

## Introduction

These Net Metering Rules (“Rules”) are intended to assist customers who desire to own, lease, or (when authorized by law) contract for their own renewable energy and renewable energy facilities while protecting other customers from cost increases that result from renewable energy subsidies. In addition to balancing affordability and renewable energy, these Rules support and reaffirm North Little Rock Electric Department’s (“NLRED”) longstanding commitment to the safe and reliable operation of its local electric distribution system.

These Rules replace NLRED Net-Metering and Distributed Generation Rules implemented by Ordinance No. 9255, adopted on June 9, 2020, as amended by Ordinance No. 9329, adopted on February 8, 2021. These Rules have been revised to reflect the changing needs of the community served by NLRED, as well as changes in the laws that regulate net metering.

## Section 1. General Provisions

### Rule 1.01 Definitions

The following definitions shall apply throughout these Rules except as otherwise required by the context, and any references to these Rules shall include these definitions.

- A. *Annual Billing Cycle* means the normal annual fiscal accounting period used by NLRED which begins on January 1<sup>st</sup> and ends on December 31<sup>st</sup> each year.
- B. *Applicable Codes* means all applicable engineering and safety standards governing the installation, maintenance, and operation of Net Metering Facilities and the performance of all work in or around electric facilities and includes the most current versions of National Electric Safety Codes (“NESC”), the National Electric Code (“NEC”), Institute of Electrical and Electronics Engineers (“IEEE”), Underwriters Laboratories (“UL”), the American Public Power Association (“APPA”) Safety Manual, the regulations of the Occupational Safety and Health Administration (“OSHA”), other safety and engineering requirements of the federal, state, or local authority having jurisdiction over the location of a Net Metering Facilities.
- C. *Avoided Costs* means the costs to NLRED of electric energy, capacity, and similar costs that, but for the generation of electricity by a customer, NLRED would be required to generate or purchase from another source, as further described in [Rule 1.06](#).
- D. *Billing Period* means, for net metering purposes, the same billing period under the customer’s applicable standard rate schedule.
- E. *Biomass Resource* means a resource that may use one or more organic fuel sources that can either be processed into synthetic fuels or burned directly to produce steam or electricity, provided that the resources are renewable, environmentally sustainable in their production and use, and the process of conversions to electricity results in a net environmental benefit. This includes, but is not limited to, dedicated energy crops and trees, agricultural food and feed crops, agricultural crop wastes and residues, wood wastes and residues, aquatic plants, animal wastes, and other accepted organic, renewable waste materials.
- F. *City Council* means the local governing body of the City of North Little Rock, Arkansas, a municipal corporation and political subdivision of the State of Arkansas organized and classified by law as a city of the first class.

- G. *Distributed Generation Customer* means an electric utility customer of NLRED who owns, leases, or subscribes to a Distributed Generation Facility in compliance with these Rules, except that, customers who receive service under an interruptible rate are not eligible to be Net Metering Customers.
- H. *Distributed Generation Facility* means the real and personal property comprising an electric generation resource that:
- a. Uses solar, wind, hydroelectric, geothermal, or biomass resources to generate electricity, including, but not limited to, fuel cells and micro turbines that generate electricity if the fuel source is entirely derived from renewable resources;
  - b. Is located in NLRED service territory;
  - c. Will not have a generating capacity that exceeds the lesser of (i) nine hundred fifty (950) kW; or (ii) the generating capacity capable of producing eighty percent (80%) of the electricity (kWh) that was consumed by the Distributed Generation Customer during the previous twelve (12) months, as further described in [Rule 3.03\(A\)](#);
  - d. Will safely operate in parallel with NLRED's distribution facilities;
  - e. May include batteries or energy storage facilities that are only charged by facilities described in [Rule 1.01\(H\)\(a\)](#);
  - f. Is primarily intended to advance the Distributed Generation Customer's renewable energy goals and offset the Distributed Generation Customer's cost of electricity; and
  - g. Complies with [Section 3, 4, and 5](#) of these Rules.
- I. *Fuel Cell Resource* means a resource that converts the chemical energy of a fuel directly to direct current electricity without intermediate combustion or thermal cycles.
- J. *Geothermal Resource* means a resource in which the prime mover is a steam turbine. The steam is generated in the earth by heat from the earth's magma.
- K. *Reserved*.
- L. *Hydroelectric Resource* means a resource in which the prime mover is a water wheel. The water wheel is driven by falling water.
- M. *Illegal Facility* means any generating facility that is connected, directly or indirectly, to NLRED's distribution system without a permit or in violation thereof.
- N. *Interconnecting Customer* means a Net Metering Customer or a Distributed Generation Customer.
- O. *Interconnecting Facility* means a Net Metering Facility or a Distributed Generation Facility.
- P. *Micro Turbine Resource* means a resource that uses a small combustion turbine to produce electricity.
- Q. *Net Excess Generation* means the amount of electricity as measured in kilowatt hours or kilowatt hours multiplied by the applicable rate that a Net Metering Customer has fed back to NLRED that exceeds the amount of electricity as measured in kilowatt hours or kilowatt hours multiplied by the applicable rate used by that customer during a Billing Period.
- R. *Net Excess Generation Credits* means uncredited customer-generated kilowatt hours or kilowatt hours multiplied by the applicable rate remaining in a Net Metering Customer's account at the close of a Billing Period to be credited by NLRED in a future Billing Period in accordance with this regulation.
- S. *Net Metering* means the billing option that measures the amount of electricity as measured in kilowatt hours supplied by NLRED to a Net Metering Customer and separately measures the

electricity as measured in kilowatt hours generated by the same Net Metering Customer's Net Metering Facility and fed back to NLRED over the applicable Billing Period in accordance with these Rules.

