 10.0** Once the feasibility study is completed, a feasibility study report shall be prepared and transmitted to the Interconnection Customer. Barring unusual circumstances, the feasibility study must be completed and the feasibility study report transmitted within sixty (60) Calendar Days of the Interconnection Customer's agreement to conduct a feasibility study.
- 11.0** Any study fees shall be based on the Transmission Provider's actual costs and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time.
- 12.0** The Interconnection Customer must pay any study costs that exceed the deposit without interest within thirty (30) calendar days on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, the Transmission Provider shall refund such excess within thirty (30) calendar days of the invoice without interest.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**[Insert name of Transmission Provider]**

**[Insert name of Interconnection Customer]**

Signed \_\_\_\_\_

Signed \_\_\_\_\_

Name (Printed):

Name (Printed):

MidAmerican Energy Company

Title\_\_\_\_\_

Title\_\_\_\_\_

### **Assumptions Used in Conducting the Feasibility Study**

The feasibility study will be based upon the information set forth in the Interconnection Request and agreed upon in the scoping meeting held on \_\_\_\_\_:

- 1) Designation of Point of Interconnection and configuration to be studied.
  
- 2) Designation of alternative Points of Interconnection and configuration.

1) and 2) are to be completed by the Interconnection Customer. Other assumptions (listed below) are to be provided by the Interconnection Customer and the Transmission Provider.

## INTERCONNECTION SYSTEM IMPACT STUDY AGREEMENT

**THIS AGREEMENT** is made and entered into this \_\_\_\_ day of \_\_\_\_\_, 2006 by and between Community Energy, organized and existing under the laws of the State of \_\_\_\_\_, ("Interconnection Customer") and MidAmerican Energy Company, ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS**, Interconnection Customer is proposing to develop a Small Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by Interconnection Customer; and

**WHEREAS**, Interconnection Customer desires to interconnect the Small Generating Facility with the Transmission System; and

**WHEREAS**, Interconnection Customer has requested Transmission Provider to perform an Interconnection System Impact Study to assess the impact of interconnecting the Small Generating Facility to the Transmission System, and of any Affected Systems;

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in Transmission Provider's technical requirements, FERC-approved SGIP or LGIP.
- 2.0 Interconnection Customer elects and Transmission Provider shall cause to be performed an Interconnection System Impact Study consistent with Section 7.0 of this Agreement in accordance with the Tariff.
- 3.0 The scope of the Interconnection System Impact Study shall be subject to the assumptions set forth in Appendix 7A to this Agreement.
- 4.0 The Interconnection System Impact Study will be based upon the technical information provided by Interconnection Customer in the Interconnection Request, subject to any modifications in accordance with

## MidAmerican Energy Company

this Agreement. Transmission Provider reserves the right to request additional technical information from Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Interconnection Customer System Impact Study. If Interconnection Customer modifies its designated Point of Interconnection, Interconnection Request, or the technical information provided therein is modified, the time to complete the Interconnection System Impact Study may be extended.

- 5.0 The Interconnection System Impact Study report shall provide the following information:
- identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
  - identification of any thermal overload or voltage limit violations resulting from the interconnection;
  - identification of any instability or inadequately damped response to system disturbances resulting from the interconnection (including, as the Transmission Provider determines to be necessary, both large and small signal, transient stability, sub synchronous stability, dynamic voltage stability, mid and long-term stability, voltage flicker analyses, and excessive neutral current studies); and
  - description and non-binding, good faith estimated cost of facilities required to interconnect the Small Generating Facility to the Transmission System and to address the identified short circuit, instability, and power flow issues.
- 6.0 Interconnection Customer shall fund each portion of the System Impact Studies completely prior to study analysis for each System Impact Study section according to milestones agreed upon and shown in Appendix 7A prior to signing this agreement. Transmission Provider's good faith estimate for the time of completion of the Interconnection System Impact Study is approximately 180 calendar days from the date of execution of this Agreement.

Upon receipt of the Interconnection System Impact Study, Transmission Provider shall charge and Interconnection Customer shall pay the actual costs of the Interconnection System Impact Study.

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Any difference between the deposit and the actual cost of the study shall be paid by or refunded to Interconnection Customer, as appropriate.

### 7.0 Miscellaneous

#### 7.1 OWNERSHIP OF RESULTS

Reports, summaries, plans and other documents arising out of this Agreement shall become the property of Transmission Provider. All studies, computer input and output data, planning, and material that forms the basis for determining the constraints on a project shall remain in the possession of Transmission Provider, provided that copies of all supporting documentation, workpapers and pre-Interconnection Request or post-Interconnection Request power flow, short circuit and stability databases for the Interconnection System Impact Study shall be made available upon request to Interconnection Customer at Interconnection Customer's expense subject to confidentiality arrangements consistent with the Small Generator Interconnection Procedures and Section 7.2 hereof and provided Transmission Provider has received Interconnection Customer's payment in full for the Interconnection System Impact Study in accordance with this Agreement.

#### 7.2 NONDISCLOSURE OF INFORMATION

Each Party shall consider all information provided by the other Party and all supporting work papers resulting from Transmission Provider's performance of the System Impact Study proprietary unless such information is available from public sources. Neither Party shall publish or disclose proprietary information of the other Party for any purpose without the prior written consent of the other Party, except that either Party may disclose proprietary information to a federal or state regulatory body conducting an investigation. Such Party shall notify the other at the time of release, but not prior thereto.

#### 7.3 PAYMENTS AND TRANSMITTAL OF STUDY

Concurrently with Interconnection Customer's submission to Transmission Provider of this executed Agreement, Interconnection Customer shall provide to Transmission Provider accounting code block information for Transmission Provider's use in directly charging payroll and expenses to Interconnection Customer.

#### 7.4 NOTICES

MidAmerican Energy Company

All notices hereunder shall be written and shall be delivered to the parties at the following addresses:

If to Transmission Provider:  
Manager, Electric System Planning  
106 East Second Street  
Davenport, Iowa 52801  
(FAX) 563-333-8112

If to Interconnection Customer:  
  
(FAX)

with a copy to:

with a copy to:

Suzan Stewart  
Managing Senior Attorney  
MidAmerican Energy Company  
401 Douglas Street  
P. O. Box 778  
Sioux City, Iowa 51102  
(FAX) 712-252-7396

Such notices shall be deemed to have been served when personally delivered or upon receipt as evidenced by a U.S. Postal Service receipt of mail or evidence of delivery by a private express mail service.

7.5 CHOICE OF LAW

This Agreement shall be governed by the laws of the State of Iowa.

7.6 INDEMNITY

Each Party shall at all times indemnify, defend, and save the other Party harmless from, any and all damages, losses, claims, including claims and actions relating to death of any person (including employees) or damage to property, demands, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from a Party's performance of its obligations under this Agreement, except in the cases of gross negligence or intentional wrongdoing by the Party who would have been indemnified. It shall be a condition to a Party's obligation to indemnify pursuant to this Section 7.6 that it be given written notice of the obligation and in the case of claims



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demands or suits, an opportunity to defend, and the right to approve any settlement.

