

Albemarle Electric Membership Corporation

INTERCONNECTION PROCEDURES, FORMS, AND AGREEMENTS

**Adopted by the Board of Directors
Effective February 20th 2017**

These materials, which will govern interconnection of distributed generation to the distribution system of Albemarle Electric Membership Corporation, will be referred to herein as the "Standard."

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Attachment 1 – Glossary of Terms

Attachment 2 – Interconnection Request Application Form

Attachment 3 – Pre-Application Report Form

Attachment 4 – Certification Codes and Standards

Attachment 5 – Certification of Generator Equipment Packages

Attachment 6 – Interconnection Request Application and Agreement Form, Certificate of Completion, Terms and Conditions and Installation Sketch for Certified Inverter-Based Generating Facilities No Larger than 20 kW

Attachment 7 – System Impact Study Agreement

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1 General Requirements

1.1 Applicability

- 1.1.1. This Standard contains the requirements for the interconnection and parallel operation of all Generating Facilities, regardless of size, with the distribution system of Albemarle Electric Membership Corporation (“Cooperative”).

Interconnection Requests for new Generating Facilities will be submitted to the Cooperative for approval at the final design stage and prior to the beginning of construction.

To avoid the potential for unforeseen issues, the Interconnection Customer should submit a written request for a Section 1.2 Pre-Request Response and/or Section 1.3 Pre-Application Report.

Revised Interconnection Requests for equipment or design changes should be submitted pursuant to Section 1.5.

Interconnection Customers must notify the Cooperative of a change of ownership or change in control pursuant to Section 6.1.1.

- 1.1.1.1. A request to interconnect a certified inverter-based Generating Facility no larger than 20 kW will be evaluated under the Section 2, 20 kW Inverter Process. (See Attachments 4 and 5 for certification criteria.)
- 1.1.1.2. A request to interconnect a certified Generating Facility no larger than the capacity specified in Section 3.1 will be evaluated under the Section 3 Fast Track Process. (See Attachments 4 and 5 for certification criteria.)
- 1.1.1.3. A request to interconnect a Generating Facility larger than the capacity stated in Section 3.1, or a Generating Facility that does not qualify for or pass the Fast Track Process or qualify for the 20 kW Inverter Process, will be evaluated under the Section 4 Study Process. Interconnection Customers that qualify for Section 2 or Section 3 may also choose to proceed directly to Section 4 if they believe Section 4 review is likely to be necessary.

- 1.1.2. Capitalized terms used herein will have the meanings specified in the Glossary of Terms in Attachment 1 or the body of these procedures.

- 1.1.3. This interconnection standard will not apply to Generating Facilities already interconnected as of the effective date of this Standard, unless the Interconnection Customer proposes a Material Modification, transfers ownership of the Generating Facility, or application of the current Standard is agreed to in writing by the Cooperative and the Interconnection Customer.

An Interconnection Customer that has not executed an interconnection agreement with the Cooperative prior to the effective date of this Standard will have 45 Calendar Days following the later of the effective date of the Standard or the posted date of notice in writing from the Cooperative to make prepayment or provide Financial Security in a form reasonably acceptable to the Cooperative for any Network Upgrades identified in the Interconnection Customer's System Impact Study Report as required by Section 4.3.8 of the Procedures.

- 1.1.4. Infrastructure security of electric system equipment and operations and control hardware and software is essential to ensure day-to-day reliability and operational security. Interconnected facilities are expected to meet basic standards for electric system infrastructure and operational security, including physical, operational, and cyber-security practices.

1.2 Pre-Request Response

- 1.2.1. The Cooperative will designate on its Internet web site an employee or office to handle informal requests from the Interconnection Customer.
- 1.2.2. The Interconnection Customer may request a Pre-Request Response by providing the Cooperative details of a potential project in writing, including site address, grid coordinates, project size, project developer name, and proposed Point of Interconnection.

Electric system information provided to the Interconnection Customer should include number of phases and voltage of closest circuit, distance to existing source, distance to substation, and other information and/or materials useful to an understanding of an interconnection at a particular point on the Cooperative's System, to the extent such provision does not violate confidentiality provisions of prior agreements or critical infrastructure requirements. The Pre-Request Response produced by the Cooperative is non-binding and does not confer any rights. The Interconnection Customer must still meet the Section 1.4 requirements to apply to interconnect to the Cooperative's system and to obtain a Queue Number. Any one developer will have no more than five (5) requests for Pre-Request Responses in the Pre-Request Response queue at one time.

1.3 Pre-Application Report

- 1.3.1. In addition to, or instead of, requesting an informal Pre-Request Response, an Interconnection Customer may submit a formal written Pre-Application Report request form (see Attachment 3) along with a non-refundable fee of \$500 for a Pre-Application Report on a proposed project at a specific site. The Cooperative will provide the Pre-Application data described in Section 1.3.2 to the Interconnection Customer following receipt of the completed request form and payment of the \$500 fee. The Pre-Application Report produced by the Cooperative is non-binding, does not confer any rights, and the Interconnection Customer must still successfully apply to interconnect to the Cooperative's system and to obtain a Queue

Number. The written Pre-Application Report request form will include the information in Sections 1.3.1.1 through 1.3.1.8 below to clearly and sufficiently identify the location of the proposed Point of Interconnection. Any one developer will have no more than five (5) requests for Pre-Application Reports in the Pre-Application Report queue at one time.

- 1.3.1.1. Project contact information, including name, address, phone number, and email address.
 - 1.3.1.2. Project location (street address, location map with nearby cross streets and town, grid coordinates of anticipated Point of Interconnection, etc).
 - 1.3.1.3. Meter number, pole number, location map or other equivalent information identifying proposed Point of Interconnection, if available.
 - 1.3.1.4. Generator or Storage Type (e.g., solar, wind, combined heat and power, etc.)
 - 1.3.1.5. Size (alternating current kW, and for Storage kWh).
 - 1.3.1.6. Single or three phase generator configuration.
 - 1.3.1.7. Stand-alone generator (no onsite load, not including station service – Yes or No?)
 - 1.3.1.8. Is new service requested? Yes or No? If there is existing service, include the customer account number, site minimum and maximum current or proposed electric loads in kW (if available) and specify if the load is expected to change.
- 1.3.2. Using the information provided by the Interconnection Customer in the Pre-Application Report request form pursuant to Section 1.3.1, the Cooperative will identify the substation/area bus, bank or circuit likely to serve the proposed Point of Interconnection. This selection by the Cooperative does not necessarily indicate, after application of the screens and/or study, that this would be the circuit the project ultimately connects to. The Interconnection Customer must request additional Pre-Application Reports if information about multiple Points of Interconnection is requested. Subject to Section 1.3.3, the Pre-Application Report will include the following information:
- 1.3.2.1 Total capacity (in MW) of substation/area bus, bank or circuit based on normal or operating ratings likely to serve the proposed Point of Interconnection.
 - 1.3.2.2 Existing aggregate generation capacity (in MW) interconnected to a substation/area bus, bank or circuit (i.e., amount of generation online) likely to serve the proposed Point of Interconnection.
 - 1.3.2.3 Aggregate queued generation capacity (in MW) for a

substation/area bus, bank or circuit (i.e., amount of generation in the queue) likely to serve the proposed Point of Interconnection.