- T. *Net Metering Customer* means an electric utility customer of NLRED who owns, leases, or (when authorized by Ark. Code Ann. §23-18-603(8)(A)(iii)) subscribes to a Net Metering Facility; except that, customers who receive service under an interruptible rate are not eligible to be Net Metering Customers.
- U. *Net Metering Facility* means the real and personal property comprising an electric generation resource that:
  - a. Uses solar, wind, hydroelectric, geothermal, or biomass resources to generate electricity, including, but not limited to, fuel cells and micro turbines that generate electricity if the fuel source is entirely derived from renewable resources;
  - b. Is located at a Net Metering Customer's service location within NLRED service territory;
  - c. Has a generating capacity of not more than:
    - i. The lesser of (i) twenty-five kilowatts (25 kW), or (ii) the generating capacity capable of producing one hundred percent (100%) of the electricity (kWh) that was or will be consumed by the Net Metering Customer in the previous twelve (12) months for Residential Use, as further described in Rule [2.04\(A\)](#); or
    - ii. The lesser of (i) three hundred kilowatts (300 kW), or (ii) the generating capacity capable of producing one hundred percent (100%) of the electricity (kWh) that was or will be consumed by the Net Metering Customer in the previous twelve (12) months for any non-residential use, as further described in Rule [2.04\(A\)](#);
  - d. Will safely operate in parallel with NLRED's distribution facilities;
  - e. May include batteries or energy storage facilities that are charged by facilities described in [Rule 1.01\(U\)\(a\)](#);
  - f. Is primarily intended to advance the Net Metering Customer's renewable energy goals and offset the Net Metering Customer's requirements for electricity; and
  - g. Complies with [Section 2, 4](#), and [5](#) of these Rules.
- V. *NLRED* means the utility service provider that is regulated by the City Council and operated by the City of North Little Rock, Arkansas.
- W. *Parallel Operation* means the operation of an electric generator that is connected, directly or indirectly, to NLRED's distribution system.
- X. *Qualifying Facility* means a cogeneration facility or a small power production facility which meets qualifying status under the cogeneration rules adopted by the Arkansas Public Service Commission pursuant to the Public Utility Regulatory Policies Act of 1978 ("PURPA") and the rules and regulations of the Federal Energy Regulatory Commission promulgated under PURPA.
- Y. *Renewable Energy Credit* means the environmental, economic, and social attributes of a unit of electricity, such as a megawatt hour, generated from the renewable fuels that can be sold or traded separately.
- Z. *Residential Use* means service provided under NLRED's standard rate schedules applicable to residential service that does not include a demand charge.

- AA. *RMC* means the Risk Management Committee by which City Council delegates the responsibility of managing the ongoing maintenance and enforcement of NLRED's approved policies and procedures for energy trading and risk management.
- BB. *Solar Resource* means a resource in which electricity is generated through the collection transfer and/or storage of the sun's heat or light.
- CC. *Wind Resource* means a resource in which an electric generator is powered by a wind-driven turbine.

#### Rule 1.02 Purpose

The purposes of these Rules are to regulate the interconnection, metering, and financial consideration given to Interconnecting Facilities by NLRED.

#### Rule 1.03 Statutory Provisions

- A. These Rules were developed pursuant to the Arkansas Cost Shifting Prevention Act of 2023 (Ark. Code Ann. § 23-18-601, et seq., as amended).
- B. These Rules are promulgated pursuant to the City Council's authority under Ark. Code Ann. §§ 14-54-701, et seq., 14-200-112, and 23-18-601, et seq., as amended.

#### Rule 1.04 Other Provisions

- A. These Rules apply to NLRED and customers of NLRED.
- B. These Rules are not intended to, and do not affect or replace any City Council-approved general service regulation, policy, procedure, rule, or service application which addresses items other than those covered in these Rules.
- C. These Rules do not apply to generation facilities built by or for NLRED.

#### Rule 1.05 Qualifying Facilities

These rules do not govern requests to interconnect generating facilities pursuant to PURPA and the rules and regulations of the Federal Energy Regulatory Commission. Request to interconnect a Qualifying Facility under PURPA should be submitted to the General Manager of NLRED.

#### Rule 1.06 Avoided Cost

At the time of adoption of these Rules, the Avoided Cost value of a fixed-tilt solar systems is \$0.03629/kilowatt-hour and a tracking solar system is \$0.03779/kilowatt-hour. The City Council may periodically revise NLRED's Avoided Cost giving due consideration to (i) the cost of energy; (ii) the cost of capacity; (iii) the cost to deliver energy and capacity; (iv) line losses and other inefficiencies; (v) administrative and ancillary expenses; (vi) related expenses determined by the NLRED Risk Management Committee to be relevant to Avoided Cost. The methodology used to determine Avoided Cost may change from time to time based on regulatory changes, public policy, or the needs of NLRED, as allowed by law. At the time of the adoption of these Rules, NLRED's Avoided Cost for solar power is based upon the type of installation.

#### Rule 1.07 Prohibited Conduct

- A. The interconnection of an Illegal Facility is hazardous to NLRED's employees and others. The interconnection of an Illegal Facility with NLRED's distribution system is declared to be a

violation that is continuous in nature. Any person who owns, operates, maintains, or connects to an Illegal Facility shall be punished by a fine of not less than two hundred fifty dollars (\$250.00) per day nor more than five hundred dollars (\$500.00) per day while such Illegal Facility is connected to NLRED's distribution system.

- B. Except as described in [Rule 1.07\(A\)](#), violations of this ordinance are declared to be detrimental to the public welfare. Any person violating a provision of this ordinance other than [Rule 1.07\(A\)](#) shall be punished by a fine of not less than two hundred fifty dollars (\$250.00) nor more than one thousand dollars (\$1,000.00), and twice such amounts for a repeated violation.
- C. In addition to all other remedies available, NLRED may completely disconnect (load and generation) any person or customer who owns, operates, maintains, or connects an Illegal Facility and keep them disconnected until:
  - a. The Illegal Facility has been dismantled or a proper application for connection has been submitted to NLRED; and
  - b. The customer has paid a reconnection fee of two hundred fifty dollars (\$250.00) per location disconnected pursuant to this Rule 1.07.