7.7 SEVERABILITY

No waiver of any breach of this Agreement shall constitute a waiver of any other breach of the same or any other provisions of this Agreement, and no waiver shall be effective unless granted in writing. In the event that any provision herein shall be illegal or unenforceable, such provision shall be severed from the Agreement. The entire Agreement shall not fail, but the balance of the Agreement shall continue in full force and effect.

7.8 ASSIGNMENT

Transmission Provider may assign all or part of its obligations under this Agreement to an entity authorized by the Federal Energy Regulatory Commission to perform generation interconnection studies on behalf of Transmission Provider without further consent of the Interconnection customer.

**IN WITNESS THEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**MidAmerican Energy Company**

**Generator Owner**

By: \_\_\_\_\_

By: \_\_\_\_\_

Name: Jim Averweg  
Title: Vice President, Engineering

Name:  
Title:

Date Signed: \_\_\_\_\_

Date Signed: \_\_\_\_\_

**ASSUMPTIONS AND MILESTONES USED IN CONDUCTING THE  
INTERCONNECTION SYSTEM IMPACT STUDY**

The Interconnection System Impact Study will be based upon the following assumptions:

1. Maximum power output of the Interconnection Customer's Small Generating Facility is expected to be between 501 to 20,000 kW.
2. Designation of Point of Interconnection and configuration to be studied shall be located approximately ....
3. Other Interconnection System Impact Study Assumptions:

The Interconnection System Impact Study shall be conducted in accordance with the requirements applicable to System Impact Studies for transmission service conducted by Transmission Provider pursuant to Attachments C and D of the Transmission Provider Open Access Transmission Tariff (OATT) on file with the Commission.

The factors to be considered in determining the capability available on Transmission Provider's transmission system shall be as set forth in the OATT and these factors shall include, but not be limited to:

1. Steady state power flow study results;
2. Stability study results;
3. NERC, Regional Reliability Council and Transmission Provider's system design criteria and planning criteria;
4. Electric system capability of the existing system in accordance with known conditions;
5. Projected electric system capability of the system after the request is added;
6. Reliability requirements of Transmission Provider and Interconnection Customer;
7. Margins; and
8. Type and term of the service requested.

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The Interconnection System Impact Study further assumes that the additional requirements detailed in Transmission Provider's technical requirements, shall be met by Interconnection Customer.

The standards to be considered in determining the capability available on Transmission Provider's transmission system shall be as set forth in the OATT.

Before any interconnection requested by Interconnection Customer may be placed in service, the Regional Reliability Council Design Review Subcommittee (DRS) and/or other committee(s) with authority over matters herein must review and accept the Interconnection System Impact Study. The Interconnection System Impact Study as described herein is intended to provide the necessary information that may be required for acceptance by Transmission Provider and the DRS and/or other committee(s) with authority. However, to obtain acceptance by the DRS and/or other committee(s) with authority, additional studies may be required. These additional studies shall be conducted by Transmission Provider at Interconnection Customer's expense in accordance with this Agreement and any amendments hereto.

Feasibility Studies and System Impact Studies will be broken into segments with milestone payments to be fully funded prior to each study segment.

Study Section	Action	Estimated Costs
Feasibility	Data Collection	\$
	Steady State Analysis	\$
Interconnection System Impact	Stability / Fault Analysis	\$
	Determine Network Upgrades	\$
	Report Preparation	\$
	Presentations	\$
Total		\$

## Facilities Study Agreement

**THIS AGREEMENT** is made and entered into this \_\_\_\_ day of \_\_\_\_\_, 20\_\_ by and between \_\_\_\_\_, A \_\_\_\_\_ organized and existing under the laws of the State of \_\_\_\_\_, ("Interconnection Customer,") and \_\_\_\_\_, a \_\_\_\_\_ existing under the laws of the State of \_\_\_\_\_, ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS**, the Interconnection Customer is proposing to develop a Small Generating Facility or generating capacity addition to an existing Small Generating Facility consistent with the Interconnection Request completed by the Interconnection Customer on \_\_\_\_\_; and

**WHEREAS**, the Interconnection Customer desires to interconnect the Small Generating Facility with the Transmission Provider's Transmission System;

**WHEREAS**, the Transmission Provider has completed a system impact study and provided the results of said study to the Interconnection Customer; and

**WHEREAS**, the Interconnection Customer has requested the Transmission Provider to perform a facilities study to specify and estimate the cost of the equipment, engineering, procurement and construction work needed to implement the conclusions of the system impact study in accordance with Good Utility Practice to physically and electrically connect the Small Generating Facility with the Transmission Provider's Transmission System.

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0** When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the standard Small Generator Interconnection Procedures.
- 2.0** The Interconnection Customer elects and the Transmission Provider shall cause a facilities study consistent with the MidAmerican Small Generator Interconnection Procedures.

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- 3.0** The scope of the facilities study shall be subject to data provided in Attachment A to this Agreement.
- 4.0** The facilities study shall specify and estimate the cost of the equipment, engineering, procurement and construction work (including overheads) needed to implement the conclusions of the system impact study(s). The facilities study shall also identify (1) the electrical switching configuration of the equipment, including, without limitation, transformer, switchgear, meters, and other station equipment, (2) the nature and estimated cost of the Transmission Provider's Interconnection Facilities and Upgrades necessary to accomplish the interconnection, and (3) an estimate of the time required to complete the construction and installation of such facilities.
- 5.0** The Transmission Provider may propose to group facilities required for more than one Interconnection Customer in order to minimize facilities costs through economies of scale, but any Interconnection Customer may require the installation of facilities required for its own Small Generating Facility if it is willing to pay the costs of those facilities.
- 6.0** A deposit of the good faith estimated facilities study costs may be required from the Interconnection Customer.
- 7.0** In cases where Upgrades are required, the facilities study must be completed within ninety (90) Calendar Days of the receipt of this Agreement. In cases where no Upgrades are necessary and the required facilities are limited to Interconnection Facilities, the facilities study must be completed within sixty (60) Calendar Days.
- 8.0** Once the facilities study is completed, a facilities study report shall be prepared and transmitted to the Interconnection Customer. Barring unusual circumstances, the facilities study must be completed and the facilities study report transmitted within sixty (60) Calendar Days of the Interconnection Customer's agreement to conduct a facilities study.
- 9.0** Any study fees shall be based on the Transmission Provider's actual costs and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time.
- 10.0** The Interconnection Customer must pay any study costs that exceed the deposit without interest within sixty (60) Calendar Days on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, the Transmission Provider shall refund such excess within sixty (60) Calendar Days

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of the invoice without interest.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**[Insert name of Transmission Provider]**

**[Insert name of Interconnection Customer]**

\_\_\_\_\_

Signed \_\_\_\_\_

Signed \_\_\_\_\_

Name (Printed):

Name (Printed):

\_\_\_\_\_

\_\_\_\_\_

Title \_\_\_\_\_

Title \_\_\_\_\_

**Data to Be Provided by the Interconnection Customer  
with the Facilities Study Agreement**

Provide location plan and simplified one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc.

