

**INTERCONNECTION RULES FOR NET
METERING
For Customer-Owned, Grid Connected Electric Generating Systems
of 200 kW or Less**

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1 General (*Scope and Purpose*) 860-039-0005 & 860-082-0005)

These rules govern net metering facilities interconnecting to the electric system of the City of McMinnville, a municipal corporation of the State of Oregon, acting by and through its Water and Light Commission (“MW&L”), pursuant to ORS 757.300.

The purpose of the MW&L Commission herein is to adopt “additional control and testing requirements for Customer-generators to protect public safety or system reliability” in operating a net metering facility.

Consistent with ORS 757.300(4) (a) customer-generators must install, operate, and maintain a net metering facility in compliance with the state building code and IEEE Standard 1547, under a MW&L Interconnection Agreement for Net Metering (“Interconnection Agreement”).

These rules do not apply to a net metering facilities interconnected prior to August 21, 2008 (date net metering rules first adopted by MW&L).

However, these rules become applicable to an existing net metering facility at transfer of the net metering facility from the existing customer generator, at termination of the existing customer-generator's agreement, or at the time of a change to the facility other than a "minor equipment modification." An application under these rules must be submitted to MW&L 60 days prior to these updated rules becoming applicable to the net metering facility. (Reference OAR 860-082-0025).

2. Authority, and Appeal:

2.1 Authority. The MW&L Commission delegates to the MW&L General Manager (GM) authority to implement and where applicable to enforce by written decision the rules contained herein. The GM may approve an application under these rules and authorize the mayor and clerk to sign an agreement under these rules.

2.2 Appeal. Any decision of the General Manager is subject to appeal to the MW&L Commission within 30 calendar days of issuance of the decision.

3. Time:

Unless otherwise specified, time periods contained herein will be extended 3 days if the time period is to provide notice and is completed by mail. Any time period contained reference in these rules may be extended a reasonable period for good cause by decision of the MW&L General Manager. An extension of time period does not affect an applicant's que position.

4. Net Metering Kilowatt Limit (860-039-0010)

4.1 For customer-generators, these rules apply to net metering facilities that have a generating capacity of 200 kilowatts or less.

4.2 Nothing in these rules is intended to limit the number of net metering facilities per customer-generator so long as the net metering facilities in aggregate on the customer-generator's contiguous property do not exceed the applicable kilowatt/megawatt limit.

5. Definitions (860-039-0005)

5.1 "ANSI C12.1 standards" means the standards prescribed by the most recent edition of the American National Standards Institute, Committee C12.1 (ANSI C12.1), entitled "American National Standard for Electric Meters - Code for Electricity Metering," approved by the C12.1 Accredited Standard Committee. "Applicant" means a person who has filed an application to interconnect a net metering facility to an electric distribution system.

5.2 "Applicant" means a person who has filed an application to interconnect a net metering facility to an electric distribution system.

5.3 "Area network" means a type of electric distribution system served by multiple transformers interconnected in an electrical network circuit in order to

provide high reliability of service. This term has the same meaning as the term "secondary grid network" as defined in IEEE standard 1547 Section 4.1.4.

5.4 "Contiguous" means a single area of land that is considered to be contiguous even if there is an intervening public or railroad right of way, provided that rights of way land on which municipal infrastructure facilities exist (such as street lighting, sewerage transmission, and roadway controls) are not considered contiguous.

5.5 "Bonneville Power Administration" means the United States of America, Department of Energy, acting by and through the Bonneville Power Administration.

5.6 "Customer-generator" means a customer-generator as defined in ORS 757.300(1) (a) (the person who is the user of a net metering facility and who has applied for and been accepted to receive electricity service at a premises from the serving [public] utility).

5.7 "Electric distribution system" means that portion of an electric system which delivers electricity from transformation points on the transmission system to points of connection at a customer's premises.

5.8 "Equipment package" means a group of components connecting an electric generator with an electric distribution system, and includes all interface equipment including switchgear, inverters, or other interface devices. An equipment package may include an integrated generator or electric production source.

5.9 "Fault current" means electrical current that flows through a circuit and is produced by an electrical fault, such as to ground, double-phase to ground, and three-phase to ground, phase-to-phase, and three-phase.

5.10 "Generation capacity" means the nameplate capacity of the power generating device(s). Generation capacity does not include the effects caused by inefficiencies of power conversion or plant parasitic loads.