#### Rule 1.08 Grandfathering

- A. A customer who installed a Net Metering Facility prior to the adoption of these rules may continue to operate under the rules that were effective at the time of installation for twenty (20) years following the installation of the Net Metering Facility or ten (10) years following the adoption of these Rules, whichever ends soonest.
- B. The grandfathering provision found in the [Rule 1.08\(A\)](#) shall constitute an affirmative defense to any enforcement action under these Rules.

## Section 2. Net Metering Requirements

#### Rule 2.01 Authority to Interconnect

- A. *Residential Customers.* NLRED shall allow residential Net Metering Facilities to be interconnected using separate meters for consumption and generation.
- B. *Non-residential Customers:*
  - a. *Demand Billed.* NLRED shall allow Net Metering Facilities of Net Metering Customers who receive a demand charge to be interconnected using a standard meter capable of registering the flow of electricity in two (2) directions, or under such metering configuration that NLRED and the Net Metering Customer may agree.
  - b. *Non-demand Billed.* NLRED shall allow Net Metering Facilities of Net Metering Customers who do not receive a demand charge to be interconnected using separate meters for consumption and generation.

#### Rule 2.02 Metering Requirements

- A. Metering equipment shall be installed to accurately measure both the electricity supplied by NLRED to each Net Metering Customer and the electricity generated by each Net Metering Customer that is fed back to NLRED during a Billing Period. If additional or nonstandard metering equipment is required, the Net Metering Customer is responsible for the cost

differential between the required metering equipment and NLRED's standard metering equipment for the Net Metering Customer's current rate schedule.

- B. Accuracy requirements for a meter operating in both forward and reverse registration modes shall be defined by NLRED. A test to determine compliance with this accuracy requirement shall be made either before or at the time the Net Metering Facility is placed in operation. Additional tests may thereafter be conducted as may be reasonably necessary or advisable to verify meter accuracy.

#### Rule 2.03 New or Additional Charges

Any new or additional charge imposed on Net Metering Customers that is not described in these Rules shall be submitted to and approved by the City Council prior to assessment.

#### Rule 2.04 Net Metering Application

- A. A customer may file an application with NLRED to install a Net Metering Facility so long as the proposed Net Metering Facility does not have a generating capacity that exceeds:
  - a. For existing residential customers, the lesser of: (i) twenty-five kilowatts (25 kW), or (ii) the generating capacity that is calculated to produce one hundred percent (100%) of the electricity (kWh) that was consumed by the Net Metering Customer during the previous twelve (12) months at the location where the Net Metering Facility will be installed.
  - b. For new residential customers, the lesser of: (i) twenty-five kilowatts (25 kW), or (ii) the generating capacity that is calculated to produce one hundred percent (100%) of the anticipated consumption of electricity (kWh) by the Net Metering Customer during the first twelve (12) months of operations at the location where the Net Metering Facility will be installed.
  - c. For existing non-residential customers, the lesser of: (i) three hundred kilowatts (300 kW), or (ii) the generating capacity that is calculated to produce one hundred percent (100%) of the electricity (kWh) that was consumed by the Net Metering Customer during the previous twelve (12) months at the location where the Net Metering Facility will be installed, or
  - d. For new non-residential customers, the lesser of: (i) three hundred kilowatts (300 kW), or (ii) the generating capacity that is calculated to produce one hundred percent (100%) of the anticipated consumption of electricity (kWh) by the Net Metering Customer during the first twelve (12) months of operations at the location where the Net Metering Facility will be installed.
  - e. The City Council has found and determined that limiting the generating capacity of a Net Metering Facility to no more than the actual or anticipated consumption of electricity during a twelve (12) month period is necessary for the reliable operations of NLRED.
- B. The application shall, at a minimum, include:
  - a. A description of the proposed Net Metering Facility including:
    - i. Project narrative;
    - ii. Project location (street address);
    - iii. Generator type (wind, solar, hydro, etc.);

- iv. Generator capacity rating in kW (AC);
  - v. Capacity factor;
  - vi. Point of interconnection with NLRED;
  - vii. Single Phase or Three Phase interconnection;
  - viii. Planned method of interconnection; and
  - ix. Expected facility performance calculated using an industry recognized simulation model (PVWatts, etc.).
- b. Evidence that the Net Metering Facility will comply with capacity restrictions described in [Rule 2.04\(A\)](#).
  - c. A copy of the Preliminary Interconnection Review Request (see [Rule 4.01](#)), with applicable fees, submitted to NLRED and the results of NLRED's interconnection site review.

#### Rule 2.05 Billing for Net Metering

- A. On a monthly basis, a Net Metering Customer shall be billed the charges applicable under the currently effective standard rate schedule and any appropriate rider schedules. Demand charges, service charges, and other charges that are not calculated based upon kWh consumption will not be reduced by Net Metering.
  - a. *Residential and Non-demand Customers.* NLRED shall credit at NLRED's Avoided Cost rate, all electricity (kWh) generated by a residential or non-demand billed Net Metering Customer. The credit shall only apply to the customer's cost of electricity (kWh) and shall not be applied to any other rate, rider, charge or fee including, without limitation, the power cost adjustment. If the amount of credit exceeds the customer's cost of electricity (kWh) during the applicable Billing Period, NLRED shall apply the excess credit in the next applicable Billing Period.
  - b. *Non-Residential Demand Customers.*
    - i. If the kWh supplied by NLRED exceed the kWh generated by a non-residential Net Metering Customer during the Billing Period, the Net Metering Customer shall be billed for the net kWh supplied by NLRED in accordance with the rates and charges under the customer's standard rate schedule.
    - ii. If the kWh generated by a non-residential Net Metering Customer exceed the kWh supplied by NLRED to the Net Metering Customer during the applicable Billing Period, NLRED shall credit the Net Metering Customer with any accumulated Net Excess Generation in the next applicable Billing Period.
- B. NLRED will not provide generation credit to any Net Metering Customer with a delinquent account or that ceases to consume electricity.
- C. Net Excess Generation Credits remaining on a Net Metering Customer's account at the close of an Annual Billing Cycle will expire on February 1<sup>st</sup> of the following Annual Billing Cycle.
- D. NLRED will not apply Net Excess Generation to more than one meter.