- 1.3.2.4 Substation nominal distribution voltage and/or transmission nominal voltage if applicable.
 - 1.3.2.5 Nominal distribution circuit voltage at the proposed Point of Interconnection.
 - 1.3.2.6 Approximate circuit distance between the proposed Point of Interconnection and the substation.
 - 1.3.2.7 Relevant line section(s) actual or estimated peak load and minimum load data, including daytime minimum load and absolute minimum load, when available.
 - 1.3.2.8 Number, location, and rating of protective devices and number, location, and type (standard, bi-directional) of voltage regulating devices between the proposed Point of Interconnection and the substation/area. Identify whether the substation has a load tap changer.
 - 1.3.2.9 Number of phases available at the proposed Point of Interconnection. If a single phase, distance from the three- phase circuit.
 - 1.3.2.10 Limiting conductor ratings from the proposed Point of Interconnection to the distribution substation.
 - 1.3.2.11 Whether the Point of Interconnection is located on a spot network, grid network, or radial supply.
 - 1.3.2.12 Based on the proposed Point of Interconnection, existing or known constraints such as, but not limited to, electrical dependencies at that location, short circuit interrupting capacity issues, power quality or stability issues on the circuit, capacity constraints, or secondary networks.
 - 1.3.2.13 Other information regarding an Affected System the Cooperative deems relevant to the Interconnection Customer.
- 1.3.3. The Pre-Application Report need only include existing data. A Pre-Application Report request does not obligate the Cooperative to conduct a study or other analysis of the proposed generator in the event that data is not readily available. If the Cooperative cannot complete all or some of the Pre-Application Report due to lack of available data, the Cooperative will provide the Interconnection Customer with a Pre-Application Report that includes the data that is readily available. Notwithstanding any of the provisions of this section, the Cooperative will, in good faith, include data in the Pre-Application Report that represents the best available information at the time of reporting. Further, the total capacity provided in Section 1.3.2.1 does not indicate that an interconnection of aggregate generation up to

this level may be completed without impacts since there are many variables studied as part of the interconnection review process, and data provided in the Pre-Application Report may become outdated at the time of the submission of the complete Interconnection Request.

1.4 Interconnection Request

- 1.4.1 The Interconnection Customer will submit its Interconnection Request to the Cooperative, and the Cooperative will notify the Interconnection Customer confirming receipt.

The Interconnection Request Application Form will be considered complete upon receipt of the following:

1.4.1.1 A substantially complete Interconnection Request Application Form contained in Attachment 2 submitted by a valid legal entity registered with the North Carolina Secretary of State, and signed by the Interconnection Customer.

1.4.1.2 The applicable fee or Interconnection Request Deposit. The applicable fee is specified in the Interconnection Request Application Form and applies to a certified inverter-based Generating Facility no larger than 20 kW reviewed under Section 2 and to any certified Generating Facility no larger than the capacity specified in Section 3.1 to be evaluated under the Section 3 Fast Track Process.

For all other Generating Facilities, including those that do not qualify for the 20 kW Inverter Process or the Fast Track Process, fail the Fast Track and Supplemental Review Process under Section 3 and are to be evaluated under the Section 4 Study Process, an Interconnection Request Deposit is required. The Interconnection Request Deposit will equal \$20,000 plus one dollar (\$1.00) per kWac of capacity specified in the Interconnection Request Application Form, not to exceed an aggregate Interconnection Request Deposit of \$100,000. The Interconnection Request Deposit is intended to cover the Cooperative's reasonably anticipated costs including overheads for conducting the System Impact Study and the Facilities Study. Such deposit will, however, be applicable towards the cost of all studies, Upgrades and Interconnection Facilities including overheads.

1.4.1.3 A Site Control Verification letter (see sample Attachment 10).

1.4.1.4 A site plan indicating the location of the project, the property lines and the desired Point of Interconnection.

1.4.1.5 An electrical one-line diagram for the Generating Facility.

1.4.1.6 Inverter specification sheets for the Interconnection Customer's equipment that will be utilized.

- 1.4.2 The original date- and time-stamp applied to the Interconnection Request Application Form shall be accepted as the qualifying date- and time-stamp for the purposes of establishing Queue Position and any timetable in these procedures.
- 1.4.3 An Interconnection Request will be deemed complete upon submission of the listed information in Section 1.4.1 to the Cooperative.
- 1.4.4 If the Interconnection Request Application Form and/or the initial supporting documentation or any other information requested by the Cooperative is incomplete, the Cooperative will provide, along with notice that the information is incomplete, a written list detailing all information that must be provided. The Interconnection Customer will have ten (10) Days after receipt of the notice to submit the listed information. If the Interconnection Customer does not provide the listed information or a written request for an extension of time, not to exceed ten (10) additional Days, within the deadline, the Interconnection Request will be deemed withdrawn.

1.5 Modification of the Interconnection Request

“Material Modification” means a modification to machine data or equipment configuration or to the interconnection site of the Generating Facility that has a material impact on the cost, timing or design of any Interconnection Facilities or Upgrades or that may adversely impact other Interdependent Interconnection Request with higher Queue Numbers. Material Modifications include certain project revisions, as defined in Section 1.5.1, but exclude certain project revisions as defined in Section 1.5.2.

- 1.5.1 Changes sufficient to constitute a Material Modification are limited to the following conditions:
 - 1.5.1.1 A Material Modification can be established before the System Impact Study Agreement has been executed by the Interconnection Customer only in the event of:
 - 1.5.1.1.1. A change in Point of Interconnection to a new location, unless the new location is on the same circuit less than two (2) poles away from the original location, and the new location is within the same protection zone as the original location;
 - 1.5.1.1.2. A change from certified to non-certified devices (“certified” means certified by an OSHA recognized Nationally Recognized Test Laboratory (NRTL), to relevant UL and IEEE standards, authorized to perform tests to such standards);
 - 1.5.1.1.3. An increase of the Maximum Generating Capacity of a Generating Facility; or

1.5.1.1.4. A change reducing the AC output of the Generating Facility by more than 10%.

1.5.1.2 A Material Modification can be established after the System Impact Study Agreement has been executed by the Interconnection Customer for various causes, including, but not limited to:

1.5.1.2.1. A change in the Point of Interconnection to a new location, unless the new location is on the same circuit less than (2) poles away from the original location, and the new location is within the same protection zone as the original location;

1.5.1.2.2. A change or replacement of generating equipment such as generator(s), inverter(s), solar panel(s), transformers, relaying, controls, etc. that is not a like-kind substitution in size, ratings, impedances, efficiencies or capabilities of the equipment specified in the original or preceding Interconnection Request;

1.5.1.2.3. A change from certified to non-certified devices ("certified" means certified by an OSHA recognized Nationally Recognized Test Laboratory (NRTL), to relevant UL and IEEE standards, authorized to perform tests to such standards);

1.5.1.2.4. A change to transformer connection(s) or grounding from that originally proposed;

1.5.1.2.5. A change to certified inverters with different specifications or different inverter control specifications or set-up than originally proposed;

1.5.1.2.6. An increase of the Maximum Generating Capacity of a Generating Facility; or

1.5.1.2.7. A change reducing the Maximum Generating Capacity of the Generating Facility by more than 10%.

1.5.2 Changes that will not constitute a Material Modification include the following:

1.5.2.1 The following will not constitute a Material Modification before the System Impact Study Agreement has been executed by the Interconnection Customer:

1.5.2.1.1. A change in the DC system configuration to include additional equipment including: DC optimizers, DC-DC converters, DC charge controllers, power plant controllers, and energy storage devices, so long as the proposed change does not violate any of the provisions laid out in Section 1.5.1.1.

1.5.2.2 Except as provided for in Section 1.5.2.1 the following changes will

not constitute a Material Modification at any time:

- 1.5.2.2.1. A change in ownership of a Generating Facility; the new owner, however, will be required to execute a new Interconnection Agreement and Study agreement(s) for any Study which has not been completed and the Report issued by the Cooperative;
 - 1.5.2.2.2. A change or replacement of generating equipment such as generator(s), inverter(s), solar panel(s), transformers, relaying controls, etc. that is a like-kind substitution in size, ratings, impedances, efficiencies or capabilities of the equipment specified in the original or preceding Interconnection Request;
 - 1.5.2.2.3. An increase in the DC/AC ratio that does not increase the maximum AC output capability of the Generating Facility;
 - 1.5.2.2.4. A decrease in the DC/AC ratio that does not reduce the AC output capability of the Generating Facility by more than 10%.
 - 1.5.2.2.5. A change in the DC system configuration to include additional equipment that does not impact the Maximum Generating Capacity, daily production profile or the proposed AC configuration of the Generating Facility including: DC optimizers, DC-DC converters, DC charge controllers, power plant controllers, and energy storage devices such that the output is delivered during the same periods and with the same profile considered during the System Impact Study.
- 1.5.3 To the extent Interconnection Customer proposes to modify any information provided in the Interconnection Request deemed complete by the Cooperative, the Interconnection Customer will submit any such modifications to the Cooperative in writing. If the Cooperative determines that the proposed modification(s) constitutes a Material Modification, the Cooperative will notify the Interconnection Customer in writing that the modification is a Material Modification and the Interconnection Request will be withdrawn from the Queue unless the Interconnection Customer withdraws the proposed Material Modification within 15 Calendar Days of receipt of the Cooperative's written notification. If the modification is determined by the Cooperative not to be a Material Modification, then the Cooperative will notify the Interconnection Customer in writing that the modification has been accepted and that the Interconnection Customer shall retain its Queue Number. Any dispute as to the Cooperative's determination that a modification constitutes a Material Modification will proceed in accordance with Section 6.2 below.
- 1.5.4 Modification Inquiry
- 1.5.4.1 Prior to making any modification, the Interconnection Customer may first submit an informal modification inquiry in writing that

requests the Cooperative to evaluate whether such modification to the original or most recent Interconnection Request is a Material Modification. The Interconnection Customer will provide specific details on all changes that are to be considered by the Cooperative.