On the one-line diagram, indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)

On the one-line diagram, indicate the location of auxiliary power. (Minimum load on CT/PT) Amps

One set of metering is required for each generation connection to the new ring bus or existing Transmission Provider station. Number of generation connections:

\_\_\_\_\_

Will an alternate source of auxiliary power be available during CT/PT maintenance?

Yes \_\_\_\_\_ No \_\_\_\_\_

Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation? Yes \_\_\_\_\_ No \_\_\_\_\_  
(Please indicate on the one-line diagram).

What type of control system or PLC will be located at the Small Generating Facility?

\_\_\_\_\_  
\_\_\_\_\_

What protocol does the control system or PLC use?

\_\_\_\_\_  
\_\_\_\_\_

Please provide a 7.5-minute quadrangle map of the site. Indicate the plant, station, transmission line, and property lines.

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Physical dimensions of the proposed interconnection station:

---

Bus length from generation to interconnection station:

---

Line length from interconnection station to Transmission Provider's Transmission System.

---

Tower number observed in the field. (Painted on tower leg)\*:

---

Number of third party easements required for transmission lines\*:

---

\* To be completed in coordination with Transmission Provider.

Is the Small Generating Facility located in Transmission Provider's service area?

Yes \_\_\_\_\_ No \_\_\_\_\_ If No, please provide name of local provider:

---

Please provide the following proposed schedule dates:

Begin Construction Date: \_\_\_\_\_

Generator step-up transformers  
receive back feed power Date: \_\_\_\_\_

Generation Testing Date: \_\_\_\_\_

Commercial Operation Date: \_\_\_\_\_



**MIDAMERICAN SMALL GENERATOR  
INTERCONNECTION AGREEMENTS (MEC-SGIA) FOR MIDAMERICAN  
JURISDICTONAL GENERATION FACILITIES (RATED AT 501 – 20,000 kW), AND  
LINE / END USER INTERCONNECTIONS (RATED AT 24.1 – 99 KV) TO THE  
MIDAMERICAN ELECTRIC SYSTEM**

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[Attachment 3](#) – One-line Diagram Depicting the Small Generating Facility, Interconnection Facilities, Metering Equipment, and Upgrades

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This Interconnection Agreement ("Agreement") is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_, by

\_\_\_\_\_  
("Transmission Provider"), and

\_\_\_\_\_  
("Interconnection Customer") each hereinafter sometimes referred to individually as "Party" or both referred to collectively as the "Parties."

**Transmission Provider Information**

Transmission Provider: \_\_\_\_\_  
Attention: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

**Interconnection Customer Information**

Interconnection Customer: \_\_\_\_\_  
Attention: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Interconnection Customer Application No: \_\_\_\_\_

In consideration of the mutual covenants set forth herein, the Parties agree as follows:

**Article 1. Scope and Limitations of Agreement**

- 1.1 This Agreement shall be used for all Interconnection Requests submitted under the Small Generator Interconnection Procedures (SGIP) except for those submitted under an aggregated nameplate capacity of 500 kW and less.
- 1.2 This Agreement governs the terms and conditions under which the Interconnection Customer's Small Generating Facility will interconnect with, and operate in parallel with, the Transmission Provider's Transmission System.
- 1.3 This Agreement does not constitute an agreement to purchase or deliver the Interconnection Customer's power. The purchase or delivery of power and other services that the Interconnection Customer may require will be

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covered under separate agreements. The Interconnection Customer will be responsible for separately making all necessary arrangements (including scheduling) for delivery of electricity with the applicable Transmission Provider.

**1.4** Nothing in this Agreement is intended to affect any other agreement between the Transmission Provider and the Interconnection Customer.

### **1.5 Responsibilities of the Parties**

**1.5.1** The Parties shall perform all obligations of this Agreement in accordance with all Applicable Laws and Regulations, Operating Requirements, and Good Utility Practice.

**1.5.2** The Interconnection Customer shall construct, interconnect, operate and maintain its Small Generating Facility and construct, operate, and maintain its Interconnection Facilities in accordance with the applicable manufacturer's recommended maintenance schedule, in accordance with this Agreement, and with Good Utility Practice.

**1.5.3** The Transmission Provider shall construct, operate, and maintain its Transmission System and Interconnection Facilities in accordance with this Agreement, and with Good Utility Practice.

**1.5.4** The Interconnection Customer agrees to construct its facilities or systems in accordance with applicable specifications that meet or exceed those provided by the National Electrical Safety Code, the American National Standards Institute, IEEE, Underwriter's Laboratory, and Operating Requirements in effect at the time of construction and other applicable national and state codes and standards. The Interconnection Customer agrees to design, install, maintain, and operate its Small Generating Facility so as to reasonably minimize the likelihood of a disturbance adversely affecting or impairing the system or equipment of the Transmission Provider or Affected Systems.

**1.5.5** Each Party shall operate, maintain, repair, and inspect, and shall be fully responsible for the facilities that it now or subsequently may own unless otherwise specified in the Attachments to this Agreement. Each Party shall be responsible for the safe installation, maintenance, repair and condition of their respective lines and appurtenances on their respective sides of the point of

change of ownership. The Transmission Provider and the Interconnection Customer, as appropriate, shall provide Interconnection Facilities that adequately protect the Transmission Provider's Transmission System, personnel, and other persons from damage and injury. The allocation of responsibility for the design, installation, operation, maintenance and ownership of Interconnection Facilities shall be delineated in the Attachments to this Agreement.

**1.5.6** The Transmission Provider shall coordinate with all Affected Systems to support the interconnection.

**1.6 Parallel Operation Obligations**

Once the Small Generating Facility has been authorized to commence parallel operation, the Interconnection Customer shall abide by all rules and procedures pertaining to the parallel operation of the Small Generating Facility in the applicable control area, including, but not limited to; 1) the rules and procedures concerning the operation of generation set forth in the Tariff or by the system operator for the Transmission Provider's Transmission System and; 2) the Operating Requirements set forth in Attachment 5 of this Agreement.

**1.7 Metering**

The Interconnection Customer shall be responsible for the Transmission Provider's reasonable and necessary cost for the purchase, installation, operation, maintenance, testing, repair, and replacement of metering and data acquisition equipment specified in Attachments 2 and 3 of this Agreement. The Interconnection Customer's metering (and data acquisition, as required) equipment shall conform to applicable industry rules and Operating Requirements.

**1.8 Reserved For Future Use**

**1.9** Capitalized terms used herein shall have the meanings specified in the Glossary of Terms in Attachment 1 or the body of this Agreement.