#### Rule 2.06 Renewable Energy Credits

Renewable Energy Credits created as a result of electricity supplied by a Net Metering Customer are the property of the Net Metering Customer that generated the Renewable Energy Credit.

#### Rule 2.07 Generation above Net Metering Limits

The rules found in this Section 2 shall not be used in conjunction with generation facilities that have a cumulative generating capacity that is greater than the limits defined for Net Metering Facilities in [Rule 1.01\(U\)\(c\)](#).

## Section 3. Distributed Generation

### Rule 3.01 Permission to Interconnect

NLRED may allow Distributed Generation Facilities to be interconnected using separate meters for consumption and generation. NLRED will not allow a Distributed Generation Facility to be interconnected using a meter that measures both electric consumption and generation. NLRED will not allow a Distributed Generation facility to be interconnected that will jeopardize reliability of the distribution system, backfeed electricity on the bulk electric system, or otherwise impede the rights and obligations of NLRED.

### Rule 3.02 Metering Requirements

- A. Metering equipment will be installed to accurately measure both the electricity supplied by NLRED to each Distributed Generation Customer and the electricity generated by each Distributed Generation Customer that is fed to NLRED. The customer is responsible for the cost of the additional meter used to measure generation, as well as any nonstandard metering configurations.
- B. Metering equipment will be tested for accuracy prior to installation according to NLRED's normal accuracy verification procedures. A test to determine compliance with this accuracy requirement shall be made either before or at the time the Distributed Generation Facility is placed in operation. Additional tests may thereafter be conducted as may be reasonably necessary or advisable to verify meter accuracy.

### Rule 3.03 Distributed Generation Application

- A. An NLRED customer may file an application with NLRED to install a Distributed Generation Facility so long as the proposed Distributed Generation Facility does not have a generating capacity that exceeds:
  - a. The lesser of (i) nine hundred fifty (950 kW), or (ii) the generating capacity that is calculated to produce eighty percent (80%) of the electricity (kWh) that was consumed by the Distributed Generation Customer during the previous twelve (12) months, or
  - b. For new facilities, the lesser of (i) nine hundred fifty (950 kW), or (ii) the generating capacity that is calculated to produce eighty percent (80%) of the anticipated consumption of electricity (kWh) by the Distributed Generation Customer during the first twelve (12) months of operations.
- B. The application shall, at a minimum include:
  - a. A description of the proposed Distributed Generation Facility including:
    - i. Project narrative;
    - ii. Project location (street address);
    - iii. Generator type (wind, solar, hydro, etc.);
    - iv. Generator capacity rating in kW (AC);
    - v. Capacity factor;



- vi. Point of interconnection with NLRED;
  - vii. Single Phase or Three Phase interconnection;
  - viii. Planned method of interconnection; and
  - ix. Expected facility performance calculated using an industry recognized simulation model (PVWatts, etc.)
- b. Evidence that the Distributed Generation Facility will comply with the capacity restrictions described in Rule 3.03(A).
  - c. A copy of the Preliminary Interconnection Review Request (see [Rule 4.01](#)), with applicable fees, submitted to NLRED and the results of NLRED's interconnection site review.

#### Rule 3.04 Billing for Distributed Generation

- A. On a monthly basis, a Distributed Generation Customer shall be billed all charges applicable under the currently effective standard rate schedule and any appropriate rider schedules.
- B. On a monthly basis, NLRED shall credit, at NLRED's Avoided Cost rate, all electricity (kWh) generated by a Distributed Generation Customer. The credit shall only apply to the Distributed Generation Customer's cost of electricity (kWh) and shall not be applied to any other rate, rider, charge or fee including, without limitation, the power cost adjustment. If the amount of credit exceeds the Distributed Generation Customer's cost of electricity (kWh) during the applicable Billing Period, NLRED shall apply the excess credit in the next applicable Billing Period.
  - a. The credit described in this Rule 3.04(B) will be applied to the load meter designated by the Distributed Generation Customer.
  - b. Credits remaining in a Distributed Generation Customer's account at the close of a Billing Period shall not expire until the end of the NLRED Annual Billing Cycle in which the credits were initially created. All generation credits shall expire on February 1<sup>st</sup> of the following Annual Billing Cycle.
- C. NLRED will not provide generation credit to any Distributed Generation Customer with a delinquent account or that ceases to consume electricity.
- D. NLRED will not purchase electricity or generation credits from a Distributed Generation Customer, subject to [Rule 1.05](#).
- E. NLRED will not apply generation credit to more than one meter. This rule shall not apply when more than one load meter is collocated with the Distributed Generation Facilities.
- F. NLRED will not transfer generation credits to another customer.

#### Rule 3.05 Location

Distributed Generation Facilities must be collocated with a Distribution Generation Customer's load within the service territory of NLRED.

#### Rule 3.06 Renewable Energy Credits

Renewable Energy Credits created as a result of electricity supplied by a Distributed Generation Customer are the property of the Distributed Generation Customer that generated the Renewable Energy Credit.