- 1.5.4.2 In response to Interconnection Customer's informal request, if the Cooperative evaluates the proposed modification(s) and determines that the changes are not Material Modifications, the Cooperative will inform the Interconnection Customer in writing. If the Interconnection Customer wishes to proceed with the proposed modification(s), the Interconnection Customer will submit a revised Interconnection Request Application Form that reflects the approved modifications.

1.6 Site Control

Documentation of site control will be submitted to the Cooperative with the Interconnection Request using the sample site control verification form included in Attachment 10.

Site control may be demonstrated through.

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

Should Interconnection Customer's site control lapse at any point in time prior to interconnection and such lapse is brought to the attention of Cooperative, the Cooperative will notify the Interconnection Customer in writing of the alleged lapse in site control. The Interconnection Customer will have ten (10) Days from the posted date on the notice from the Cooperative to cure and submit documentation of re-established site control, where failure to cure the lapse will result in the Interconnection Request being deemed withdrawn.

1.7 Queue Number

- 1.7.1 The Cooperative will assign a Queue Number pursuant to Section 1.4.2. Subject to an Interconnection Customer's election to participate in an optional Utility sponsored System Impact Grouping Study, as described in Section 4.3.4, the Queue Number of each Interconnection Request shall be used to determine the cost responsibility for the Upgrades necessary to accommodate the interconnection. Subject to Section 1.7, 1.8, and Section 4.3.4, the Queue Number of each Interconnection Request will also determine the order in which each Interconnection Request is studied.

1.7.2 Subject to the provisions of Sections 1.4, 1.5, and 1.6, Generating Facilities shall retain the Queue Number assigned to their initial Interconnection Request throughout the review process, including when moving through the processes covered by Sections 2, 3, and 4.

1.8 Interdependent Projects

“Interdependent Customer” (or “Project”), “Project A”, “Project B” and “Project C” are defined in the Glossary of Terms (see Attachment 1).

1.8.1 Upon an Interconnection Customer’s submission of a Section 1.4 Interconnection Request for the Section 3 Fast Track Process or Section 4 Study Process, the Cooperative will review the Interconnection Request and make a preliminary determination whether any known Interdependency exists between the Interconnection Customer’s proposed Generating Facility and any other Interconnection Customer with a lower Queue Number. Any preliminary determination by the Cooperative that the Generating Facility does not create an Interdependency will result in the Interconnection Request being preliminarily designated as a Project A and the Cooperative will proceed immediately to either the Section 3 Fast Track Process or the Section 4 Study Process, as applicable. The Cooperative will advise the Interconnection Customer at the Section 4.2 Scoping Meeting, if requested by the Interconnection Customer, regarding its preliminary determination of whether Interdependency would be created by the Generating Facility. A Generating Facility designated and reviewed for system impacts as a Project A may still be determined to create an Interdependency and may be designated by the Cooperative as an Interdependent Project during the Section 4.3 System Impact Study Process. Once the System Impact Study Report is issued by the Cooperative designating a Generating Facility as a Project A for purposes of the Section 4.4 Facilities Study, the Interconnection Request will retain this designation without change.

1.8.2 If the Cooperative determines that that the Interconnection Customer’s proposed Generating Facility is Interdependent with one (1) other Interconnection Request with a lower Queue Number, the Cooperative shall notify the Interconnection Customer at the Section 4.2 Scoping Meeting that the Interconnection Request is designated as a Project B.

1.8.2.1 Following the Section 4.2 scoping meeting and execution of the System Impact Study Agreement, the Project B shall proceed to the Section 4.3 System Impact Study process. Project B shall receive a System Impact Study Report that assumes the interdependent Project A Interconnection Request with the lower Queue Number completes construction and interconnection and another System Impact Study report that assumes the interdependent Project A Interconnection Request with the lower Queue Number is not constructed and is withdrawn.

1.8.2.2 The Cooperative will not proceed to a Project B Facilities Study until after the Project B Interconnection Customer returns a

signed Facilities Study Agreement to the Cooperative and the Cooperative has issued the Section 4.4.4 Facilities Study report for the Interdependent Project A. The Project B Interconnection Customer shall then have the option of whether to proceed with a Facility Study, or wait until the Interdependent Project A executes an Interconnection Agreement and makes payment for any required Upgrade, Interconnection Facilities, and other charges under Section 5.2. If the Project B Interconnection Customer signed a Facilities Study Agreement prior to Interdependent Project A committing to Section 5 construction, the Project B's Facility Study shall assume that the Interdependent Project A Interconnection Request with the lower Queue Number completes construction and interconnection. If Project A is later cancelled prior to the Project A Interconnection Customer making payment for the required Upgrade, the Cooperative will revise the Project B Facility Study at Project B Interconnection Customer's expense. If Project B Interconnection Customer chooses to wait to request the Project B Facility Study, Project B is not required to adhere to the timeline in Section 4.4.1 until Project A has signed an Interconnection Agreement and paid the charges specified in Section 5.2.4 of these Interconnection Procedures or withdrawn.

1.8.3 If the Cooperative determines that that the Interconnection Customer's proposed Generating Facility is Interdependent with more than one (1) other Interconnection Request with lower Queue Numbers, the Cooperative will make a preliminary determination and notify the Interconnection Customer at the Section 4.2 scoping meeting, if requested by the Interconnection Customer, describing generally the number and type of Interdependencies of Interconnection Requests with lower Queue Numbers.

1.8.3.1 Except as provided in Section 1.8.3.3 below, the Cooperative shall not study a project if it is interdependent with more than one prior project, each of which has a lower Queue Number. The Cooperative will study a project when interdependency with only one lower Queue Number prior project exists. The removal of interdependency with multiple projects may be the result of upgrades to the Cooperative System which eliminate the cause of the interdependency, 2) withdrawal of prior interdependent project(s) with lower Queue Numbers, or 3) a lower Queue Number prior project signing an Interconnection Agreement and making payments required in Section 5.2.4.

1.8.3.2 Within five (5) Business Days of an Interconnection Request becoming a Project B Interconnection Request that is Interdependent with only one (1) other prior Interconnection Request with a lower Queue Number, the Cooperative shall notify the Interconnection Customer in writing and provide the new Project B an executable System Impact Study Agreement. Upon being designated by the Cooperative as a Project B, the

Interconnection Customer may request a Section 4.2 scoping meeting on or before the date that the System Impact Study Agreement must be returned to the Utility pursuant to Section 4.2.1. The new Project B Interconnection Customer's Queue Number will be used to determine the order in which the Interconnection Request is studied under Section 4.3 relative to all other Interconnection Requests.

1.8.3.3 When an Interconnection Customer is proposing to interconnect a Standby Generating Facility with zero export requested, the Cooperative shall designate the Standby Generating Facility for expedited Section 4 study as a Project A and also ahead of all other Section 4 studies currently underway in the Cooperative study queue, unless there are other Standby Generating Facilities currently under study, in which case such Standby Generating Facilities shall be studied in their own queue order. Notwithstanding Section 1.7.1, a Standby Generating Facility will be responsible for Interconnection Facilities and any Upgrades arising from its designated Project A position in the Queue as provided for in this section.

1.9 Interconnection Request Submitted Prior to the Effective Date of these Procedures

Other than as set forth in Section 1.1.3, nothing in this Standard affects an Interconnection Customer's Queue Number assigned before the effective date of these procedures. Interconnection Requests which have received a System Impact Study Report as of the effective date of these procedures that did not identify any interdependency with another project shall be deemed a Project A. Any Interconnection Requests for which the Utility has not completed the System Impact Study and issued a System Impact Study Report to the Interconnection Customer as of the Effective date of these procedures shall be reviewed for Interdependency pursuant to Section 1.8.