5.11 "Good utility practice" means a practice, method, policy, or action engaged in or accepted by a significant portion of the electric industry in a region, which a reasonable utility official would expect, in light of the facts reasonably discernable at the time, to accomplish the desired result reliably, safely and expeditiously.

5.12 "IEEE standards" means the standards published in the edition of the Institute of Electrical and Electronics Engineers (IEEE) Standard 1547, entitled "Interconnecting Distributed Resources with Electric Power Systems," approved by the IEEE SA Standards Board, and in the edition of the IEEE Standard 1547.1, entitled "IEEE Standard Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems," approved

by the IEEE SA Standards Board, currently in use with MW&L.

5.13 "Impact study" means an engineering analysis of the probable impact of a net metering facility on the safety and reliability of MW&L's electric distribution system

5.14 "Interconnection agreement" means an agreement between a Customer-generator and MW&L, which governs the connection of the net metering facility to the electric distribution system, as well as the ongoing operation of the net metering facility after it is connected to the system. An interconnection agreement will be in a standard form of agreement adopted by the Water and Light Commission.

5.15 "interconnection facilities study" means a study conducted by MW&L for the customer-generator that determines the additional or upgraded distribution system facilities, the cost of those facilities, and the time schedule required to interconnect the net metering facility to MW&L's distribution system

5.16 "Minor equipment modification" means a change to a small generator facility or its associated interconnection equipment that:

5.16.1 Does not affect the application of the approval requirements in Levels 1, 2, or 3;

5.16.2 Does not, in MW&L's reasonable opinion, have a material impact on the safety or reliability of MW&L's transmission or distribution system or an affected system; and

5.16.3 Does not affect the nameplate capacity of the net metering facility

5.17 "Net metering facility" means a net metering facility as defined in ORS 757.300(1) (d).

5.18 "Non-residential customer" means a retail electricity consumer that is not a residential customer, except "non-residential customer" does not include a customer who would be a residential customer but for the residency provisions of subsection (17) of this section.

5.19 "Point of common coupling" means the point beyond the customer-generator's meter where the customer-generator facility connects with the electric distribution system.

5.20 "Residential customer" means a retail electricity consumer that resides at a dwelling primarily used for residential purposes. "Residential customer" does not include retail electricity customers in a dwelling typically used for residency periods of less than 30 days, including hotels, motels, camps, lodges, and clubs. "Dwelling" includes, but is not limited to, single-family dwellings,

separately-metered apartments, adult foster homes, manufactured dwellings, and floating homes.

5.21 "Spot network" means a type of electric distribution system that uses two or more inter-tied transformers protected by network protectors to supply an electrical network circuit. A spot network may be used to supply power to a single customer or a small group of customers.

5.22 "Notice" (See Section No. 19 below for MW&L Notice)

6. Oregon Administrative Rules:

References to the Oregon Administrative Rules ("OAR") applicable to "public utilities" (but not municipal utilities such as MW&L) , unless otherwise indicated, are for informational purposes only and the references to OARs are intended only as persuasive authority in interpretation of these rules.

7 Disconnect Switch (860-039-0015)

7.1 The Customer-generator must install and maintain a manual disconnect switch that will disconnect the net metering facility from the MW&L system. The disconnect switch must be a lockable, load-break switch that plainly indicates whether it is in the open or closed position. The disconnect switch must be readily accessible to MW&L at all times and located within 10 feet of the meter.

7.1.1 For customer-generator services of 600 volts or less, a disconnect switch will not be required for a net metering facility that is inverter-based with a maximum rating as shown below:

Service Type	Maximum Net Metering Facility Size (kW)
240 Volts, Single-phase, 3 Wire	7.2
120/208 Volts, 3-Phase, 4 Wire	10.5
120/240 Volts, 3-Phase, 4 Wire	12.5
277/480 Volts, 3-Phase, 4 Wire	25.0

7.1.2 For other service types, the net metering facility must not impact the customer-generator's service conductors by more than 30 amperes.

7.1.3 It should be noted that, if the customer-generator chooses to not install a disconnect switch as allowed by 7.1.1, the customer-generator's meter may be pulled, disconnecting the electric service beyond the meter, if the net metering facility must be physically disconnected for any reason.

7.1.4 The disconnect switch may be located more than 10 feet from the

MW&L meter if permanent instructions are posted at the meter indicating the precise location of the disconnect switch. MW&L must approve the location of the disconnect switch prior to the installation of the net metering facility.

- 7.1.5 To maintain the safe operation of its electric system, and without notice, MW&L may in its sole discretion disconnect a net metering facility. The customer-generator's electric service may be disconnected by the utility entirely if the net metering facility must be physically disconnected for any reason.