## Section 4. Interconnection of Facilities to the NLRED Distribution System

### Rule 4.01 Requirements for Preliminary Interconnection Review Request

- A. An Interconnecting Customer shall execute a Preliminary Interconnection Review Request ([Appendix A](#)) and pay the designated application fee at least sixty (60) days prior to the date the customer intends to commence construction of the Interconnecting Facilities, and construction shall not commence until approved. The customer shall submit a separate Preliminary Interconnection Review Request for each point of interconnection if review of multiple points of interconnection is requested. Part A, Standard Information, Sections 1 through 3 of the Preliminary Interconnection Review Request must be completed. If mailed, the date of delivery of the request shall be deemed to be the third day following the mailing of the Preliminary Interconnection Review Request. NLRED shall provide a copy of the Preliminary Interconnection Review Request to the customer upon request.
- B. Following delivery of the request by the customer as specified in [Rule 4.01\(A\)](#), NLRED will seek to review the plans of the facility interconnection and provide the results of its review to the customer, in writing, within thirty (30) calendar days. If the customer requests that multiple interconnection site reviews be conducted NLRED shall make reasonable efforts to provide the customer with the results of the review within sixty (60) calendar days. Any items that would prevent Parallel Operation due to violation of safety standards and/or power generation limits shall be explained along with a description of the modifications necessary to remedy the violations. The Preliminary Interconnection Review will identify estimated costs, if any, that the customer must pay to upgrade NLRED's distribution system for the safe and reliable interconnection of the customer's proposed facilities.
- C. Approval of a preliminary interconnection review is valid for one (1) calendar year. Approval does not relieve a customer from other regulations governing permitting, construction, operation, lawful uses of property, and the like. Preliminary interconnection review is only performed on existing data and does not require NLRED to conduct a study or other analysis of the proposed interconnection site in the event that data is not readily available. Additional data or changes in data may invalidate approval of a preliminary interconnection review.
- D. The preliminary interconnection review does not relieve the customer of the requirements to (i) comply with applicable land use, zoning, and control of development and building regulations; and (ii) execute a Standard Interconnection Agreement prior to interconnection of the facility.

### Rule 4.02 Requirements for Initial Interconnection

- A. An Interconnecting Facility must be capable of operating in parallel and safely commencing the delivery of power to NLRED's distribution system at a single point of interconnection. To prevent an Interconnecting Customer from backfeeding a de-energized line, each Interconnecting Facility must have:
  - a. An automatic switching scheme as described in IEEE 1547 that senses when a loss of power from the distribution system has occurred and immediately disconnects the Net Metering Facility from the distribution system until the utility has restored power; and

- b. A visibly open, lockable, manual disconnect switch which is clearly labeled and accessible to NLRED.
- B. The customer shall submit a Standard Interconnection Agreement ([Appendix B](#)) to NLRED at least sixty (60) days prior to the date the customer intends to interconnect the Interconnecting Facilities to NLRED's distribution system. Part A, Standard Information Sections 1 through 3 of the Standard Interconnection Agreement must be completed. The customer shall have all equipment necessary to complete the interconnection prior to submission of the Standard Interconnection Agreement. If mailed, the date of submission shall be deemed to be the third day following the mailing of the Standard Interconnection Agreement. NLRED shall provide a copy of the Standard Interconnection Agreement to the customer upon request.
- C. Following submission of the Standard Interconnection Agreement by the customer as specified in [Rule 4.02\(B\)](#), NLRED will seek to review the plans of the facility and provide the results of its review to the customer, in writing, within thirty (30) calendar days. Any items that would prevent Parallel Operation due to violation of safety standards and/or power generation limits shall be explained along with a description of the modifications necessary to remedy the violation.
- D. The Interconnecting Facility, at the Interconnecting Customer's expense, shall meet all safety requirements and performance standards of Applicable Codes.
- E. The Interconnecting Facility, at the Interconnecting Customer's expense, shall meet all NLRED safety and performance standards approved by the appropriate electrical inspectors and NLRED staff.
- F. If NLRED's existing facilities are not adequate for interconnection, the Interconnecting Customer shall pay the cost of additional or reconfigured facilities prior to the installation or reconfiguration of the facilities.
- G. The Interconnecting Customer shall execute a Standard Interconnection Agreement ([Appendix B](#)) and pay the designated interconnection fee prior to connecting to the NLRED Distribution System.

#### Rule 4.03 Requirements for Commissioning Test and Reports

- A. A commissioning test and report shall be performed by the installation contractor of the Interconnecting Facility. The test described in this Rule 4.03 must be documented and performed by using written test procedures established by the manufacturer(s) of the interconnecting equipment. At a minimum, the following tests and their results must be documented in a report and submitted to NLRED prior to NLRED's final inspection.
  - a. *Visual Inspection.* A visual inspection shall be made to ensure that the grounding scheme of the interconnection shall not cause overvoltage that exceeds the rating of the equipment connected to NLRED's distribution system and shall not disrupt the coordination of the ground fault protection on NLRED's distribution system. The visual inspection must confirm the presence of required isolation devices.
  - b. *Performance Tests.* The following commissioning tests shall be performed on the installed Interconnecting Facility and interconnection system equipment prior to the initial Parallel Operation of the Interconnecting Facility. The following are required:
    - i. Operability test on required isolation devices.
    - ii. Unintentional Islanding functionality as specified in IEEE 1547 Clause 5.4.1

- iii. Cease to energize functionality as specified in IEEE 1547 Clause 5.4.2
- iv. Any tests of IEEE 1547 Section 5.1 that have not been previously performed on a representative sample and formally documented. These are tests that should be completed by the manufacturer of the Interconnecting Facility equipment and submitted as part of the report for the Commissioning test to NLRED. For reference these include Clauses 5.1.1 through 5.1.6 in the IEEE Standard 1547:
  - 1. Response to abnormal voltage and frequency;
  - 2. Synchronization;
  - 3. Interconnect integrity test;
  - 4. Unintentional Islanding;
  - 5. Limitation of DC injection; and
  - 6. Harmonics.
- v. Any tests of IEEE 1547 Section 5.2 that have not been previously performed on the interconnection systems. These tests are the same response to abnormal voltage and frequency and synchronization tests listed previously covered in IEEE Standard 1547 Clause 5.1.1 and 5.1.2.