2 Optional 20 kW Inverter Process for Certified Inverter-Based Generating Facilities No Larger than 20 kW

2.1 Applicability

The 20 kW Inverter Process is available to an Interconnection Customer proposing to interconnect its inverter-based Generating Facility with the Cooperative's System if the Generating Facility is no larger than 20 kW and if the Interconnection Customer's proposed Generating Facility meets the codes, standards, and certification requirements of Attachments 4 and 5 of these procedures, or the Cooperative has reviewed the design or tested the proposed Generating Facility and is satisfied that it is safe to operate.

The Interconnection Customer must install a manual load- break disconnect switch or safety switch as a clear visible indication of switch position between

the Cooperative System and the Interconnection Customer. When the installation of the switch is not otherwise required (e.g. National Electric Code, state or local building code) and is deemed necessary by the Cooperative for certified, inverter-based generators no larger than 10 kW, the Cooperative will reimburse the Interconnection Customer for the reasonable cost of installing a switch that meets the Cooperative's specifications (see also Section 6.16).

2.2 Interconnection Request

The Interconnection Customer will complete the Interconnection Request Application Form for a certified inverter-based Generating Facility no larger than 20 kW in the form provided in Attachment 6 and submit it to the Cooperative, together with the non-refundable processing fee specified in the Interconnection Request Application Form and the documentation required pursuant to Section 1.4.1.

2.2.1. The Cooperative will verify that the Generating Facility can be interconnected safely and reliably using the screens contained in the Fast Track Process. (See Section 3.2.1.) Unless the Cooperative determines and demonstrates that the Generating Facility cannot be interconnected safely and reliably, the Cooperative will approve the Interconnection Request upon fulfillment of all requirements in Section 1.4 and return the Interconnection Request Application Form to the Interconnection Customer.

2.1.1.2 If the proposed interconnection passes the screens but the Cooperative determines that minor Cooperative construction is required to interconnect the Generating Facility to the Cooperative's system, the Interconnection Request will be approved and the Cooperative will provide the Interconnection Customer a non-binding good faith estimate of the cost of interconnection along with the Interconnection Request Application Form.

2.1.1.3 If the proposed interconnection passes the screens, but the costs of interconnection including System Upgrades and Interconnection Facilities cannot be determined without further study or review, the Cooperative will notify the Interconnection Customer that the Cooperative will need to complete a Facilities Study under Section 4.4 to determine the necessary costs of interconnection and will charge the actual cost of the Facilities Study to the Interconnection Customer.

2.2.2. Screens failure: Despite the failure of one or more screens, the Cooperative, at its sole option, may approve the interconnection provided such approval is consistent with safety and reliability. If the Cooperative cannot determine that the Generating Facility may be interconnected consistent with safety, reliability, and power quality standards, the Cooperative may either:

2.2.4.1 Notify the Interconnection Customer in writing that the Cooperative is continuing to evaluate the Generating Facility under Section 3.4 Supplemental Review if the Cooperative concludes that

the Supplemental Review might determine that the Generating Facility could continue to qualify for interconnection pursuant to Fast Track: or

2.2.4.2 Offer to continue evaluating the Interconnection Request under the Section 4 Study Process.

2.3 Certificate of Completion

2.3.1 After installation of the Generating Facility, the Interconnection Customer will submit the Certificate of Completion in the form provided in Attachment 6 to the Cooperative. Prior to parallel operation, the Cooperative may inspect the Generating Facility for compliance with standards including a witness test and the scheduling of an appropriate metering replacement, if necessary.

2.3.2 If a witness test is required but the outcome is not satisfactory, the Cooperative has the right to disconnect the Generating Facility. The Interconnection Customer has no right to operate in parallel with the Cooperative until being notified by the Cooperative that it is so authorized.

2.3.3 Interconnection and parallel operation of the Generating Facility is subject to the Terms and Conditions stated in Attachment 6 of these procedures.

2.4 Contact Information

The Interconnection Customer must provide its contact information. If another entity is responsible for interfacing with the Cooperative, that contact information must also be provided on the Interconnection Request Application Form.

2.5 Ownership Information

The Interconnection Customer will provide the legal name(s) of the owner(s) of the Generating Facility.

2.6 UL 1741 Listed

The Interconnection Customer will ensure that the Generating Facility complies with Underwriters' Laboratories (UL) 1741 standard (Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources) once it has been modified or amended to address adoption of IEEE standard 1547-2018.

2.7 IEEE 1547-2018

The Interconnection customer will design, build and operate its facility so that it complies with IEEE standard 1547-2018. In addition, the Interconnection Customer shall ensure that all facilities or systems have communication capabilities for monitoring and managing the DER in accordance with IEEE Standard 1547-2018 (and UL Standard 1741, upon its revision or amendment to incorporate IEEE

Standard 1547-2018). The facility must also have a smart inverter and a DER management device connected to the smart inverter that allows for communication with Cooperative's energy management system.

3 Optional Fast Track Process for Certified Generating Facilities

3.1 Applicability

The Fast Track Process is available to an Interconnection Customer proposing to interconnect its Generating Facility with the Cooperative's System if the Generating Facility's capacity does not exceed the size limits identified in the table below. Generating Facilities below these limits are eligible for Fast Track review. However, Fast Track eligibility is distinct from the Fast Track Process itself, and eligibility does not imply or indicate that a Generating Facility will pass the Fast Track screens in Section 3.2 below or the Supplemental Review screens in Section 3.4 below.

Fast Track eligibility is determined based upon the generator type, the size of the generator, voltage of the line and the location of and the type of line at the Point of Interconnection. Generating Facilities connecting to lines greater or equal to 35 kilovolt (kV) are ineligible for the Fast Track Process regardless of size, unless mutually agreed to in writing between the Interconnection Customer and Cooperative. Only certified inverter-based systems are eligible for the Fast Track Process and the size limit varies according to the voltage of the line at the proposed Point of Interconnection. Certified inverter-based Generating Facilities located within 2.5 electrical circuit miles of a substation and on a mainline (as defined in the table below) are eligible for the Fast Track Process under the higher thresholds set forth in the table below. In addition to the size threshold, the Interconnection Customer's proposed Generating Facility must meet the codes, standards, and certification requirements of Attachments 4 and 5 of these procedures, or the Cooperative has to have reviewed the design or tested the proposed Generating Facility and be satisfied that it is safe to operate.

Fast Track Eligibility for Inverter-Based Systems¹		
Line Voltage	Fast Track Eligibility Regardless of Location	Fast Track Eligibility on a Mainline² and ≤ 2.5 Electrical Circuit Miles from Substation³
< 5 kV	≤ 20 kW	≤ 50 kW
≥ 5 kV and < 35 kV	≤ 50 kW	≤ 100 kW

¹ Must be an UL certified inverter.

² For purposes of this table, a mainline is the three-phase backbone of a circuit. It will typically constitute lines with wire sizes of 4/0 American wire gauge, 336.4 kcmil, 397.5 kcmil, 477 kcmil and 795 kcmil.

³ An Interconnection Customer can determine this information about its proposed interconnection location in advance by requesting a pre-application report pursuant to Section 1.2.

3.1.1 The Interconnection Customer may elect in the Interconnection Request Application Form to proceed directly to Supplemental Review, in order to minimize overall processing time in the event the Cooperative deems Supplemental Review is appropriate. This is accomplished by selecting both the Fast Track and Supplemental Review options on the Interconnection Request Application Form and paying the applicable Fast Track fee and Supplemental Review deposit.

3.2 Initial Review

After the Cooperative notifies the Interconnection Customer it has received a complete Interconnection Request pursuant to Section 1.4 and the Cooperative has preliminarily determined that the Interconnection Request is not interdependent with more than one Interconnection Request with lower Queue Numbers under Section 1.8, the Cooperative will perform an initial review using the screens set forth below, will notify the Interconnection Customer of the results, and include with the notification copies of the analysis and data underlying the Cooperative's determinations under the screens.