**Article 2. Inspection, Testing, Authorization, and Right of Access**

**2.1 Equipment Testing and Inspection**

**2.1.1** The Interconnection Customer shall test and inspect its Small Generating Facility and Interconnection Facilities prior to

interconnection. The Interconnection Customer shall notify the Transmission Provider of such activities no fewer than thirty (30) Calendar Days (or as may be agreed to by the Parties) prior to such testing and inspection. Testing and inspection shall occur on a Business Day. The Transmission Provider may, at its own expense, send qualified personnel to the Small Generating Facility site to inspect the interconnection and observe the testing. The Interconnection Customer shall provide the Transmission Provider a written test report when such testing and inspection is completed.

**2.1.2** The Transmission Provider shall provide the Interconnection Customer written acknowledgment that it has received the Interconnection Customer's written test report. Such written acknowledgment shall not be deemed to be or construed as any representation, assurance, guarantee, or warranty by the Transmission Provider of the safety, durability, suitability, or reliability of the Small Generating Facility or any associated control, protective, and safety devices owned or controlled by the Interconnection Customer or the quality of power produced by the Small Generating Facility.

## **2.2 Authorization Required Prior to Parallel Operation**

**2.2.1** The Transmission Provider shall use Reasonable Efforts to list applicable parallel operation requirements in Attachment 5 of this Agreement. Additionally, the Transmission Provider shall notify the Interconnection Customer of any changes to these requirements as soon as they are known. The Transmission Provider shall make Reasonable Efforts to cooperate with the Interconnection Customer in meeting requirements necessary for the Interconnection Customer to commence parallel operations by the in-service date.

**2.2.2** The Interconnection Customer shall not operate its Small Generating Facility in parallel with the Transmission Provider's Transmission System without prior written authorization of the Transmission Provider. The Transmission Provider will provide such authorization once the Transmission Provider receives notification that the Interconnection Customer has complied with all applicable parallel operation requirements. Such authorization shall not be unreasonably withheld, conditioned, or delayed.

## **2.3 Right of Access**



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- 2.3.1** Upon reasonable notice, the Transmission Provider may send a qualified person to the premises of the Interconnection Customer at or immediately before the time the Small Generating Facility first produces energy to inspect the interconnection, and observe the commissioning of the Small Generating Facility. The Interconnection Customer shall notify the Transmission Provider at least thirty (30) Calendar Days prior to conducting any on-site verification testing of the Small Generating Facility.
- 2.3.2** Following the initial inspection process described above, at reasonable hours, and upon reasonable notice, or at any time without notice in the event of an emergency or hazardous condition, the Transmission Provider shall have access to the Interconnection Customer's premises for any reasonable purpose in connection with the performance of the obligations imposed on it by this Agreement or if necessary to meet its legal obligation to provide service to its customers.
- 2.3.3** Each Party shall be responsible for its own costs associated with following this article.

## Article 3. Effective Date, Term, Termination, and Disconnection

- 3.1** **Effective Date**  
This Agreement shall become effective upon execution by the Parties.
- 3.2** **Term of Agreement**  
This Agreement shall become effective on the Effective Date and shall remain in effect for a period of ten years from the Effective Date or such other longer period as the Interconnection Customer may request and shall be automatically renewed for each successive one-year period thereafter, unless terminated earlier in accordance with article 3.3 of this Agreement.
- 3.3** **Termination**  
No termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination.
- 3.3.1** The Interconnection Customer may terminate this Agreement at any time by giving the Transmission Provider thirty (30) Calendar Days written notice.

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**3.3.2** Either Party may terminate this Agreement after Default pursuant to article 7.6.

**3.3.3** Upon termination of this Agreement, the Small Generating Facility will be disconnected from the Transmission Provider's Transmission System. The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of the termination.

**3.3.4** This provisions of this article shall survive termination or expiration of this Agreement.

**3.4 Temporary Disconnection**

Temporary disconnection shall continue only for so long as reasonably necessary under Good Utility Practice.

**3.4.1 Emergency Conditions** -- "Emergency Condition" shall mean a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (2) that, in the case of the Transmission Provider, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to the Transmission System, the Transmission Provider's Interconnection Facilities or the Transmission Systems of others to which the Transmission System is directly connected; or (3) that, in the case of the Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Small Generating Facility or the Interconnection Customer's Interconnection Facilities. Under Emergency Conditions, the Transmission Provider may immediately suspend interconnection service and temporarily disconnect the Small Generating Facility. The Transmission Provider shall notify the Interconnection Customer promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the Interconnection Customer's operation of the Small Generating Facility. The Interconnection Customer shall notify the Transmission Provider promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the Transmission Provider's Transmission System or other Affected Systems. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of

both Parties' facilities and operations, its anticipated duration, and the necessary corrective action.

**3.4.2 Routine Maintenance, Construction, and Repair**

The Transmission Provider may interrupt interconnection service or curtail the output of the Small Generating Facility and temporarily disconnect the Small Generating Facility from the Transmission Provider's Transmission System when necessary for routine maintenance, construction, and repairs on the Transmission Provider's Transmission System. The Transmission Provider shall use Reasonable Efforts to coordinate such reduction or temporary disconnection with the Interconnection Customer.

**3.4.3 Forced Outages**

During any forced outage, the Transmission Provider may suspend interconnection service to effect immediate repairs on the Transmission Provider's Transmission System. The Transmission Provider shall use Reasonable Efforts to provide the Interconnection Customer with prior notice. If prior notice is not given, the Transmission Provider shall, upon request, provide the Interconnection Customer written documentation after the fact explaining the circumstances of the disconnection.

**3.4.4 Adverse Operating Effects**

The Transmission Provider shall notify the Interconnection Customer as soon as practicable if, based on Good Utility Practice, operation of the Small Generating Facility may cause disruption or deterioration of service to other customers served from the same electric system, or if operating the Small Generating Facility could cause damage to the Transmission Provider's Transmission System or Affected Systems. Supporting documentation used to reach the decision to disconnect shall be provided to the Interconnection Customer upon request. If, after notice, the Interconnection Customer fails to remedy the adverse operating effect within a reasonable time, the Transmission Provider may disconnect the Small Generating Facility. The Transmission Provider shall provide the Interconnection Customer a five (5) Business Day notice of such disconnection, unless the provisions of article 3.4.1 apply.

**3.4.5 Modification of the Small Generating Facility**

The Interconnection Customer must receive written authorization from the Transmission Provider before making any change to the

Small Generating Facility that may have a material impact on the safety or reliability of the Transmission System. Such authorization shall not be unreasonably withheld. Modifications shall be done in accordance with Good Utility Practice. If the Interconnection Customer makes such modification without the Transmission Provider's prior written authorization, the latter shall have the right to temporarily disconnect the Small Generating Facility.

**3.4.6 Reconnection**

The Parties shall cooperate with each other to restore the Small Generating Facility, Interconnection Facilities, and the Transmission Provider's Transmission System to their normal operating state as soon as reasonably practicable following a temporary disconnection.