#### Rule 4.04 Requirements for Modifications or Changes to a Net Metering Facility

- A. Prior to making any modifications or changes, the Interconnecting Customer shall notify NLRED of, and NLRED shall evaluate any proposed modifications or changes to the Interconnecting Facility described in Part A, Standard Information, Section 2 of the Standard Interconnection Agreement. The notice provided by the Interconnecting Customer shall provide detailed information describing the modifications or changes to NLRED in writing, including a revised Standard Interconnection Agreement that clearly identifies the changes to be made. NLRED will seek to review the proposed changes to the facility and provide the results of its evaluation to the customer, in writing, within thirty (30) days of receipt of the customer's proposal. Any items that would prevent Parallel Operation due to violation of applicable safety standards and/or power generation limits shall be explained along with a description of the modifications necessary to remedy the violations.
- B. If the Interconnecting Customer makes such modification without NLRED's prior written authorization and the execution of a new Standard Interconnection Agreement, NLRED shall have the right to suspend service pursuant to [Rule 1.07\(C\)](#).

#### Rule 4.05 Requirements for Periodic Testing

The customer shall complete a visual inspection of the Interconnecting Facility and conduct a "cease to energize" functionality test every year on or before the anniversary of the Interconnecting Facility's initial approval by NLRED. The customer shall also perform any other periodic tests as recommended by the manufacturer(s) of the interconnection equipment. The customer shall have these tests performed by a qualified individual, keep a log of the inspection and the results, and submit this log to NLRED upon completion every year. NLRED may elect to witness these tests at its own discretion to ensure that the tests are completed. NLRED may perform an inspection or test of any Interconnecting Facility at intervals of no less than three (3) years, or upon the reasonable belief of a safety or operational risk, at the expense of the Interconnecting Facility Owner.

## Section 5. Standard Interconnection Agreement and Preliminary Interconnection Site Review Request

### Rule 5.01 Standard Interconnection Agreement and Preliminary Interconnection Site Review Request

Typical standard agreements used by NLRED for interconnection are attached as annexes to these Rules as the Preliminary Interconnection Site Review Request ([Appendix A](#)) and the Standard Interconnection Agreement ([Appendix B](#)). The NLRED General Manager may make non-substantive changes to these forms as deemed necessary from time to time.

## Appendix A

**PRELIMINARY INTERCONNECTION REVIEW REQUEST****A. Standard Information****1. Customer Information:**

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

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

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

Phone Number: \_\_\_\_\_ Email: \_\_\_\_\_

Project Manager/Contractor: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Email: \_\_\_\_\_

**2. Owner Information** *(if different from customer information)*

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

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

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

Phone Number: \_\_\_\_\_ Email: \_\_\_\_\_

**3. Generation Facility Information:**Facility Type *(select one)*: ☐ Customer Owned ☐ Leased ☐ Service AgreementSystem Type: ☐ Solar ☐ Wind ☐ Energy Storage Device*(select all that apply)* ☐ Fuel Cell ☐ Biomass ☐ Micro Turbine☐ Hydro ☐ Geothermal

Generator Power Rating (kW): \_\_\_\_\_ DC

Inverter Power Rating (kW): \_\_\_\_\_ AC

Expected Annual Energy Production (kWh): \_\_\_\_\_

**4. Interconnection Information***Attach a detailed electrical diagram showing the configuration of all generating facility and storage equipment, including protection and control schemes.*

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

Customer-Site Load (kW) at Net-Metering Facility location *(if none, so state)*: \_\_\_\_\_Interconnection Request: ☐ Single Phase -or- ☐ Three Phase

## **B. Preliminary Interconnection Terms & Conditions**

1. *Requirements for Request.* For the purpose of requesting that NLRED conduct a preliminary interconnection site review for a proposed Interconnecting Facility, or as otherwise requested by the customer, the customer shall notify NLRED by submitting a completed Preliminary Interconnection Site Review Request. The customer shall submit a separate Preliminary Interconnection Site Review Request for each point of interconnection if information about multiple points of interconnection is requested. Part A, Standard Information, Sections 1 through 4 of the Preliminary Interconnection Site Review Request must be completed for the notification to be valid. If mailed, the date of notification shall be the third day following the mailing of the Preliminary Interconnection Site Review Request. NLRED shall provide a copy of the Preliminary Interconnection Site Review Request to the customer upon request.
2. *Review by NLRED.* Following submission of the Preliminary Interconnection Site Review Request by the customer, NLRED will seek to review the plans of the facility interconnection and provide the results of its review to the customer, in writing, within thirty (30) calendar days. If the customer requests that multiple interconnection site reviews be conducted NLRED will make reasonable efforts to provide the customer with the results of the review within a timely fashion. If NLRED cannot provide results within ninety (90) days, NLRED will provide the customer with an estimated date by which it will complete the review. Any items that would prevent Parallel Operation due to violation of safety standards and/or power generation limits shall be explained along with a description of the modifications necessary to remedy the violations.
3. *Nonbinding Report.* The preliminary interconnection site review is non-binding and need only include existing data and does not require NLRED to conduct a study or other analysis of the proposed interconnection site in the event that data is not readily available. NLRED shall notify the customer if additional site screening may be required prior to interconnection of the facility. The customer shall be responsible for the actual costs for conducting the preliminary interconnection site review and any subsequent costs associated with site screening that may be required.
4. *Standard Interconnection Agreement.* The preliminary interconnection site review does not relieve the customer of the requirement to execute a Standard Interconnection Agreement prior to interconnection of the facility.