8. Net Metering Facility Requirements (860-039-0020)

- 8.1 To qualify for the Level 1 and the Level 2 interconnection review procedures set forth below, a net metering facility must be certified as complying with the following standards, as applicable:
- 8.1.1 IEEE standards; and
 - 8.1.2. UL 1741 Inverters, Converters, and Controllers for Use in Independent Power Systems.
- 8.2 An equipment package will be considered certified for interconnected operation if it has been submitted by a manufacturer to a nationally recognized testing and certification laboratory, and has been tested and listed by the laboratory for continuous interactive operation with an electric distribution system in compliance with the applicable codes and standards listed in section (1) of this rule.
- 8.3 If the equipment package has been tested and listed in accordance with this section as an integrated package, which includes a generator or other electric source, the equipment package will be deemed certified, and the public utility will not require further design review, testing or additional equipment.
- 8.4 If the equipment package includes only the interface components (switchgear, inverters, or other interface devices), an interconnection applicant must show that the generator or other electric source being utilized with the equipment package is compatible with the equipment package and consistent with the testing and listing specified for the package. If the generator or electric source being utilized with the equipment package is consistent with the testing and listing performed by the nationally recognized testing and certification laboratory, the equipment package will be deemed certified, and the public utility will not require further design review, testing or additional equipment.
- 8.5 A net metering facility must be equipped with metering equipment that can measure the flow of electricity in both directions, comply with ANSI C12.1 standards and OAR 860-023-0015. MW&L will install the required metering equipment at MW&L's expense.

8.6 *A customer-generator must install, operate and maintain a net metering facility in compliance with the IEEE standards.*

9. Application for Interconnection (860-039-0025)

9.1 An application for interconnection review will be submitted on a standard form, available from MW&L. The application form will require the following types of information.

9.1.1 The name of the applicant involved; and

9.1.2 The type and specifications of the net metering facility; and

9.1.3 The level of interconnection review sought; e.g., Level 1, Level 2 or Level 3; and

9.1.4 The contractor who will install the net metering facility; and

9.1.5 Equipment certifications; and

9.1.6 The anticipated date the net metering facility will be operational; and

9.1.7 Other information that the utility deems is necessary to determine compliance with these net metering rules.

9.2 *The MW&L General Manager will adopt a form(s) of application for use under these rules.*

9.3 Within **5 business days** (except where there is good cause shown for additional time) after receiving an application for Level 1 or Level 2 interconnection review, MW&L will provide written or electronic mail notice to the applicant that it received the application and whether the application is complete. If the application is incomplete, the written notice will include a list of all the information needed to complete the application.

9.4 An applicant will retain its original queue position for an interconnection request if the applicant resubmits its application at a higher level of review within 30 business days of MW&L's denial of the application at a lower level of review.

9.5 MW&L will not be responsible for the cost of determining the rating of equipment owned by a customer-generator or of equipment owned by other local customers.

9.6 At the time of application, an applicant may choose to simultaneously submit an executed MW&L Interconnection Agreement.

10. Level 1 Net Metering Interconnection Review (860-039-0030)

- 10.1 A net metering facility meeting the following criteria is eligible for Level 1 interconnection review:
- 10.1.1 The facility is inverter-based; and
 - 10.1.2 The facility has a capacity of 25 kilowatts or less.
- 10.2 MW&L will approve interconnection under the Level 1 interconnection review procedure if:
- 10.2.1 The aggregate generation capacity on the distribution circuit to which the net metering facility will interconnect, including the capacity of the net metering facility, will not contribute more than 10 percent to the distribution circuit's maximum fault current at the point on the high voltage (primary) level that is nearest the proposed point of common coupling.
 - 10.2.2 A net metering facility's point of common coupling will not be on a transmission line, a spot network, or an area network.
 - 10.2.3 If a net metering facility is to be connected to a radial distribution circuit, the aggregate generation capacity connected to the circuit, including that of the net metering facility, will not exceed 10 percent (15 percent for solar electric generation) of the circuit's total annual peak load, as most recently measured at the substation.
 - 10.2.4 If a net metering facility is to be connected to a single-phase shared secondary, the aggregate generation capacity connected to the shared secondary, including the net metering facility, will not exceed 20 kilovolt-amps.
 - 10.2.5 If a single-phase net metering facility is to be connected to a transformer center tap neutral of a 240 volt service, that addition of the net metering facility will not create a current imbalance between the two sides of the 240 volt service of more than 20 percent of nameplate rating of the service transformer.
- 10.3 Within **10 business days** after MW&L notifies a Level 1 applicant that the application is complete, MW&L will notify the applicant that:
- 10.3.1 The net metering facility meets all applicable criteria and the interconnection will be approved upon installation of any required meter upgrade, completion of any required inspection of the facility, and execution of an interconnection agreement; or