**Article 4. Cost Responsibility for Interconnection Facilities and Distribution Upgrades**

**4.1 Interconnection Facilities**

**4.1.1** The Interconnection Customer shall pay for the cost of the Interconnection Facilities itemized in Attachment 2 of this Agreement. The Transmission Provider shall provide a best estimate cost, including overheads, for the purchase and construction of its Interconnection Facilities and provide a detailed itemization of such costs. Costs associated with Interconnection Facilities may be shared with other entities that may benefit from such facilities by agreement of the Interconnection Customer, such other entities, and the Transmission Provider.

**4.1.2** The Interconnection Customer shall be responsible for its share of all reasonable expenses, including overheads, associated with (1) owning, operating, maintaining, repairing, and replacing its own Interconnection Facilities, and (2) operating, maintaining, repairing, and replacing the Transmission Provider's Interconnection Facilities.

**4.2 Distribution Upgrades**

The Transmission Provider shall design, procure, construct, install, and own the Distribution Upgrades described in Attachment 6 of this Agreement. If the Transmission Provider and the Interconnection Customer agree, the Interconnection Customer may construct Distribution

Upgrades that are located on land owned by the Interconnection Customer. The actual cost of the Distribution Upgrades, including overheads, shall be directly assigned to the Interconnection Customer.

## **Article 5. Cost Responsibility for Network Upgrades**

### **5.1 Applicability**

No portion of this article 5 shall apply unless the interconnection of the Small Generating Facility requires Network Upgrades.

### **5.2 Network Upgrades**

The Transmission Provider or the Transmission Owner shall design, procure, construct, install, and own the Network Upgrades described in Attachment 6 of this Agreement. If the Transmission Provider and the Interconnection Customer agree, the Interconnection Customer may construct Network Upgrades that are located on land owned by the Interconnection Customer. The Interconnection Customer is responsible for all incremental costs above what would be required to serve the expected interconnected site load.

**5.2.1.1** Notwithstanding the foregoing, the Interconnection Customer, the Transmission Provider, and Affected System operator may adopt any alternative payment schedule that is mutually agreeable.

### **5.3 Special Provisions for Affected Systems**

Unless the Transmission Provider provides, under this Agreement, for the repayment of amounts advanced to Affected System operator for Network Upgrades, the Interconnection Customer and Affected System operator shall enter into an agreement that provides for such repayment. The agreement shall specify the terms governing payments to be made by the Interconnection Customer to Affected System operator as well as the repayment by Affected System operator.

### **5.4 Rights Under Other Agreements**

Notwithstanding any other provision of this Agreement, nothing herein shall be construed as relinquishing or foreclosing any rights, including but not limited to firm transmission rights, capacity rights, transmission congestion rights, or transmission credits, that the Interconnection

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Customer shall be entitled to, now or in the future, under any other agreement or tariff as a result of, or otherwise associated with, the transmission capacity, if any, created by the Network Upgrades, including the right to obtain cash reimbursements or transmission credits for transmission service that is not associated with the Small Generating Facility.

### **Article 6. Billing, Payment, Milestones, and Financial Security**

#### **6.1 Billing and Payment Procedures and Final Accounting**

**6.1.1** The Transmission Provider shall bill the Interconnection Customer for the design, engineering, construction, and procurement costs of Interconnection Facilities and Upgrades contemplated by this Agreement on a monthly basis, or as otherwise agreed by the Parties. The Interconnection Customer shall pay each bill within thirty (30) Business Days of receipt, or as otherwise agreed to by the Parties.

**6.1.2** Within ninety (90) Calendar Days of completing the construction and installation of the Transmission Provider's Interconnection Facilities and/or Upgrades described in the Attachments to this Agreement, the Transmission Provider shall provide the Interconnection Customer with a final accounting report of any difference between (1) the Interconnection Customer's cost responsibility for the actual cost of such facilities or Upgrades, and (2) the Interconnection Customer's previous aggregate payments to the Transmission Provider for such facilities or Upgrades. If the Interconnection Customer's cost responsibility exceeds its previous aggregate payments, the Transmission Provider shall invoice the Interconnection Customer for the amount due and the Interconnection Customer shall make payment to the Transmission Provider within thirty (30) Calendar Days. If the Interconnection Customer's previous aggregate payments exceed its cost responsibility under this Agreement, the Transmission Provider shall refund to the Interconnection Customer an amount equal to the difference within 30 calendar days of the final accounting report.

#### **6.2 Milestones**

The Parties shall agree on milestones for which each Party is responsible and list them in Attachment 4 of this Agreement. A Party's obligations under this provision may be extended by agreement. If a Party anticipates

that it will be unable to meet a milestone for any reason other than a Force Majeure Event, it shall immediately notify the other Party of the reason(s) for not meeting the milestone and (1) propose the earliest reasonable alternate date by which it can attain this and future milestones, and (2) requesting appropriate amendments to Attachment 4. The Party affected by the failure to meet a milestone shall not unreasonably withhold agreement to such an amendment unless it will suffer significant uncompensated economic or operational harm from the delay, (2) attainment of the same milestone has previously been delayed, or (3) it has reason to believe that the delay in meeting the milestone is intentional or unwarranted notwithstanding the circumstances explained by the Party proposing the amendment.

### **6.3 Financial Security Arrangements**

At least ninety (90) Calendar Days prior to the commencement of the design, procurement, installation, or construction of a discrete portion of the Transmission Provider's Interconnection Facilities and Upgrades, the Interconnection Customer shall provide the Transmission Provider, at the Interconnection Customer's option, a guarantee, a surety bond, letter of credit or other form of security that is reasonably acceptable to the Transmission Provider and is consistent with the Uniform Commercial Code of the jurisdiction where the Point of Interconnection is located. Such security for payment shall be in an amount sufficient to cover the costs for constructing, designing, procuring, and installing the applicable portion of the Transmission Provider's Interconnection Facilities and Upgrades and shall be reduced on a dollar-for-dollar basis for payments made to the Transmission Provider under this Agreement during its term. In addition:

**6.3.1** The guarantee must be made by an entity that meets the creditworthiness requirements of the Transmission Provider, and contain terms and conditions that guarantee payment of any amount that may be due from the Interconnection Customer, up to an agreed-to maximum amount.

**6.3.2** The letter of credit or surety bond must be issued by a financial institution or insured reasonably acceptable to the Transmission Provider and must specify a reasonable expiration date.

## **Article 7. Assignment, Liability, Indemnity, Force Majeure, Consequential Damages, and Default**

**7.1 Assignment**

This Agreement may be assigned by either Party upon thirty (30) Calendar Days prior written notice and opportunity to object by the other Party; provided that:

**7.1.1** Either Party may assign this Agreement without the consent of the other Party to any affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement;

**7.1.2** The Interconnection Customer shall have the right to assign this Agreement, without the consent of the Transmission Provider, for collateral security purposes to aid in providing financing for the Small Generating Facility, provided that the Interconnection Customer will promptly notify the Transmission Provider of any such assignment.