I hereby certify that, to the best of my knowledge, all of the information provided in this Preliminary Interconnection Site Review is true and correct and that I am authorized to execute this document on behalf of the Customer identified in Part A, Section 1.

CUSTOMER

Signature: \_\_\_\_\_

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

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

**FOR NLRED USE ONLY**

☐ **APPROVED**

☐ **DISAPPROVED**

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



## Appendix B

**STANDARD INTERCONNECTION AGREEMENT****A. Standard Information****1. Customer Information:**

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

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

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

Phone Number: \_\_\_\_\_ Email: \_\_\_\_\_

Electric Account Number to which the Net-Metering Facility is attached: \_\_\_\_\_

**2. Owner Information** *(if different from customer information)*

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

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

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

Phone Number: \_\_\_\_\_ Email: \_\_\_\_\_

**3. Generation Facility Information**

If there are no changes from the plans submitted in the preliminary review, proceed to Installation Information. If revisions were made to the plans submitted, include the revised plans with the revisions clearly marked.

**4. Installation Information**

Electrical Contractor: \_\_\_\_\_ License Number: \_\_\_\_\_

Installed by: \_\_\_\_\_ Qualifications/Credentials: \_\_\_\_\_

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

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

Phone Number: \_\_\_\_\_ Email: \_\_\_\_\_

**5. Certification & Approval**

This system has been installed in compliance with the local Building/Electrical Code of:

☐ North Little Rock

☐ Sherwood

Inspector Signature: \_\_\_\_\_ Date: \_\_\_\_\_

*(In lieu of signature of inspector, a copy of the final inspection certificate may be attached)*

Facility Interconnection Approved: \_\_\_\_\_ Date: \_\_\_\_\_

Metering Facility Verified: \_\_\_\_\_ Date: \_\_\_\_\_

## **B. Interconnection Agreement Terms & Conditions**

1. *Customer Assurances.* By executing this document below, Customer assures NLRED that the system has been installed in accordance with NLRED Net Metering and Distributed Generation Rules, that the Customer has been given system warranty information and operation manual, and that Customer has been instructed in the safe operation of the system.

2. *Interruption or Reduction of Deliveries.* NLRED shall not be obligated to accept and may require Customer to interrupt or reduce deliveries when necessary to construct, install, repair, replace, remove, investigate, or inspect any of its equipment or part of its system; or if it reasonably determines that curtailment, interruption, or reduction is necessary because of emergencies, forced outages, force majeure, or compliance with prudent electrical practices. Whenever possible, NLRED shall give Customer reasonable notice of the possibility that interruption or reduction of deliveries may be required. Notwithstanding any other provision of this Agreement, if at any time NLRED reasonably determines that either the facility may endanger the NLRED's personnel or other persons or property, or the continued operation of the Customer's facility may endanger the integrity or safety of NLRED's electric system, NLRED shall have the right to disconnect and lock out Customer's facility from the NLRED's electric system. Customer's facility shall remain disconnected until NLRED is reasonably satisfied that the conditions referenced in this Section have been corrected.

3. *Interconnection.* Customer shall deliver the as-available energy to NLRED at NLRED's meter. NLRED shall furnish and install two standard kilowatt hour meters. Customer shall provide and install a suitable meter socket for NLRED's meters and any related interconnection equipment per NLRED's technical requirements, including safety and performance standards. Distributed Generation Customers are responsible for the cost of the meter to measure generation. Customer shall submit a Standard

Interconnection Agreement to NLRED at least sixty (60) days prior to the date the customer intends to interconnect to NLRED's facilities. Part A, Standard Information, Sections 1 through 3 of the Standard Interconnection Agreement must be completed and valid. Customer must have all equipment necessary to complete the interconnection prior to such notification. If mailed, the date of notification shall be the third day following the mailing of the Standard Interconnection Agreement.

4. *Timely Review.* Following submission of the Standard Interconnection Agreement by Customer, NLRED will seek to review the facility plans and provide the results of its review to Customer, in writing, within thirty (30) calendar days. Any items that would prevent Parallel Operation due to violation of applicable safety standards and/or power generation limits will be explained along with a description of the modifications necessary to remedy the violations.

5. *Required Upgrades.* If NLRED's existing facilities are not adequate for interconnection, the Customer shall pay the cost of additional or reconfigured facilities prior to the installation or reconfiguration of the facilities.

6. *Manual Disconnect.* To prevent an Interconnecting Customer from backfeeding a de-energized line, Customer must install a manual disconnect switch with lockout capability that is accessible to NLRED personnel at all hours.

7. *National Safety Standards.* Customer, at his own expense, shall meet all safety and performance standards established by local and national electrical codes including the National Electrical Code (NEC), the Institute of Electrical and Electronics Engineers (IEEE), the National Electrical Safety Code (NESC), and Underwriters Laboratories (UL).

8. *Local Safety Standards.* Customer, at his own expense, shall meet all safety and performance

standards adopted by NLRED that are necessary to assure safe and reliable operation of the Interconnecting Facility to NLRED's system.

9. *Operation Contingent on Inspection and Approval.* Customer shall not commence Parallel Operation of an Interconnecting Facility until the Facility has been inspected and approved by NLRED. Such approval shall not be unreasonably withheld or delayed. Notwithstanding the foregoing, NLRED's approval to operate the Customer's Interconnecting Facility in parallel with the NLRED's electrical system should not be construed as an endorsement, confirmation, warranty, guarantee, or representation concerning the safety, operating characteristics, durability, or reliability of Customer's Net-Metering Facility.