3.2.1. Screens

- 3.2.1.1. The proposed Generating Facility's Point of Interconnection must be on a portion of the Cooperative's Distribution System.
- 3.2.1.2. For interconnection of a proposed Generating Facility to a radial distribution circuit, the aggregated generation, including the proposed Generating Facility, on the circuit will not exceed 15% of the line section annual peak load as most recently measured at the substation. A line section is that portion of a Cooperative's System connected to a customer bounded by automatic sectionalizing devices or the end of the distribution line.
- 3.2.1.3. For interconnection of a proposed Generating Facility to a radial distribution circuit, the aggregated generation, including the proposed Generating Facility, on the circuit will not exceed 90% of the circuit and/or bank minimum load at the substation.
- 3.2.1.4. For interconnection of a proposed Generating Facility to the load side of spot network protectors, the proposed Generating Facility must utilize an inverter-based equipment package and, together with the aggregated other inverter-based generation, will not exceed the smaller of 5% of a spot network's maximum load or 50 kW.
- 3.2.1.5. The proposed Generating Facility, in aggregation with other generation on the distribution circuit, will not contribute more than 10% to the distribution circuit's maximum fault current at the point on the high voltage (primary) level nearest the proposed point of change of ownership.

- 3.2.1.6. The proposed Generating Facility, in aggregate with other generation on the distribution circuit, will not cause any distribution protective devices and equipment (including, but not limited to, substation breakers, fuse cutouts, and line reclosers), or Interconnection Customer equipment on the system to exceed 87.5% of the short circuit interrupting capability; nor will the interconnection be approved for a circuit that already exceeds 87.5% of the short circuit interrupting capability.
- 3.2.1.7. Using the table below, determine the type of interconnection to a primary distribution line. This screen includes a review of the type of electrical service to be provided to the Interconnection Customer, including line configuration and the transformer connection for the purpose of limiting the potential for creating over-voltages on the Cooperative's System due to a loss of ground during the operating time of any anti-islanding function.

Primary Distribution Line Type	Type of Interconnection to Primary Distribution Line	Result/Criteria
Three-phase, three wire	3-phase or single phase, phase-to-phase	Pass Screen
Three-phase, four wire	Effectively-grounded three-phase or single phase, line-to-neutral	Pass Screen

- 3.2.1.8. If the proposed Generating Facility is to be interconnected on a single-phase shared secondary, the aggregate Generating Facility capacity on the shared secondary, including the proposed Generating Facility, will not exceed 65% of the transformer nameplate rating
- 3.2.1.9. If the proposed Generating Facility is single-phase and is to be interconnected on a center tap neutral of a 240 volt service, its addition will not create an imbalance between the two sides of the 240 volt service of more than 20% of the nameplate rating of the service transformer.
- 3.2.1.10. The Generating Facility, in aggregate with other generation interconnected to the transmission side of a substation transformer feeding the circuit where the Generating Facility proposes to interconnect will not exceed 10 MW in an area where there are known, or posted, transient stability limitations to generating units located in the general electrical vicinity (e.g., three or four transmission busses from the point of Interconnection).

3.2.2. Screen Results

- 3.2.2.1 If the proposed interconnection passes the screens and requires no construction by the Cooperative on its own System, the Interconnection Request will be approved and the Cooperative will provide the Interconnection Customer an executable Interconnection Agreement.
- 3.2.2.2 If the proposed interconnection passes the screens and the Cooperative is able to determine without further study or review that only minor Cooperative construction is required to interconnect the Generating Facility to the Cooperative's System, the Interconnection Request will be approved and the Cooperative will provide the Interconnection Customer a non-binding good faith estimate of the cost of interconnection along with an executable Interconnection Agreement.
- 3.2.2.3 If the proposed interconnection passes the screens, but the costs of interconnection including System Upgrades and Interconnection Facilities cannot be determined without further study or review, the Cooperative will notify the Interconnection Customer that the Cooperative will need to complete a Facilities Study under Section 4.4 to determine the necessary costs of interconnection.
- 3.2.2.4 If the proposed interconnection fails the screens, but the Cooperative determines that the Generating Facility may nevertheless be interconnected consistent with safety, reliability, and power quality standards, and requires no construction by the Cooperative on its own System, the Cooperative will provide the Interconnection Customer an executable Interconnection Agreement.
- 3.2.2.5 If the proposed interconnection fails the screens, but the Cooperative determines that the Generating Facility may nevertheless be interconnected consistent with safety, reliability, and power quality standards and the Cooperative is able to determine without further study or review that only minor Cooperative construction is required to interconnect with the Generating Facility, the Interconnection Request will be approved and the Cooperative will provide the Interconnection Customer a non-binding good faith estimate of the cost of interconnection along with an executable Interconnection Agreement.
- 3.2.2.6 If the proposed interconnection fails the screens, and the Cooperative does not or cannot determine from the initial review that the Generating Facility may nevertheless be interconnected consistent with safety, reliability, and power quality standards unless the Interconnection Customer is willing to consider minor modifications or further study, the Cooperative will provide the Interconnection Customer with the opportunity to attend a customer options meeting as described in Section 3.3 below.

3.3 Customer Options Meeting

If the Cooperative determines the Interconnection Request cannot be approved without (1) minor modifications at minimal cost, (2) a supplemental study or other additional studies or actions, or (3) incurring significant cost to address safety, reliability, or power quality problems, the Cooperative will notify the Interconnection Customer and offer to convene a customer options meeting to review possible Interconnection Customer facility modifications or the screen analysis and related results, to determine what further steps are needed to permit the Generating Facility to be connected safely and reliably. At the time of notification of the Cooperative's determination, or at the customer options meeting, the Cooperative will consider:

- 3.3.1 Whether to offer to perform facility modifications or minor modifications to the Cooperative's System (e.g., changing meters, fuses, relay settings) and provide a non-binding good faith estimate of the limited cost to make such modifications to the Cooperative's System. If offered, the Interconnection Customer will have ten (10) Days to agree to pay for the modifications to the Cooperative's electric system or the Interconnection Request will be deemed to be withdrawn. If the Interconnection Customer agrees to pay for the modifications to the Cooperative's electric system, the Cooperative will provide the Interconnection Customer with an executable Interconnection Agreement; or
- 3.3.2 Whether to offer to perform a Supplemental Review under Section 3.4 if the Cooperative concludes that the Supplemental Review might determine that the Generating Facility could continue to qualify for interconnection pursuant to the Fast Track Process, and provide a non-binding good faith estimate of the costs of such review. If offered, the Interconnection Customer will have ten (10) Days to accept the Cooperative's offer to perform a Supplemental Review and post any deposit requirement for the Supplemental Review, or the Interconnection Request will be deemed to be withdrawn; or
- 3.3.3 Whether to offer to continue evaluating the Interconnection Request under the Section 4 Study Process. If offered, the Interconnection Customer will have ten (10) Days to agree in writing to its Interconnection Request continuing to be evaluated under the Section 4 Study Process, and post any deposit requirement for the Study Process, or the Interconnection Request will be deemed to be withdrawn.

3.4 Supplemental Review

If the Interconnection Customer agrees to a Supplemental Review, the Interconnection Customer will agree in writing within 15 Days of the offer, and submit a deposit for the estimated costs or the request will be deemed to be withdrawn. The Interconnection Customer will be responsible for the Cooperative's actual costs for conducting the Supplemental Review. The Interconnection Customer must pay any review costs that exceed the deposit within 30 Days of receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced

costs, the Cooperative will return such excess within 30 Days of the invoice without interest.

- 3.4.1 After receipt of the deposit for a Supplemental Review, Cooperative will determine if the Generating Facility can be interconnected safely and reliably.
 - 3.4.1.1 If so, the Cooperative will forward an executable Interconnection Agreement to the Interconnection Customer.
 - 3.4.1.2 If so, but Interconnection Customer facility modifications are required to allow the Generating Facility to be interconnected consistent with safety, reliability, and power quality standards under these procedures, the Cooperative shall ask if Interconnection Customer agrees to make the necessary modifications. The Interconnection Customer will be given 10 Days to agree, in writing, to the required modifications. The Cooperative will forward an executable Interconnection Agreement to the Interconnection Customer after confirmation that the Interconnection Customer has agreed to make the necessary modifications at the Interconnection Customer's cost.
 - 3.4.1.3 If so, but minor modifications to the Cooperative's System are required to allow the Generating Facility to be interconnected consistent with safety, reliability, and power quality standards under these procedures, the Cooperative will forward an executable Interconnection Agreement to the Interconnection Customer that requires the Interconnection Customer to pay the costs of such System modifications prior to interconnection.
 - 3.4.1.4 If so, but the cost of interconnection including System Upgrades and Interconnection Facilities cannot be determined without further study or review, the Cooperative will notify the Interconnection Customer that the Cooperative will need to complete a Facilities Study under Section 4.4 to determine the necessary costs of interconnection.
 - 3.4.1.5 If not, the Interconnection Request will continue to be evaluated under the Section 4 Study Process, provided the Interconnection Customer indicates it wants to proceed and submits the required deposit within 15 Days.