**7.1.3** Any attempted assignment that violates this article is void and ineffective. Assignment shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. An assignee is responsible for meeting the same financial, credit, and insurance obligations as the Interconnection Customer. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

**7.2 Limitation of Liability**

Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either Party be liable to the other Party for any indirect, special, consequential, or punitive damages, except as authorized by this Agreement.

**7.3 Indemnity**

**7.3.1** This provision protects each Party from liability incurred to third parties as a result of carrying out the provisions of this Agreement. Liability under this provision is exempt from the general limitations on liability found in article 7.2.



**7.3.2** The Parties shall at all times indemnify, defend, and hold the other Party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or failure to meet its obligations under this Agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

**7.3.3** If an indemnified person is entitled to indemnification under this article as a result of a claim by a third party, and the indemnifying Party fails, after notice and reasonable opportunity to proceed under this article, to assume the defense of such claim, such indemnified person may at the expense of the indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.

**7.3.4** If an indemnifying party is obligated to indemnify and hold any indemnified person harmless under this article, the amount owing to the indemnified person shall be the amount of such indemnified person's actual loss, net of any insurance or other recovery.

**7.3.5** Promptly after receipt by an indemnified person of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in this article may apply, the indemnified person shall notify the indemnifying party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying party.

**7.4 Consequential Damages**

Other than as expressly provided for in this Agreement, neither Party shall be liable under any provision of this Agreement for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to the other Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

**7.5 Force Majeure**

**7.5.1** As used in this article, a Force Majeure Event shall mean "any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure Event does not include an act of negligence or intentional wrongdoing."

**7.5.2** If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, the Party affected by the Force Majeure Event (Affected Party) shall promptly notify the other Party, either in writing or via the telephone, of the existence of the Force Majeure Event. The notification must specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the Affected Party is taking to mitigate the effects of the event on its performance. The Affected Party shall keep the other Party informed on a continuing basis of developments relating to the Force Majeure Event until the event ends. The Affected Party will be entitled to suspend or modify its performance of obligations under this Agreement (other than the obligation to make payments) only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of Reasonable Efforts. The Affected Party will use Reasonable Efforts to resume its performance as soon as possible.

**7.6 Default**

**7.6.1** No Default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of a Force Majeure Event as defined in this Agreement or the result of an act or omission of the other Party. Upon a Default, the non-defaulting Party shall give written notice of such Default to the defaulting Party. Except as provided in article 7.6.2, the defaulting Party shall have 60 calendar days from receipt of the Default notice within which to cure such Default; provided however, if such Default is not capable of cure within 60 calendar days, the defaulting Party shall commence such cure within 20 calendar days after notice and continuously and diligently complete such cure within six months

from receipt of the Default notice; and, if cured within such time, the Default specified in such notice shall cease to exist.

**7.6.2** If a Default is not cured as provided in this article, or if a Default is not capable of being cured within the period provided for herein, the non-defaulting Party shall have the right to terminate this Agreement by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not that Party terminates this Agreement, to recover from the defaulting Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this article will survive termination of this Agreement.

## **Article 8. Insurance**

- 8.1** The Interconnection Customer shall, at its own expense, maintain in force general liability insurance without any exclusion for liabilities related to the interconnection undertaken pursuant to this Agreement. The amount of such insurance shall be sufficient to insure against all reasonably foreseeable direct liabilities given the size and nature of the generating equipment being interconnected, the interconnection itself, and the characteristics of the system to which the interconnection is made. The Interconnection Customer shall obtain additional insurance only if necessary as a function of owning and operating a generating facility. Such insurance shall be obtained from an insurance provider authorized to do business in the State where the interconnection is located. Certification that such insurance is in effect shall be provided upon request of the Transmission Provider, except that the Interconnection Customer shall show proof of insurance to the Transmission Provider no later than thirty (30) Calendar Days prior to the anticipated commercial operation date. An Interconnection Customer of sufficient credit-worthiness may propose to self-insure for such liabilities, and such a proposal shall not be unreasonably rejected.
- 8.2** The Transmission Provider agrees to maintain general liability insurance or self-insurance consistent with the Transmission Provider's commercial practice. Such insurance or self-insurance shall not exclude coverage for the Transmission Provider's liabilities undertaken pursuant to this Agreement.
- 8.3** The Parties further agree to notify each other whenever an accident or incident occurs resulting in any injuries or damages that are included

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within the scope of coverage of such insurance, whether or not such coverage is sought.

- 8.4** Prior to the start of the Work, and at all times during the term of the Work and this Contract, the IC shall purchase, at its own expense, and maintain with insurance companies in good standing and acceptable to the Company, such insurance as will protect the IC from liability and claims for injuries and damages which may arise out of or result from the IC operations under the Contract and for which the IC may be legally liable, whether such operations are by the IC or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. The Company intends that this Contract shall also be one of indemnity, and that such indemnification shall be covered by insurance. For the further protection of the IC and the Company, but without restricting or waiving any obligations of the IC herein contained, the IC shall insure the risks associated with the Work and this Contract with minimum coverages and limits as set forth below:
- 8.4.1 Two million dollars (\$2,000,000) for each occurrence if the Gross Nameplate Rating of IC's Generating Facility is greater than one hundred (100) kW;
- 8.4.2 One million dollars (\$1,000,000) for each occurrence if the Gross Nameplate Rating of IC's Generating Facility is greater than twenty (20) kW and less than or equal to one hundred (100) kW; and
- 8.4.3 Five hundred thousand dollars (\$500,000) for each occurrence if the Gross Nameplate Rating of QF's Generating Facility is twenty (20) kW or less.
- 8.4.4 Workers compensation and employers liability insurance at statutory limits.
- 8.5** The IC shall deliver to Company certificates of insurance evidencing valid coverage in effect as of the date that the contract is effective. All policies shall contain provisions that no cancellation of material changes shall become effective except on thirty days written notice to MidAmerican Energy Company. MidAmerican Energy Company shall be named as an additional insured in each of the Contractor's insurance policies.

## **Article 9. Confidentiality**

- 9.1** Confidential Information shall mean any confidential and/or proprietary information provided by one Party to the other Party that is clearly marked or otherwise designated "Confidential." For purposes of this Agreement all design, operating specifications, and metering data provided by the Interconnection Customer shall be deemed Confidential Information regardless of whether it is clearly marked or otherwise designated as such.
- 9.2** Confidential Information does not include information previously in the public domain, required to be publicly submitted or divulged by Governmental Authorities (after notice to the other Party and after exhausting any opportunity to oppose such publication or release), or necessary to be divulged in an action to enforce this Agreement. Each Party receiving Confidential Information shall hold such information in confidence and shall not disclose it to any third party nor to the public without the prior written authorization from the Party providing that information, except to fulfill obligations under this Agreement, or to fulfill legal or regulatory requirements.
- 9.2.1** Each Party shall employ at least the same standard of care to protect Confidential Information obtained from the other Party as it employs to protect its own Confidential Information.
- 9.2.2** Each Party is entitled to equitable relief, by injunction or otherwise, to enforce its rights under this provision to prevent the release of Confidential Information without bond or proof of damages, and may seek other remedies available at law or in equity for breach of this provision.