- 10.3.2 The net metering facility has failed to meet one or more of the applicable criteria and the interconnection application is denied.
- 10.4 If MW&L does not notify a Level 1 applicant in writing or by electronic mail whether the interconnection is approved or denied within **20 business days** after the receipt of an application, the interconnection will be deemed approved. Interconnections approved under this section remain subject to **Section 10.7 below**.
- 10.5 Within **five business days** after sending the notice to an applicant that the proposed interconnection meets the Level 1 requirements, MW&L will notify the applicant whether:
- 10.5.1 An inspection of the net metering facility for compliance with the net metering rules is required prior to the operation of the facility; and
- 10.5.2 An interconnection agreement is required for the net metering facilities. If required, MW&L will execute and send to the applicant an interconnection agreement, unless the applicant has already submitted such an agreement with its application for interconnection.
- 10.6 On receipt of any required executed interconnection agreement from the applicant and satisfactory completion of any required inspection, MW&L will approve the interconnection, conditioned on compliance with all applicable building codes.
- 10.7 A customer-generator will notify MW&L of the anticipated start date for operation of the net metering facility at least five business days prior to starting operation, either through the submittal of the interconnection agreement or in a separate notice. If MW&L requires an inspection of the net metering facility, the applicant will not begin operating the facility until satisfactory completion of the inspection.
- 10.8 If an application for Level 1 interconnection review is denied because it does not meet one or more of the applicable requirements in this section, an applicant may resubmit the application under the Level 2 or Level 3 interconnection review procedure, as appropriate.

11. Level 2 Net Metering Interconnection Review (860-039-0035)

- 11.1 MW&L will apply the following Level 2 interconnection review procedure for an application to interconnect a net metering facility that meets the following criteria:
- 11.1.1 The facility has a capacity of 200 Kilowatts or less; and
- 11.1.2 The facility does not qualify for or failed to meet applicable Level 1 interconnection review procedures.

11.1.3 The facility complies with and permits MW&L to continue to comply with terms and conditions of MW&L agreements with the Bonneville Power Administration.

11.2 MW&L will approve interconnection under the Level 2 interconnection review procedure if:

11.2.1 The aggregate generation capacity on the distribution circuit to which the net metering facility will interconnect, including the capacity of the net metering facility, will not cause any distribution protective equipment (including, but not limited to, substation breakers, fuse cutouts, and line reclosers), or customer-generator equipment on the electric distribution system, to exceed 90 percent of the short circuit interrupting capability of the equipment. In addition, a net metering facility will not be connected to a circuit that already exceeds 90 percent of the short circuit interrupting capability, prior to interconnection of the facility.

11.2.2 If there are posted transient stability limits to generating units located in the general electrical vicinity of the proposed point of common coupling, including, but not limited to within three or four transmission voltage level busses, the aggregate generation capacity, including the net metering facility, connected to the distribution low voltage side of the substation transformer feeding the distribution circuit containing the point of common coupling will not exceed 10 megawatts.

11.2.3 The aggregate generation capacity connected to the distribution circuit, including the net metering facility, will not contribute more than 10 percent to the distribution circuit's maximum fault current at the point on the high voltage (primary) level nearest the proposed point of common coupling.

11.2.4 If a net metering facility is to be connected to a radial distribution circuit, the aggregate generation capacity connected to the electric distribution system by non-public utility sources, including the net metering facility, will not exceed 10 percent (or 15 percent for solar electric generation) of the total circuit annual peak load. For the purposes of this subsection, annual peak load will be based on measurements taken over the 12 months previous to the submittal of the application, measured for the circuit at the substation nearest to the net metering facility.

11.2.5 If a net metering facility is to be connected to three-phase, three wire primary MW&L distribution lines, a three-phase or single-phase generator will be connected phase-to-phase.

11.2.6 If a net metering facility is to be connected to three-phase, four

wire primary MW&L distribution lines, a three-phase or single-phase generator will be connected line-to-neutral and will be effectively grounded.