4 Study Process

4.1 Applicability

The Study Process will be used by an Interconnection Customer proposing to interconnect its Generating Facility with the Cooperative's System if the Generating Facility exceeds the size limits for the Section 3 Fast Track Process,

is not certified, or is certified but did not pass the Fast Track Process or the 20 kW Inverter Process. The Interconnection Customer may be required to submit additional information or documentation, as may be requested by the Cooperative in writing, during the Study Process.

4.2 Scoping Meeting

- 4.2.1. A scoping meeting will be held after the Interconnection Request is deemed complete, unless the Interconnection Customer is preliminarily designated as interdependent with more than one (1) Interconnection Request pursuant to Section 1.8.3.1, or as otherwise mutually agreed to by the Parties. The Cooperative and the Interconnection Customer will bring appropriate personnel and materials as may be reasonably required to accomplish the purpose of the meeting. The scoping meeting may be omitted by mutual agreement in writing.
- 4.2.2. The purpose of the scoping meeting is to discuss the Interconnection Request and review existing studies relevant to the Interconnection Request. The Parties will further discuss whether the Cooperative should perform a System Impact Study, a Facilities Study, or proceed directly to an Interconnection Agreement.
- 4.2.3. If the Cooperative, after consultation with the Interconnection Customer, determines that the project should proceed to a System Impact Study or Facilities Study, the Cooperative will provide the Interconnection Customer either a System Impact Study Agreement (Attachment 7) or a Facilities Study Agreement (Attachment 8), as appropriate, including an outline of the scope of the study or studies and a nonbinding good faith estimate of the cost to perform the study or studies, which cost will be subtracted from the deposit outlined in Section 1.4.1.2.
- 4.2.4. If the Parties agree not to perform a System Impact Study or Facilities Study, but to proceed directly to an Interconnection Agreement, the Parties will proceed to the Construction Planning Meeting as called for in Section 5.

4.3 System Impact Study

- 4.3.1. In order to retain its Queue Position, the Interconnection Customer must return a System Impact Study Agreement signed by the Interconnection Customer within 15 Days of receiving an executable System Impact Study Agreement as provided for in Section 4.2.3.
- 4.3.2. The scope of and cost responsibilities for a System Impact Study are described in the System Impact Study Agreement. The time allotted for completion of the System Impact Study will be as set forth in the System Impact Study Agreement.
- 4.3.3. The System Impact Study will identify and detail the electric System impacts that would result if the proposed Generating Facility were interconnected without project modifications or electric System modifications, or to study potential impacts, including, but not limited to,

those identified in the scoping meeting. The System Impact Study will evaluate the impact of the proposed interconnection on the reliability of the electric System, including the distribution and transmission systems, if required.

- 4.3.4. The System Impact Study Report will provide the Preliminary Estimated Upgrade Charge, which is a preliminary indication of the cost and length of time that would be necessary to correct any System problems identified in those analyses and implement the interconnection.
- 4.3.5. The System Impact Study Report will provide the Preliminary Estimated Interconnection Facilities Charge, which is a preliminary non-binding indication of the cost and length of time that would be necessary to provide the Interconnection Facilities.
- 4.3.6. If Cooperative has determined that an Interdependency exists and the Project is designated as a Project B, the Project B Interconnection Request will receive a System Impact Study report, addressing a scenario assuming Project A is constructed and a second scenario assuming Project A is not constructed.
- 4.3.7. After receipt of the System Impact Study report(s), the Interconnection Customer will inform the Cooperative in writing if it wishes to withdraw the Interconnection Request and to request an accounting of any remaining deposit amount pursuant to Section 6.3.
- 4.3.8. At the time the System Impact Study Report is provided to the Interconnection Customer, the Cooperative will also deliver an executable Facilities Study Agreement to the Interconnection Customer. After receipt of the System Impact Study report and Facilities Study Agreement, when the Interconnection Customer is ready to proceed with the design and construction of the Upgrades and Interconnection Facilities, the Interconnection Customer will return the signed Facilities Study Agreement to the Cooperative in accordance with Section 4.4 and shall also submit payment or Financial Security reasonably acceptable to the Cooperative equal to the cost of any Network Upgrades identified in the Preliminary Estimated Upgrade Charge, as set forth in the System Impact Study Report, that would be borne by the Interconnection Customer under a future Interconnection Agreement. This payment or Financial Security shall be held by the Cooperative as a non-refundable pre-payment for the estimated cost of Network Upgrades to be designed by the Cooperative in the Section 4.4 Facilities Study. The preliminary Network Upgrade pre-payment amount shall be trued up by the Cooperative in the Detailed Estimated Upgrade Charges included in a future Interconnection Agreement or shall be forfeited to the Cooperative to construct the Network Upgrades if the Interconnection Request is subsequently withdrawn by the Interconnection Customer. Failure to timely make such pre-payments will result in the Cooperative removing the Interconnection Request from the queue.

4.4 Facilities Study

- 4.4.1. A solar Interconnection Customer must request a Facilities Study by returning the signed Facilities Study Agreement within 60 Calendar Days of the date the Facilities Study Agreement was provided. Any other Interconnection Customer must request a Facility Study by returning the signed Facilities Study Agreement within 180 Calendar Days of the date the Facilities Study Agreement was provided. Failure to return the signed Facilities Study Agreement within the foregoing applicable time period will result in the Interconnection Request being deemed withdrawn.
- 4.4.2. When an Interdependent Project A exists, a Project B Interconnection Request will not be required to comply with Section 4.4.1 until Project A has signed the Final Interconnection Agreement, and made payments and provided Financial Security as specified in Section 5.2 or withdrawn. If Project B has not provided written notice of its intent to proceed to a Facilities Study under Section 1.8.2.2, upon the Project A fulfilling the requirements in Section 5.2 or withdrawing the Interconnection Request, the Cooperative will notify the Project B Interconnection Customer that it has the time specified in Section 4.4.1 to return the signed Facilities Study Agreement or the Interconnection Request will be deemed withdrawn.
- 4.4.3. The scope of and cost responsibilities for the Facilities Study are described in the Facilities Study Agreement. The time allotted for completion of the Facilities Study is described in the Facilities Study Agreement.
- 4.4.4. The Facilities Study Report will specify and estimate the cost of the equipment, engineering, procurement and construction work (including overheads) needed to implement the System Impact Studies and to allow the Generating Facility to be interconnected and operated safely and reliably.
- 4.4.5. The Cooperative will design any required Interconnection Facilities and/or Upgrades under the Facilities Study Agreement. The Cooperative may contract with consultants to perform activities required under the Facilities Study Agreement. The Interconnection Customer and the Cooperative may agree to allow the Interconnection Customer to separately arrange for the design of some of the Interconnection Facilities. In such cases, facilities design will be reviewed and/or modified prior to acceptance by the Cooperative, under the provisions of the Facilities Study Agreement. If the Parties agree to separately arrange for design and construction, and provided that critical infrastructure security and confidentiality requirements can be met, the Cooperative will make sufficient information available to the Interconnection Customer in accordance with confidentiality and critical infrastructure requirements to permit the Interconnection Customer to obtain an independent design and cost estimate for any necessary facilities.

5 Interconnection Agreement and Scheduling

5.1 Construction Planning Meeting

- 5.1.1. Within ten (10) Days of receipt of the Facility Study report, the

Interconnection Customer will request a Construction Planning Meeting, where failure to comply will result in the Interconnection Request being deemed withdrawn. The Construction Planning Meeting request will be in writing and will include the Interconnection Customer's reasonably requested date for completion of the construction of the Upgrades and Interconnection Facilities.