## **Article 10. Disputes**

- 10.1** The Parties agree to attempt to resolve all disputes arising out of the interconnection process according to the provisions of this article.
- 10.2** In the event of a dispute, either Party shall provide the other Party with a written Notice of Dispute. Such Notice shall describe in detail the nature of the dispute.
- 10.3** Reserved for future use.

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- 10.4 Reserved for future use.
- 10.5 Each Party agrees to conduct all negotiations in good faith and will be responsible for one-half of any costs paid to neutral third-parties.
- 10.6 Reserved for future use.

#### **Article 11. Taxes**

- 11.1 The Parties agree to follow all applicable tax laws and regulations, consistent with Internal Revenue Service and state requirements.
- 11.2 Each Party shall cooperate with the other to maintain the other Party's tax status. Nothing in this Agreement is intended to adversely affect the Transmission Provider's tax exempt status with respect to the issuance of bonds including, but not limited to, local furnishing bonds.

#### **Article 12. Miscellaneous**

##### **12.1 Governing Law, Regulatory Authority, and Rules**

The validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the laws of the state of \_\_\_\_\_ (where the Point of Interconnection is located), without regard to its conflicts of law principles. This Agreement is subject to all Applicable Laws and Regulations. Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a Governmental Authority.

##### **12.2 Amendment**

The Parties may amend this Agreement by a written instrument duly executed by both Parties.

##### **12.3 No Third-Party Beneficiaries**

This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and where permitted, their assigns.

##### **12.4 Waiver**

**12.4.1** The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

**12.4.2** Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Agreement. Termination or default of this Agreement for any reason by Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Transmission Provider. Any waiver of this Agreement shall, if requested, be provided in writing.

**12.5 Entire Agreement**

This Agreement, including all Attachments, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, either Party's compliance with its obligations under this Agreement.

**12.6 Multiple Counterparts**

This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

**12.7 No Partnership**

This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon either Party. Neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

**12.8 Severability**

If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall

negotiate in good faith to restore insofar as practicable the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

**12.9 Security Arrangements**

Infrastructure security of electric system equipment and operations and control hardware and software is essential to ensure day-to-day reliability and operational security. MidAmerican expects all Transmission Providers, market participants, and Interconnection Customers interconnected to electric systems to comply with the recommendations offered by the President's Critical Infrastructure Protection Board and, eventually, best practice recommendations from the electric reliability authority. All public utilities are expected to meet basic standards for system infrastructure and operational security, including physical, operational, and cyber-security practices.

**12.10 Environmental Releases**

Each Party shall notify the other Party, first orally and then in writing, of the release of any hazardous substances, any asbestos or lead abatement activities, or any type of remediation activities related to the Small Generating Facility or the Interconnection Facilities, each of which may reasonably be expected to affect the other Party. The notifying Party shall (1) provide the notice as soon as practicable, provided such Party makes a good faith effort to provide the notice no later than 24 hours after such Party becomes aware of the occurrence, and (2) promptly furnish to the other Party copies of any publicly available reports filed with any governmental authorities addressing such events.

**12.11 Subcontractors**

Nothing in this Agreement shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this Agreement; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this Agreement in providing such services and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

**12.11.1** The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible to the other Party for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall the Transmission Provider be liable for the actions or



inactions of the Interconnection Customer or its subcontractors with respect to obligations of the Interconnection Customer under this Agreement. Any applicable obligation imposed by this Agreement upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

**12.11.2** The obligations under this article will not be limited in any way by any limitation of subcontractor's insurance.

**Article 13. Notices**

**13.1 General**

Unless otherwise provided in this Agreement, any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if delivered in person, delivered by recognized national carrier service, or sent by first class mail, postage prepaid, to the person specified below:

If to the Interconnection Customer:

Interconnection Customer: \_\_\_\_\_  
Attention: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

If to the Transmission Provider:

Transmission Provider: \_\_\_\_\_  
Attention: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

**13.2 Billing and Payment**

Billings and payments shall be sent to the addresses set out below:

Interconnection Customer: \_\_\_\_\_  
Attention: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

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Transmission Provider: \_\_\_\_\_  
Attention: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

**13.3 Alternative Forms of Notice**

Any notice or request required or permitted to be given by either Party to the other and not required by this Agreement to be given in writing may be so given by telephone, facsimile or e-mail to the telephone numbers and e-mail addresses set out below:

If to the Interconnection Customer:

Interconnection Customer: \_\_\_\_\_  
Attention: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

If to the Transmission Provider:

Transmission Provider: \_\_\_\_\_  
Attention: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

**13.4 Designated Operating Representative**

The Parties may also designate operating representatives to conduct the communications which may be necessary or convenient for the administration of this Agreement. This person will also serve as the point of contact with respect to operations and maintenance of the Party's facilities.

Interconnection Customer's Operating Representative:

Interconnection Customer: \_\_\_\_\_  
Attention: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Transmission Provider's Operating Representative:

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Transmission Provider: \_\_\_\_\_  
Attention: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

**13.5 Changes to the Notice Information**

Either Party may change this information by giving thirty (30) Calendar Days written notice prior to the effective date of the change.

**Article 14. Signatures**

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

**For the Transmission Provider**

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**For the Interconnection Customer**

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

## Glossary of Terms

**Affected System** – An electric system other than the Transmission Provider's Transmission System that may be affected by the proposed interconnection.

**Applicable Laws and Regulations** – All duly promulgated applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.

**Business Day** – Monday through Friday, excluding Federal Holidays.

**Default** – The failure of a breaching Party to cure its Breach under the Small Generator Interconnection Agreement.

**Distribution System** – The Transmission Provider's facilities and equipment used to transmit electricity to ultimate usage points such as homes and industries directly from nearby generators or from interchanges with higher voltage transmission networks which transport bulk power over longer distances. The voltage levels at which Distribution Systems operate differ among areas.

**Distribution Upgrades** – The additions, modifications, and upgrades to the Transmission Provider's Distribution System at or beyond the Point of Interconnection to facilitate interconnection of the Small Generating Facility and render the transmission service necessary to effect the Interconnection Customer's wholesale sale of electricity in interstate commerce. Distribution Upgrades do not include Interconnection Facilities.

**Good Utility Practice** – Any of the practices, methods and acts engaged in or approved by a significant portion of the electric industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

**Governmental Authority** – Any federal, state, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power;

provided, however, that such term does not include the Interconnection Customer, the Interconnection Provider, or any Affiliate thereof.

