NOW COMES the North Carolina Sustainable Energy Association ("NCSEA"), which respectfully petitions the North Carolina Utilities Commission ("Commission"), pursuant to N.C. Gen. Stat. § 62-133.8(i)(4), to "re-open" Commission Docket No. E-100, Sub 101 for consideration of (1) whether the Commission should adopt, for use in North Carolina, modifications recently made by the Federal Energy Regulatory Commission ("FERC") to the federal Small Generator Interconnection Procedures ("SGIP") in Order No. 792 as well as other emerging interconnection best practices; and (2) other interconnection-related matters that may be raised by the parties or the Commission.

In support of the petition, NCSEA respectfully shows the following:

A Brief Overview of Interconnection Standards at FERC and the Commission

1. On 25 October 2001, FERC initiated a rulemaking proceeding to consider federal interconnection procedures for electric generators. On 24 July 2003, FERC issued Order No. 2003 adopting interconnection procedures for large generators and initiated a separate rulemaking proceeding to consider the special needs of generators with a
capacity of 20 MW or less. On 12 May 2005, FERC issued Order No. 2006 adopting federal small generator interconnection procedures. Order No. 2006 included procedures that the transmission provider and small generator must follow throughout the interconnection process. In addition to a default study process, Order No. 2006 provided for a “Fast Track Process” for interconnecting certified generators 2 MW or less and a “10 kW Inverter Process” for interconnecting certified inverter-based generators no larger than 10 kW that use technical screens to evaluate proposed interconnections.

2. On 4 June 2004, North Carolina’s three investor-owned electric utilities jointly filed a proposed model small generator interconnection standard, application, and agreement to be applicable in North Carolina.¹ The proposed model interconnection standard applied to parallel interconnection of single-phase small generation systems rated at 20 kW or less for residential customers and 100 kW or less for nonresidential customers. This proposal streamlined the interconnection process and standardized the interconnection criteria for safety and reliability. By Orders dated 22 March 2005 and 6 July 2005, the Commission addressed the remaining issues in dispute and approved small generator interconnection standards for North Carolina.


¹ Although consensus was not reached with regard to all issues, the proposed standard represented the result of a collaborative effort by representatives of the utilities, NCSEA, and the North Carolina Solar Center.
determination whether or not it is appropriate to implement the standard to carry out the purposes of PURPA. A state commission was excused from this requirement if the State had previously considered or implemented the same or a comparable interconnection standard. On 8 August 2007, the Commission issued an Order declining to adopt the interconnection standard set forth in Section 1254 of EPAct 2005. However, the Commission cited the provision in Session Law 2007-397 ("Senate Bill 3") that would require further consideration of the North Carolina interconnection standards (see next paragraph) and stated that it anticipated initiating further consideration once Senate Bill 3 was signed into law.

4. Senate Bill 3 was signed into law on 20 August 2007. In the legislation, the General Assembly, among other things, directs the Commission to “[e]stablish standards for interconnection of renewable energy facilities and other nonutility-owned generation with a generation capacity of 10 megawatts or less to an electric public utility’s distribution system; provided, however, that the Commission shall adopt, if appropriate, federal interconnection standards.” N.C. Gen. Stat. § 62-133.8(i)(4).

5. Pursuant to the provision in Senate Bill 3, on 19 September 2007, the Commission again considered whether it should adopt, in whole or in part, the model federal small generator interconnection procedures for use in North Carolina. On 9 June 2008, the Commission issued an Order that adopted a modified version of the federal small generator interconnection procedures, forms and agreements as the generator interconnection standard for North Carolina. On 16 December 2008, the Commission issued an Order further clarifying that, under the recently adopted generator interconnection standard for North Carolina, electric utilities have discretion to require an
external disconnect switch but will have to reimburse certain small generators for all costs related to any required installation.

*FERC Order No. 792*

6. On February 16, 2012, the Solar Energy Industries Association ("SEIA") petitioned FERC to open a rulemaking to consider changes to SGIP, arguing that the pro forma SGIP was no longer just and reasonable, had become unduly discriminatory, and presented unreasonable barriers to market entry due to changes occurring as result of the rapid expansion of solar energy adoption in the country. On February 28, 2012 FERC issued a Notice of Petition for Rulemaking inviting comments, it held a technical conference on July 17, 2012 and accepted post-conference comments. On January 17, 2013, FERC issued a Notice of Proposed Rulemaking ("NOPR") proposing reforms to SGIP. FERC held a workshop on March 27, 2013 where participants discussed the NOPR proposals. In addition, a stakeholder working group composed of individual utilities, the Edison Electric Institute, SEIA, the Interstate Renewable Energy Council ("IREC"), national renewable energy laboratories and others was formed to propose mutually agreeable revisions to the NOPR proposals. Comments on the NOPR were submitted on June 3, 2013. FERC issued Order No. 792 on Nov. 22, 2013 adopting modifications to SGIP.