- 11.2.7 If a net metering facility is to be connected to a single-phase shared secondary, the aggregate generation capacity on the shared secondary, including the net metering facility, will not exceed 20 kilovolt-amps.
- 11.2.8 If a net metering facility is single-phase and is to be connected to a transformer center tap neutral of a 240 volt service, the addition of the net metering facility will not create a current imbalance between the two sides of the 240 volt service that is greater than 20 percent of the nameplate rating of the service transformer.
- 11.2.9 A net metering facility's point of common coupling will not be on a transmission line.
- 11.2.10 If a net metering facility's proposed point of common coupling is on a spot or area network, the interconnection will meet the following additional requirements:
 - 11.2.10.1 For a net metering facility that will be connected to a spot network circuit, the aggregate generation capacity connected to that spot network from the net metering facilities, and any generating facilities, will not exceed five percent of the spot network's maximum load;
 - 11.2.10.2 For a net metering facility that utilizes inverter-based protective functions, which will be connected to an area network, the net metering facility, combined with any other generating facilities on the load side of network protective devices, will not exceed 10 percent of the minimum annual load on the network, or 500 kilowatts, whichever is less. For the purposes of this paragraph, the percent of minimum load for solar electric generation net metering facility will be calculated based on the minimum load occurring during an off-peak daylight period; and
 - 11.2.10.3 For a net metering facility that will be connected to a spot or an area network that does not utilize inverter-based protective functions, or for an inverter-based net metering facility that does not meet the requirements of paragraphs (1) or (2) of this subsection, the net metering facility will utilize low forward power relays or other protection devices that ensure no export of power from the net metering facility, including inadvertent export (under fault conditions) that could adversely affect protective devices on the network.

11.3 Within a 30 business days after notifying a Level 2 applicant that the application is complete, MW&L will perform an initial review of the proposed interconnection to determine whether the interconnection meets the applicable criteria. During this initial review, MW&L may, at its own expense, conduct any studies or tests it deems necessary to evaluate the proposed interconnection and provide notice to the applicant of one of the following determinations:

11.3.1 The net metering facility meets the applicable requirements and that interconnection will be approved following any required inspection of the facility and fully executed interconnection agreement. Within **three business days** after this notice, MW&L will provide the applicant with an executable interconnection agreement;

11.3.2 The net metering facility failed to meet one or more of the applicable requirements, but MW&L determined that the net metering facility may be interconnected consistent with safety, reliability, and power quality. In this case, MW&L will notify the applicant that the interconnection will be approved following any required inspection of the facility and fully executed interconnection agreement. Within **five business days** after this notice, MW&L will provide the applicant with an executable interconnection agreement;

11.3.3 The net metering facility failed to meet one or more of the applicable requirements, but additional review may enable MW&L to determine that the net metering facility may be interconnected consistent with safety, reliability, and power quality. In such a case, MW&L will offer to perform additional review to determine whether minor modifications to the electric distribution system would enable the interconnection to be made consistent with safety, reliability and power quality. MW&L will provide to the applicant a nonbinding, good faith estimate of the costs of such additional review, or such minor modifications, or both. MW&L will undertake the additional review or modifications only after the applicant consents to pay for the review or modifications, or both; or

11.3.4 The net metering facility failed to meet one or more of the applicable requirements, and that additional review would not enable MW&L to determine that the net metering facility could be interconnected consistent with safety, reliability, and power quality. In such a case, MW&L will notify the applicant that the interconnection application has been denied, and will provide an explanation of the reason(s) for the denial, including a list of additional information, or modifications to the net metering facility, or both, which would be required in order to obtain an approval under Level 2 interconnection procedures.

11.4. An applicant that receives an interconnection agreement under

subsection 11.3.1 or 11.3.2. of this rule must:

11.4.1 Execute the agreement and return it to MW&L at least **10 business days** prior to starting operation of the net metering facility (unless MW&L does not so require); and

11.4.2 Indicate to MW&L the anticipated start date for operation of the net metering facility.

11.5 MW&L may require an inspection of a net metering facility for compliance with these net metering rules prior to operation, and may require and arrange for witness of commissioning tests as set forth in IEEE standards. MW&L must schedule any inspections or tests under this section promptly and within a reasonable time after submittal of the application. The applicant may not begin operating the net metering facility until after the inspection and testing is completed.

11.6 Approval of interconnected operation of any Level 2 net metering facility must be conditioned on all of the following occurring:

11.6.1 Approval of the interconnection by the electrical code official with jurisdiction over the interconnection;

11.6.2 Successful completion of MW&L inspection or witnessing, or both, of commissioning tests requested by MW&L; and

11.7 Passing of the planned start date provided by the applicant. If an application for Level 2 interconnection review is denied because it does not meet one or more of the requirements in this section, the applicant may resubmit the application under the Level 3 interconnection review procedure.