- 5.1.2. The Construction Planning Meeting will be scheduled within a reasonable period following the Section 5.1.1 request from the Interconnection Customer, or as otherwise mutually agreed to by the parties.
- 5.1.3. The purpose of the Construction Planning Meeting is to identify the tasks for each party and discuss and determine the milestones for the construction of the Upgrades and Interconnection Facilities. Agreed upon milestones will be specific as to scope of action, responsible party, and date of deliverable and will be recorded in the Final Interconnection Agreement (see Attachment 9) to be provided to Interconnection Customer pursuant to Section 5.2.1 below.
- 5.1.4. If the Cooperative cannot complete the installation of the required Upgrades and Interconnection Facilities within two (2) months of the Interconnection Customer's reasonably requested In-Service Date, the Interconnection Customer will have the option of payment for work outside of normal business hours or hiring a Cooperative-approved subcontractor to perform the distribution Upgrades. Any Cooperative-approved subcontractor performance remains subject to Cooperative oversight during construction. The Cooperative will make a list of Cooperative-approved subcontractors available to the Interconnection Customer promptly upon request.

5.2 Interconnection Agreement

- 5.2.1. After the Construction Planning Meeting, the Cooperative will provide an executable Final Interconnection Agreement containing the Detailed Estimated Upgrade Charges, Detailed Estimated Interconnection Facility Charge, Appendix H (Construction Milestone and payment schedule listing tasks, dates and the party responsible for completing each task), and other appropriate information, requirements, and charges.
- 5.2.2. If the Interconnection Customer does not execute and return the Final Interconnection Agreement within ten (10) Days of receipt from Cooperative, the Interconnection Request will be deemed withdrawn.
- 5.2.3. After the Parties execute the Final Interconnection Agreement, the Cooperative will return a copy to the Interconnection Customer and initiate interconnection.
- 5.2.4. The Final Interconnection Agreement will specify milestones for payment for Upgrades and Interconnection facilities (and/or, if acceptable to the Cooperative, provision of Financial Security) that are required prior to the start of design and construction. Failure to make payment or provide Financial Security within forty-five (45) Calendar Days after the date the

Interconnection Agreement is executed will result in the Interconnection Request being deemed withdrawn.

5.3 Interconnection Construction

Construction of the Upgrades and Interconnection Facilities will proceed as provided in the Final Interconnection Agreement and Appendices. The Interconnection Customer's facilities or system construction shall comply with Cooperative's applicable design and construction requirements.

6 Provisions that Apply to All Interconnection Requests

6.1 Reasonable Efforts

The Cooperative will endeavor to complete its obligations pursuant to these procedures within reasonable periods. If for any reason the Cooperative cannot complete an obligation within a reasonable period, it will at its earliest opportunity notify the Interconnection Customer, explain the reason for the delay, and provide an estimated time by which it will complete the applicable interconnection procedure in the process.

6.2 Disputes

6.2.1. The Parties agree to attempt to resolve all disputes arising out of the interconnection process according to the provisions of this section. Each Party agrees to conduct all negotiations in good faith.

6.2.2. In the event of a dispute, either Party will provide the other Party with a written notice of dispute. Such notice will describe in detail the nature of the dispute.

6.2.3. The Parties shall seek to resolve a dispute within twenty (20) Days after the receipt of the notice. If a resolution is not reached, the Parties may if mutually agreed, continue negotiations for up to an additional twenty (20) Days.

6.2.4. The Parties may, upon mutual agreement, seek the assistance of a dispute resolution service to resolve the dispute within (20) Days, with the opportunity to extend this timeline upon mutual agreement. The dispute resolution service will assist the Parties in either resolving the dispute or in selecting an appropriate dispute resolution venue (e.g., mediation, settlement judge, early neutral evaluation, or technical expert) to assist the parties in resolving their dispute. Each Party will be responsible for one-half of any costs paid to neutral third parties.

6.2.5. The Queue Number assigned to an Interconnection Customer Seeking to resolve a dispute shall not be withdrawn pursuant to Section 6.3 unless: (1) the Interconnection Request is deemed withdrawn by the Cooperative and the Interconnection Customer fails to take advantage of any express opportunity to cure; (2) the Interconnection Customer voluntarily submits a written request for withdrawal.

6.3 Withdrawal of An Interconnection Request

- 6.3.1. An Interconnection Customer may withdraw an Interconnection Request at any time prior to executing a Interconnection Agreement by providing the Cooperative with a written request for withdrawal.
- 6.3.2. An Interconnection Request will be deemed withdrawn if the Interconnection Customer fails to meet its obligations specified in the Interconnection Procedures, System Impact Study Agreement or Facilities Study Agreement or to take advantage of any express opportunity to cure.
- 6.3.3. Within 90 Calendar Days of any voluntary or deemed withdrawal of the Interconnection Request, the Cooperative will provide the Interconnection Customer with a final accounting report of any difference between (1) the Interconnection Customer's cost responsibility for the actual cost of such work performed, and (2) the Interconnection Customer's previous aggregate Interconnection Facility Request Deposit payments to the Cooperative for such work. If the Interconnection Customer's cost responsibility exceeds its previous aggregate payments, the Cooperative will invoice the Interconnection Customer for the amount due and the Interconnection Customer will make payment to the Cooperative within 30 Calendar Days. If the Interconnection Customer's previous aggregate payments exceed its cost responsibility under this Agreement, the Cooperative will refund to the Interconnection Customer, without interest, an amount equal to the difference within 30 Calendar Days of the final accounting report.

6.4 Interconnection Metering, Curtailment, Control, and Data Acquisition

Any metering necessitated by the use of the Generating Facility will be installed at the Interconnection Customer's expense in accordance with all applicable regulatory requirements or the Cooperative's specifications. This includes metering, telemetry, control, and curtailment requirements of the Cooperative's wholesale power provider.

For projects greater than 20 kW, the Generating Facility must support Modbus and DNP 3.0 protocols for the purpose of exchanging information and receiving any control or curtailment instructions from the Cooperative and/or its wholesale power provider.

6.5 Commissioning and Post-Commissioning Inspections

- 6.5.1 Commissioning tests of the Interconnection Customer's installed equipment will be performed pursuant to applicable codes and standards. If the Interconnection Customer is proceeding under Section 2.3.1, the Cooperative must be given at least ten (10) Days written notice, or as otherwise mutually agreed to by the Parties, of the tests and may be present to witness the commissioning tests.

- 6.5.2 In the case of any Generating Facility that was not inspected prior to commencing parallel operation, the Cooperative shall be authorized to conduct an inspection of the medium voltage AC side of each Generating Facility (including assessing that the anti-islanding process is operational). Such inspection and testing activities will be performed by Cooperative or a third-party independent contractor approved by Cooperative. The Interconnection Customer shall pay the actual cost of such inspection within 30 Days after the Cooperative provides a written invoice for such cost.
- 6.5.3 The Cooperative shall also be entitled, on a periodic basis, to inspect the medium voltage AC side of each Interconnected Generating Facility on a reasonable schedule determined by the Cooperative in accordance with the inspection cycles applicable to its own distribution system. Such inspection and testing activities will be performed by Cooperative or a third-party independent contractor approved by Cooperative. The Interconnection Customer shall pay the actual cost of such inspection within 30 Days after the Cooperative provides a written invoice for such costs.
- 6.5.4 The Cooperative shall also be entitled to inspect the medium voltage AC side of an Interconnected Generating Facility in the event that the Cooperative identifies or becomes aware of any condition that (1) has the potential to either cause disruption or deterioration of service to other customers served from the same electric system or cause damage to the Cooperative's System or Affected Systems, or (2) is imminently likely to endanger life or property or cause a material adverse effect on the security of, or damage to the Cooperative's System, the Cooperative's System is directly connected. Such inspection and testing activities will be performed by Cooperative or a third-party independent contractor approved by Cooperative. The Interconnection Customer shall pay the actual cost of such inspection within 30 Days after the Cooperative provides a written invoice for such cost.

6.6 Confidentiality

- 6.6.1. Confidential Information will mean any confidential and/or proprietary information provided by one Party to the other Party that is clearly marked or otherwise designated "Confidential."
- 6.6.2. Confidential Information does not include information previously in the public domain, required to be publicly submitted or divulged by Governmental Authorities (after notice to the other Party and after exhausting any opportunity to oppose such publication or release), or necessary to be divulged in an action to enforce these procedures. Each Party receiving Confidential Information will hold such information in confidence and will not disclose it to any third party nor to the public without the prior written authorization from the Party providing that information, except to fulfill obligations under these procedures, or to fulfill legal or regulatory requirements.