**Interconnection Customer** – Any entity, including the Transmission Provider, the Transmission Owner or any of the affiliates or subsidiaries of either, that proposes to interconnect its Small Generating Facility with the Transmission Provider's Transmission System.

**Interconnection Facilities** – The Transmission Provider's Interconnection Facilities and the Interconnection Customer's Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the Small Generating Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Small Generating Facility to the Transmission Provider's Transmission System. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades or Network Upgrades.

**Interconnection Request** – The Interconnection Customer's request, in accordance with the Tariff, to interconnect a new Small Generating Facility, or to increase the capacity of, or make a Material Modification to the operating characteristics of, an existing Small Generating Facility that is interconnected with the Transmission Provider's Transmission System.

**Material Modification** – A modification that has a material impact on the cost or timing of any Interconnection Request with a later queue priority date.

**Network Upgrades** – Additions, modifications, and upgrades to the Transmission Provider's Transmission System required at or beyond the point at which the Small Generating Facility interconnects with the Transmission Provider's Transmission System to accommodate the interconnection of the Small Generating Facility with the Transmission Provider's Transmission System. Network Upgrades do not include Distribution Upgrades.

**Operating Requirements** – Any operating and technical requirements that may be applicable due to Regional Transmission Organization, Independent System Operator, control area, or the Transmission Provider's requirements, including those set forth in the Small Generator Interconnection Agreement.

**Party or Parties** – The Transmission Provider, Transmission Owner, Interconnection Customer or any combination of the above.

**Point of Interconnection** – The point where the Interconnection Facilities connect with the Transmission Provider's Transmission System.

**Reasonable Efforts** – With respect to an action required to be attempted or taken by a Party under the Small Generator Interconnection Agreement, efforts

that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

**Small Generating Facility** – The Interconnection Customer's device for the production of electricity identified in the Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

**Tariff** – The Transmission Provider or Affected System's Tariff through which open access transmission service and Interconnection Service are offered, as filed with the FERC, and as amended or supplemented from time to time, or any successor tariff.

**Transmission Owner** – The entity that owns, leases or otherwise possesses an interest in the portion of the Transmission System at the Point of Interconnection and may be a Party to the Small Generator Interconnection Agreement to the extent necessary.

**Transmission Provider** – The public utility (or its designated agent) that owns, controls, or operates transmission or distribution facilities used for the transmission of electricity in interstate commerce and provides transmission service under the Tariff. The term Transmission Provider should be read to include the Transmission Owner when the Transmission Owner is separate from the Transmission Provider.

**Transmission System** – The facilities owned, controlled or operated by the Transmission Provider or the Transmission Owner that are used to provide transmission service under the Tariff.

**Upgrades** – The required additions and modifications to the Transmission Provider's Transmission System at or beyond the Point of Interconnection. Upgrades may be Network Upgrades or Distribution Upgrades. Upgrades do not include Interconnection Facilities.

**Description and Costs of the Small Generating Facility,  
Interconnection Facilities, and Metering Equipment**

Equipment, including the Small Generating Facility, Interconnection Facilities, and metering equipment shall be itemized and identified as being owned by the Interconnection Customer, the Transmission Provider, or the Transmission Owner. The Transmission Provider will provide a best estimate itemized cost, including overheads, of its Interconnection Facilities and metering equipment, and a best estimate itemized cost of the annual operation and maintenance expenses associated with its Interconnection Facilities and metering equipment.

**One-line Diagram Depicting the Small Generating Facility,  
Interconnection  
Facilities, Metering Equipment, and Upgrades**



**Milestones**

In-Service Date: \_\_\_\_\_

Critical milestones and responsibility as agreed to by the Parties:

	<b>Milestone/Date</b>	<b>Responsible Party</b>
(1)	_____	_____
(2)	_____	_____
(3)	_____	_____
(4)	_____	_____
(5)	_____	_____
(6)	_____	_____
(7)	_____	_____
(8)	_____	_____
(9)	_____	_____
(10)	_____	_____

Agreed to by:

For the Transmission Provider \_\_\_\_\_ Date \_\_\_\_\_

For the Transmission Owner (If Applicable) \_\_\_\_\_  
Date \_\_\_\_\_

For the Interconnection Customer \_\_\_\_\_ Date \_\_\_\_\_

**Additional Operating Requirements for the Transmission Provider's  
Transmission System and Affected Systems Needed to Support  
the Interconnection Customer's Needs**

The Transmission Provider shall also provide requirements that must be met by the Interconnection Customer prior to initiating parallel operation with the Transmission Provider's Transmission System.

**Transmission Provider's Description of its Upgrades  
and Best Estimate of Upgrade Costs**

The Transmission Provider shall describe Upgrades and provide an itemized best estimate of the cost, including overheads, of the Upgrades and annual operation and maintenance expenses associated with such Upgrades. The Transmission Provider shall functionalize Upgrade costs and annual expenses as either transmission or distribution related.

## **Transmission Provider's State Mandated Procedures and Requirements**

Pursuant to federal law, as of August 2006, all state regulatory authorities are to begin consideration of whether to adopt interconnection service applicable to interconnections subject to state jurisdiction. This determination is to be completed by August 2007. All of the states in which MidAmerican operates have commenced proceedings regarding this issue. Please contact MidAmerican during this period for updated information on the status of these proceedings. These procedures will be updated should any states determine to adopt generator service.

### **1.1 The State of Illinois**

The Illinois Electric Service Customer Choice and Rate Relief Law of 1997 restructured the Illinois electric service industry and created a competitive marketplace. Non-residential customers became eligible for choice beginning in 1999. Effective May 1, 2002, residential customers of Illinois investor-owned utilities were eligible to choose their electric supplier. Use the links below to access MidAmerican's website and the MidAmerican's Supplier Guide. The Supplier guide describes the process to be followed in order for a prospective supplier to register to serve customers in MidAmerican's Illinois service territory. Alternately, the customer may contact MidAmerican to request a copy.

<http://www.midamericanenergy.com/html/choice2b.asp>

[http://www.midamericanenergy.com/pdf/illinois\\_choice/supgddftplntxt5.pdf](http://www.midamericanenergy.com/pdf/illinois_choice/supgddftplntxt5.pdf)

The Illinois Commerce Commission (ICC) website also has sections of the Illinois Code that deal with Supplier certification by the ICC.

### **1.2 The State of Iowa**

The Iowa Administrative Code 199 Chapter 15 rules and regulations may be accessed via the web at the following link. There should be no other special procedures or guides.

<http://www.legis.state.ia.us/Rules/2002/iac/199iac/19915/19915.pdf#search=%22Iowa%20Administrative%20Code%20Chapter%2015%20small%20power%22>

Alternately, the customer may contact MidAmerican to request a copy.

MidAmerican Energy Company

### **1.3 The State of South Dakota**

The South Dakota Administrative Code rules and regulations may be accessed via the web at the following link. There should be no other special procedures or guides.

Alternately, the customer may contact MidAmerican to request a copy.