12. Level 3 Net Metering Interconnection Review (860-039-0040)

12.1 MW&L will apply the Level 3 review procedure for an application to interconnect a net metering facility that meets the following criteria:

12.1.1 The facility has a capacity of 200 Kilowatts or less; and

12.1.2 The facility does not qualify or failed to meet Level 2 interconnection review procedures.

12.1.3 The facility complies with and permits MW&L to continue to comply with terms and conditions of MW&L agreements with the Bonneville Power Administration.

12.2 Following receipt of a Level 3 application and five (5) business days of a request from the applicant, MW&L will provide pertinent information to the applicant, such as the available fault current at the proposed interconnection location, the existing peak loading on the lines in the

general vicinity of the net metering facility, and the configuration of the distribution lines at the proposed point of common coupling.

12.3 Within ten (10) business days *after* receiving a complete application for Level 3 interconnection review, MW&L *will* provide an impact study agreement to the applicant, which will include a non-binding, good faith cost estimate for an impact study to be performed by MW&L. The impact study will be conducted in accordance with good utility practice and must:

12.3.1 Detail the impacts to the electric distribution system that would result if the net metering facility were interconnected without modifications to either the net metering facility or to the electric distribution system;

12.3.2 Identify any modifications to MW&L's electric distribution system that would be necessary to accommodate the proposed interconnection; and

12.3.3 Focus on power flows and utility protective devices, including control requirements; and

12.3.4 Include the following elements, as applicable:

12.3.4.1 A load flow study;

12.3.4.2 A short-circuit study;

12.3.4.3 A circuit protection and coordination study;

12.3.4.4 The impact on the operation of the electric distribution system;

12.3.4.5 A stability study, along with the conditions that would justify including this element in the impact study;

12.3.4.6 A voltage collapse study, along with the conditions that would justify including this element in the impact study; and

12.3.4.7 Additional elements, if approved in writing by Commission staff prior to the impact study.

12.4 After the applicant executes the impact study agreement and pays MW&L the amount of the good faith estimate, MW&L will complete the impact study and will notify the applicant within **60 calendar days** of one of the following results:

12.4.1 Only minor modifications to MW&L's electric distribution system are necessary to accommodate interconnection. In such a case,

MW&L will send the applicant an interconnection agreement that details the scope of the necessary modifications and a non-binding, good faith estimate of their cost; or

12.4.1 Substantial modifications to MW&L's electric distribution system are necessary to accommodate the proposed interconnection. In such a case, MW&L must provide a non-binding, good faith estimate of the cost of the modifications. In addition, MW&L *may* offer to conduct, at the applicant's expense, an interconnection facilities study that *will* identify the types and cost of equipment needed to safely interconnect the applicant's net metering facility.

12.5 If the proposed interconnection may affect electric transmission or delivery systems other than those controlled by MW&L, operators of those other systems may require additional studies to determine the potential impact of the interconnection on those systems. If such additional studies are required, MW&L will coordinate the studies but will not be responsible for their timing. The applicant will be responsible for the costs of any such additional studies required by another affected system. Such studies will be conducted only after the applicant has provided written authorization.

12.6 At request of the applicant, MW&L may provide an interconnection facilities study agreement. The interconnection facilities study agreement will describe the work to be undertaken in the interconnection facilities study and will include a non-binding, good faith estimate of the cost to the applicant for completion of the study. Upon the execution by the applicant of the interconnection facilities study agreement, MW&L will conduct an interconnection facilities study to identify the facilities necessary to safely interconnect the net metering facility with MW&L's electric distribution system, and to propose a non-binding, good faith estimate of the cost of those facilities and the time required to build and install those facilities.

12.7 Upon completion of an interconnection facilities study, MW&L will provide the applicant with the results of the study and an executable interconnection agreement. The agreement will list the conditions and facilities necessary for the net metering facility to safely interconnect with the public utility's electric distribution system, and will include a non-binding, good faith estimate of the cost of those facilities and the estimated time required to build and install those facilities.

12.8 If the applicant wishes to interconnect, it must execute the interconnection agreement and return it to MW&L at least **10 business days** prior to starting operation of the net metering facility (unless MW&L does not so require), pay a deposit of not more than 50 percent of the estimated cost of the facilities identified in the interconnection facilities study, complete installation of the net metering facility, and agree to pay MW&L the actual installed cost of the facilities needed to interconnect as identified in the interconnection facilities study.