10. *Modifications or Changes.* Prior to being made, Customer shall notify NLRED of, and NLRED shall evaluate, any modifications or changes to the Interconnecting Facility described in Part A, Standard Information, Section 2 of the Standard Interconnection Agreement. The notice provided by Customer shall provide detailed information describing the modifications or changes to NLRED in writing, including a revised Standard Interconnection Agreement that clearly identifies the changes to be made. NLRED will seek to review the proposed changes to the facility and provide the results of its evaluation to Customer, in writing, within thirty (30) calendar days of receipt of Customer's proposal. Any items that would prevent Parallel Operation due to violation of applicable safety standards and/or power generation limits shall be explained along with a description of the modifications necessary to remedy the violations. If Customer makes such modification without NLRED's prior written authorization and the execution of a new Standard Interconnection Agreement, NLRED shall have the right to suspend all services.

11. *Maintenance and Permits.* Customer shall obtain any governmental authorizations and

permits required for the construction and operation of the Interconnecting Facility and related equipment. Customer shall maintain the Interconnecting Facility and related equipment in a safe and reliable manner and in conformance with all applicable laws and regulations.

12. *Access to Premises.* NLRED may enter the Customer's premises to inspect the Customer's protective devices and read or test the meter. NLRED may disconnect the Interconnecting Facilities without notice if NLRED reasonably believes a hazardous condition exists and such immediate action is necessary to protect persons, or NLRED's facilities, or property of others from damage or interference caused by Customer's facilities, or lack of properly operating protective devices.

13. *Liability and Indemnity.* Neither NLRED, its officers, agents or employees shall be liable for any claims, demands, costs, losses, causes of action, or any other liability of any nature or kind, arising out of the engineering, design, construction, ownership, maintenance or operation of, or the making of replacements, additions or betterment to, or by failure of, Customer's facilities by Customer or any other person or entity. **CUSTOMER SHALL INDEMNIFY THE CITY OF NORTH LITTLE ROCK, ARKANSAS ("CITY"), ITS DIRECTORS, OFFICERS, AGENTS, AND EMPLOYEES AGAINST ALL LOSS, DAMAGES, EXPENSE AND LIABILITY TO THIRD PERSONS FOR INJURY TO OR DEATH OF PERSONS OR INJURY TO PROPERTY CAUSED BY CUSTOMER'S ENGINEERING, DESIGN, CONSTRUCTION, OWNERSHIP, MAINTENANCE OR OPERATIONS OF, OR THE MAKING OF REPLACEMENTS, ADDITIONS OR BETTERMENT TO, OR BY FAILURE OF, ANY OF CUSTOMER'S WORKS OR FACILITIES USED IN CONNECTION WITH THIS AGREEMENT BY REASON OF OMISSION OR NEGLIGENCE, WHETHER ACTIVE OR PASSIVE.** Customer shall, on City's request, defend any suit asserting a claim covered by this indemnity. Customer shall pay all costs that may be incurred by the City in enforcing this indemnity.

14. *Term of Agreement.* This Agreement shall be until modified or terminated in accordance with its terms or applicable ordinances, regulations or other laws.

15. *Assignment.* This Agreement and all provisions hereof shall inure to and be binding upon the respective Parties hereto, their personal representatives, heirs, successors, and assigns. Customer shall not assign this Agreement or any part hereof without the prior written consent of NLRED, and such

unauthorized assignment may result in termination of this Agreement.

**16. WARNING. POSSIBLE RULES OR RATE CHANGES, OR BOTH, THAT AFFECT THE OPERATION OR FINANCIAL FEASIBILITY OF AN INTERCONNECTING FACILITY COULD OCCUR IN THE FUTURE. INTERCONNECTING FACILITY OWNERS ARE ADVISED THAT THEY MUST REMAIN AWARE OF AND COMPLIANT WITH ALL LAWS AND REGULATIONS.**

**Customer Certification**

I hereby certify that all information provided is true and correct, to the best of my knowledge, and that I have read and understand the Terms and Conditions of this Agreement.

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

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

Print: \_\_\_\_\_

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

**NLRED Certification**

I hereby certify that: (1) I am a duly authorized NLRED representative; (2) I have examined the documents and generating facility proposed for interconnection described in Part A, Sections 1-3; and (3) I have determined that interconnection is authorized in accordance with NLRED regulations.

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

Print: \_\_\_\_\_

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

## NET-METERING AND DISTRIBUTED GENERATION FEES

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1. Net Metering Preliminary Review Fee .....\$100.00
2. Distributed Generation Preliminary Review Fee .....\$250.00
3. Net Metering Interconnection Fee.....\$250.00
4. Distributed Generation Interconnection Fee .....\$1,000.00
5. Net-Metering Periodic Inspection Fee .....\$100.00
6. Distributed Generation Periodic Inspection Fee .....\$250.00

*Note: Wheeling charges applicable to distributed generators that are separated from load will be based on the cost-share of facilities used to route electricity between the customer's generation and load.*

## INTERCONNECTION TIMELINE

	60 DAYS PRIOR TO CONSTRUCTION	60 DAYS PRIOR TO INTERCONNECTION	EVERY YEAR	EVERY 3 YEARS
<b>CUSTOMER ACTION</b>	SUBMIT PRELIMINARY INTERCONNECTION REVIEW REQUEST	SUBMIT STANDARD INTERCONNECTION AGREEMENT	SAFETY TEST	
<b>FORM</b>	APPENDIX A	APPENDIX B		
<b>NLRD ACTION</b>	REVIEW REQUEST FOR COMPLIANCE WITH ORDINANCE	REVIEW REQUEST FOR COMPLIANCE WITH ORDINANCE	MAY EXAMINE DOCUMENTS	SAFETY TEST
<b>APPROVAL</b>	ESTABLISHES UPGRADE COSTS	AUTHORIZES INTERCONNECTION	CONTINUES CONNECTION	CONTINUES CONNECTION