- 6.6.2.1. Each Party will employ at least the same standard of care to protect Confidential Information obtained from the other Party as it employs to protect its own Confidential Information.
- 6.6.2.2. Each Party is entitled to equitable relief, by injunction or otherwise, to enforce its rights under this provision to prevent the release of Confidential Information without bond or proof of damages and may seek other remedies available at law or in equity for breach of this provision.
- 6.6.3. If information is requested by any regulatory agency or commission, or pursuant to subpoena or other legal process, from one of the Parties that is otherwise required to be maintained in confidence pursuant to these procedures, the Party will provide the requested information within the time provided for in the request. The disclosing Party may request that the information be treated as confidential and non-public in accordance with applicable law and withheld from public disclosure.
- 6.6.4. All information pertaining to a project will be provided to the new owner in the case of a change of control of the existing legal entity or a change of ownership to a new legal entity.

6.7 Comparability

The Cooperative will receive, process, and analyze all Interconnection Requests received under these procedures in a timely manner, as set forth in these procedures. The Cooperative will use the same reasonable efforts in processing and analyzing Interconnection Requests from all Interconnection Customers, whether the Generating Facility is owned or operated by the Cooperative, its subsidiaries or affiliates, or others.

6.8 Record Retention

The Cooperative will maintain for three (3) years records, subject to audit, of all Interconnection Requests received under these procedures, the times required to complete Interconnection Request approvals and disapprovals, and justification for the actions taken on the Interconnection Requests.

6.9 Coordination with Affected Systems

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

with the Cooperative in all matters related to the conduct of studies and the determination of modifications to Affected Systems.

6.10 Capacity of the Generating Facility

- 6.10.1. If the Interconnection Request is for a Generating Facility that includes multiple energy production devices at a site for which the Interconnection Customer seeks a single Point of Interconnection, the Interconnection Request will be evaluated on the basis of the aggregate capacity of the multiple devices, unless otherwise agreed to by the Cooperative and the Interconnection Customer.
- 6.10.2. For the purposes of this Standard, the capacity of the Generating Facility shall be considered the maximum rated capacity of the Generating Facility, except where the gross generating capacity of the Generating Facility is limited (e.g., through the use of a control system, power relay(s), or other similar device settings or adjustments as mutually agreed upon by the Cooperative and Interconnection Customer). The Generating Facility's capacity shall be considered the Maximum Generating Capacity specified by the Interconnection Customer in the Interconnection Request. The Maximum Generating Capacity approved in the Study Process will subsequently be included as a limitation in the Interconnection Agreement.

6.11 Sale of an Existing or Proposed Generating Facility

- 6.11.1. The Interconnection Customer will notify the Cooperative of the pending sale of a proposed Generating Facility in writing. The Interconnection Customer will provide the Cooperative with information regarding whether the sale is a change of ownership of the Generating Facility to a new legal entity, or a change of control of the existing legal entity.

The Interconnection Customer will promptly notify the Cooperative of the final date of sale and transfer date of ownership in writing. The purchaser of the Generating Facility will confirm to the Cooperative the final date of sale and transfer date of ownership in writing, and submit an Interconnection Request requesting transfer control or change of ownership together with the change of ownership fee listed in Attachment 2.

- 6.11.2. Existing Interconnection Agreements are non-transferable. If the Generating Facility is sold to a new legal entity, a new Interconnection Agreement must be executed by the new legal entity prior to the interconnection or for the continued interconnection of the Generating Facility to the Cooperative's System. Cooperative will not withhold or delay the execution of an Interconnection Agreement with the new owner provided the Generating facility or proposed Generating facility complies with requirements of 6.11.
- 6.11.3. The technical requirements in the Interconnection Agreement will be grandfathered for subsequent owners as long as (1) the Generating Facility's maximum rated capacity has not been changed; (2) the

Generating Facility has not been modified so as to change its electrical characteristics; and (3) the interconnection system has not been modified.

6.12 Isolating or Disconnecting the Generating Facility

- 6.12.1. The Cooperative may isolate the Interconnection Customer's premises and/or Generating Facility from the Cooperative's System when necessary in order to construct, install, repair, replace, remove, investigate or inspect any of the Cooperative's equipment or part of Cooperative's System; or if the Cooperative determines that isolation of the Interconnection Customer's premises and/or Generating Facility from the Cooperative's System is necessary because of emergencies, forced outages, force majeure or compliance with prudent electrical practices.
- 6.12.2. Whenever feasible, the Cooperative will give the Interconnection Customer reasonable notice of the isolation of the Interconnection Customer's premises and/or Generating Facility from the Cooperative's System.
- 6.12.3. Notwithstanding any other provision of this Standard, if at any time the Cooperative determines that the continued operation of the Generating Facility may endanger either (1) the Cooperative's personnel or other persons or property or (2) the integrity or safety of the Cooperative's System, or otherwise cause unacceptable power quality problems for other electric consumers, the Cooperative will have the right to isolate the Interconnection Customer's premises and/or Generating Facility from the Cooperative's System.
- 6.12.4. The Cooperative may disconnect from the Cooperative's System any Generating Facility determined to be malfunctioning, or not in compliance with this Standard. The Interconnection Customer must provide proof of compliance with this Standard before the Generating Facility will be reconnected.

6.13 Limitation of Liability

Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission hereunder, will be limited to the amount of direct damage actually incurred. In no event will either Party be liable to the other Party for any indirect, special, incidental, consequential, or punitive damages of any kind.

6.14 Indemnification

The Interconnection Customer will at all times indemnify, defend and save the Cooperative, its members, directors, employees and agents harmless from any and all damages, losses, claims, including claims and actions relating to injury or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney's fees, and all other obligations by or to third parties,

arising out of or resulting from the Interconnection Customer's action or inaction of its obligations hereunder.

6.15 Insurance

The Interconnection Customer will obtain and retain, for as long as the Generating Facility is interconnected with the Cooperative's System, liability insurance which protects the Interconnection Customer from claims for bodily injury and/or property damage. The amount of such insurance will be sufficient to insure against all reasonably foreseeable direct liabilities given the size and nature of the generating equipment being interconnected, the interconnection itself, and the characteristics of the system to which the interconnection is made. This insurance will be primary for all purposes. The Interconnection Customer will provide certificates evidencing this coverage as required by the Cooperative. Such insurance will be obtained from an insurance provider authorized to do business in North Carolina. The Cooperative reserves the right to refuse to establish or continue the interconnection of the Generating Facility with the Cooperative's System, if such insurance is not in effect.

- 6.15.1. For an Interconnection Customer that is a residential customer of the Cooperative proposing to interconnect a Generating Facility no larger than 20 kW, the required coverage will be a standard homeowner's insurance policy with liability coverage in the amount of at least \$100,000 per occurrence.
- 6.15.2. For an Interconnection Customer that is a non-residential customer of the Cooperative proposing to interconnect a Generating Facility no larger than 20 kW, the required coverage will be comprehensive general liability insurance with coverage in the amount of at least \$300,000 per occurrence.
- 6.15.3. For an Interconnection Customer that is a non-residential customer of the Cooperative proposing to interconnect a Generating Facility greater than 20 kW, the required coverage will be comprehensive general liability insurance with coverage in the amount of at least \$2,000,000 per occurrence.

6.16 Disconnect Switch

The Interconnection Customer must install a manual load- break disconnect switch or safety switch as a clear visible indication of switch position between the Cooperative System and the Interconnection Customer. The switch must have padlock provisions for locking in the open position. The switch must be visible to, and accessible to Cooperative personnel. The switch must be in close proximity to, and on the Interconnection Customer's side of the point of electrical interconnection with the Cooperative's system. The switch must be labeled "Generator Disconnect Switch." The switch may isolate the Interconnection Customer and its associated load from the Cooperative's System or disconnect only the Generator from the Cooperative's System and will be accessible to the Cooperative at all times. The Cooperative, in its sole discretion, determines if the switch is suitable and necessary.

6.17 Certification Codes and Standards

Attachment 4 specifies codes and standards the Generating Facility must comply with.

6.18 Certification of Generator Equipment Packages

Attachment 5 specifies the certification requirements for the Generating Facility.