- 12.9 Within **15 business days** after notice from the applicant that the net metering facility has been installed, MW&L will inspect the net metering facility and will arrange to witness any commissioning tests required under IEEE standards. MW&L and the applicant will select a date by mutual agreement for MW&L to witness commissioning tests.
- 12.10 If the net metering facility satisfactorily passes required commissioning tests, if any, MW&L will notify the applicant in writing, within three business days after the tests, of one of the following:
- 12.10.1 The interconnection is approved and the net metering facility may begin operation; or
- 12.10.2 The interconnection facilities study identified necessary construction that has not been completed, the date upon which the construction will be completed and the date when the net metering facility may begin operation.
- 12.11 If the commissioning tests are not satisfactory, the applicant will repair or replace the unsatisfactory equipment and reschedule a commissioning test.

13. Net Metering Interconnection Fees and Costs (860-039-0045)

- 13.1 MW&L will not charge an application, or other fee, to an applicant that requests Level 1 interconnection review. However, if an application for Level 1 interconnection review is denied because it does not meet the requirements for Level 1 interconnection review and the applicant resubmits the application under another review procedure, MW&L will impose a fee for the resubmitted application, consistent with this section.
- 13.2 For a Level 2 interconnection review, MW&L will charge fees as established by the MW&L Commission, plus the reasonable cost of any required minor modifications to the electric distribution system or additional review. Costs for such minor modifications or additional review will be based on MW&L's non-binding, good faith estimates and the ultimate actual installed costs. Costs for engineering work done as part of any additional review will be as described in MW&L rate schedules.
- 13.3 For a Level 3 interconnection review, MW&L will charge fees as established by the MW&L Commission, as well as charges for actual time spent on any required impact or facilities studies. Costs for engineering work done as part of an impact study or interconnection facilities study will be as described in MW&L rate schedules. If MW&L must install facilities in order to accommodate the interconnection of the net metering facility, the cost of such facilities will be the responsibility of the applicant.

14. Requirements after Approval of a Net Metering Interconnection (860-039-0050)

- 14.1 MW&L will not require an applicant whose facility meets the criteria for interconnection approval under the Level 1 or Level 2 interconnection review procedure to perform or pay for additional tests, except if agreed to by the applicant; or as otherwise required by these rules or fees established by the Commission.
- 14.2 MW&L will not charge any fee or other charge for connecting to MW&L's distribution system or for operation of a net metering facility for the purposes of net metering, except for the fees provided for under these net metering rules, or other applicable fee adopted by the Water and Light Commission.
- 14.3 Once a net metering interconnection has been approved under these net metering rules, MW&L will not require a customer-generator to test or perform maintenance on its facility except for the following:
- 14.3.1 An annual test in which the net metering facility is disconnected from MW&L's equipment to ensure that the inverter stops delivering power to the grid;
 - 14.3.2 Any manufacturer-recommended testing or maintenance;
 - 14.3.3 Any post-installation testing necessary to ensure compliance with IEEE standards or to ensure safety; and
 - 14.3.4 The customer-generator replaces a major equipment component that is different from the originally installed model.
- 14.4 When an approved net metering facility undergoes maintenance or testing in accordance with the requirements of these net metering rules, the customer-generator must retain written records for seven years documenting the maintenance and the results of testing.
- 14.5 MW&L has the right to inspect a customer-generator's facility after interconnection approval is granted, at reasonable hours and with reasonable prior notice to the customer-generator. If MW&L discovers that the net metering facility is not in compliance with the requirements of these net metering rules, MW&L may require the customer-generator to disconnect the net metering facility until compliance is achieved.
- 14.6 The approved facility must continue to operate and be maintained in a manner that permits MW&L to remain in compliance with the terms and conditions of MW&L agreements with the Bonneville Power Administration.

15. Net Metering Billing (860-039-0055)

- 15.1 MWL shall measure the electricity produced and consumed by Customer-generator during each billing period, in accordance with MW&L's metering practices.
- 15.2 If the amount of the electricity fed back to MW&L during the billing period by Customer-generator does not exceed the amount of electricity supplied by MW&L to Customer-generator, then MW&L will bill the Customer-generator for the net electricity supplied at the same rate and with the same customer charges(s) paid by other customers of MW&L in the same rate class as Customer-generator.
- 15.3. If the amount of the electricity fed back to MW&L during the billing period by Customer-generator exceeds the amount of electricity supplied by MW&L to Customer-generator, then MW&L will bill Customer-generator the minimum monthly charge(s) paid by other customers of MW&L in the same rate class as Customer-generator and carry forward to the next billing period a credit for the excess kilowatt-hour generation fed back to MW&L.
- 15.4 For the billing cycle ending at end of fiscal year, June 30, any remaining unused kilowatt-hour credit accumulated during the previous year shall be credited to the Customer-generators at MW&L's then applicable avoided energy cost rates, as determined in the sole discretion of MW&L. MW&L's avoided energy cost rate, as well as residential and commercial user rates, may be amended, supplemented or adjusted by MW&L from time to time.

16. Aggregation of Meters for Net Metering (860-039-0065)

16.1 [For the purpose of measuring electricity usage under the net metering program, MW&L will, upon request from a customer-generator, aggregate for billing purposes a meter to which the net metering facility is physically attached ("designated meter") with one or more meters ("additional meter") in the manner set out in this section. This rule applies only when:

16.1.1 The additional meter is located on the customer-generator's contiguous property;

16.1.2 The additional meter is used to measure only electricity used for the customer-generator's requirements;

16.1.3 The designated meter and the additional meter are subject to the same rate schedule; and

16.1.4 The designated meter and the additional meter are served by the same primary feeder.

16.2 A customer-generator must give at least **60 calendar days' notice** to MW&L to request that additional meters be included in meter aggregation. The specific meters must be identified at the time of such request. In the event that more than one additional meter is identified, the customer-generator must designate the rank order for the additional meters to which net metering credits are to be applied, in accordance with section 16.4.

16.3 The aggregation of meters will apply only to charges that use kilowatt-hours as the billing determinant. All other charges applicable to each meter account will be billed to the customer-generator.

16.4 If in a monthly billing period the net metering facility supplies more electricity to MW&L than the energy usage recorded by the customer-generator's designated meter, MW&L will apply credits to the next monthly bill for the excess kilowatt-hours first to the designated meter, then to additional meters that have the same charges as the designated meter, and finally to other additional meters.

16.5 If an additional meter changes service to a rate schedule that is different than the designated meter, the additional meter is not eligible for net metering credits for the remainder of the billing year and until such time as the additional meter receives service on the same rate schedule as the designated meter.

16.6 If the designated meter changes service to a different rate schedule, aggregation of net metering credits is not allowed for the remainder of the billing year and may not occur until such time as the additional meters receive service on the same rate schedule as the designated meter.

16.7 MW&L may charge the customer-generator requesting to aggregate meters a reasonable fee to cover the administrative costs of this provision.

17. **Insurance:** (860-039-0080)

Customer-generators shall maintain, during the term of this agreement existing commercial or general liability insurance. Customer-generator shall provide MW&L with a copy of said insurance policy if requested.

18. **Termination & Transfer**

18.1 If Customer-generator discontinues operation of the net metering facility, is no longer a MW&L customer at the point of delivery set forth in the interconnection agreement, or otherwise fails to comply with the terms of the interconnection agreement or MW&L Interconnection Rules for Net Metering, MW&L may, in addition to its other rights pursuant to the

interconnection agreement, terminate the interconnection agreement by giving written notice to the Customer. Customer shall have thirty (30) days from the date of the notice within which to correct any failure to comply with the terms of the agreement. If Customer fails to correct the noncompliance within 30 days, MW&L may elect to immediately terminate the interconnection agreement.

- 18.2 Purchaser/Successor. If Customer-generator sells or transfers ownership of the premises where Customer's net metering facility is located, MW&L may, on **thirty (30) days written notice** terminate the interconnection agreement. In order to continue as a Customer-generator, a premises purchaser or other successor in interest to the Customer-generator is required to execute an applicable interconnection agreement under these rules with MW&L and deliver the agreement to MW&L. If the existing interconnection agreement is not in default and the facility is in compliance with these rules, no additional documentation is required. The interconnection agreement will be reviewed by MW&L staff and executed under these rules.

19. NOTICES AND OTHER COMMUNICATIONS

All notices, requests, demands, and other communications required or permitted to be given under these rules shall be given in writing. All notices to either Party shall be made to the addresses set forth in the interconnection agreement. Any notice shall be deemed to have been given on the date delivered, if delivered personally, by overnight air courier service or by facsimile transmission; or, if mailed shall be deemed to have been given on the date shown on the return receipt as the date of delivery or the date on which the United States postal service certified that it was unable to deliver, whichever is applicable.