7. The modifications FERC made to SGIP were largely designed to increase access to the Fast Track process for small generators. The key changes include: the adoption of a pre-application report to increase access to information about the electrical system to help generators select appropriate project locations, modification of the eligibility limit for Fast Track to allow projects up to 5 MW to use the expedited procedures if sited
appropriately, creation of a more robust supplemental review process to help avoid the need to send as many projects to full study, along with other modest changes.

8. Although the Commission has previously approved interconnection standards for North Carolina, this Commission has expressed its agreement “with the General Assembly’s apparent intent expressed in Senate Bill 3 that it is imperative to further simplify and streamline interconnection standards for small renewable generators to the greatest extent possible.” Order Requesting Comments Pursuant to Session Law 2007-397, p. 2, Commission Docket No. E-100, Sub 101 (19 September 2007).

Revising the Generator Interconnection Standard for North Carolina

9. Pursuant to N.C. Gen. Stat. § 62-133.8(i)(4) and the imperative to further simplify and streamline interconnection standards for small renewable generators to the greatest extent possible, NCSEA respectfully requests that the Commission once again consider revising the generator interconnection standard for North Carolina in light of FERC Order No. 792 and other improvements that have been made by state commissions to improve the efficiency of the interconnection process. Attached to this petition as Exhibit A is a red-lined version of the generator interconnection standard for North Carolina, prepared by IREC, which includes proposed modifications supported by IREC that could be used as a starting point for discussion.2 IREC has national expertise in

2 While the changes FERC made to SGIP focused on those issues directly raised by SEIA in its petition for rulemaking, there are additional modifications that have been made by other state commissions in recent years that may also prove valuable in North Carolina that are reflected in the IREC redline. These include increasing the size of the 10 kW inverter processes to 25 kW, removing the Fast Track “no construction” screen to allow for interconnection facilities and minor modifications without the need for full study, requirements for posting interconnection materials online and allowing for electronic submission and signing of interconnection applications and related materials, and
interconnection and was actively involved in developing the language approved by FERC in Order. No. 792 and in many other states that have recently made interconnection advancements. NCSBA supports using the IREC redline as a starting point for discussion (reserving to itself the right to comment on the IREC redline). NCSEA also believes that there are additional interconnection-related issues that should be considered beyond those identified in the red-lined generator interconnection standard.

10. NCSEA and IREC have discussed FERC Order No. 792 and interconnection with the Public Staff, Duke Energy Carolinas, LLC and Duke Energy Progress, Inc. (collectively "Duke Energy"), and Dominion North Carolina Power.

11. Without taking any positions at this time and expressly reserving their rights to develop and argue for their positions, IREC, the Public Staff, Duke Energy, and Dominion North Carolina Power are in general agreement that it would be appropriate for the Commission to consider whether it should adopt, in whole or in part or in modified form, the modifications set forth in the newly revised federal SGIP, as well as in the attached IREC redline, for use in North Carolina.

12. Furthermore, again without taking any positions at this time and expressly reserving their rights to develop and argue for their positions, the Public Staff, Duke Energy, and Dominion North Carolina Power are also in general agreement that, in the event Commission Docket No. E-100, Sub 101 is "re-opened" to consider the implications of FERC Order No. 792, it would be appropriate to consider additional interconnection-related issues.

modifications to one of the Fast Track technical screens to reflect the actual size of the transformer rather than apply a one-size fits all rule.
13. In the event the Commission “re-opens” Commission Docket No. E-100, Sub 101 to consider (a) whether it should adopt, in whole or in part or in modified form, the modifications set forth in the newly revised federal SGIP, as well as in the attached IREC redline, for use in North Carolina and (b) additional interconnection-related issues, NCSBA respectfully suggests that the Commission incorporate the following into any scheduling order: Establishment of a deadline by which interested parties shall hold at least one informal workshop-style discussion intended to identify (i) where consensus exists, and (ii) the issues to be decided by the Commission where consensus does not exist. This informal workshop-style discussion should be held at least 30 days in advance of any deadline established for filing initial comments. To facilitate the discussion, the Commission should direct each party that intends to participate in the informal discussion share with other parties a short list of the topics that it would like to see discussed in connection with either the North Carolina interconnection standard or other interconnection-related issues. The Commission should require exchange of the lists within 30 days of the issuance of any order “re-opening” the docket and at least 7 days before any informal workshop-style discussion is initiated. NCSBA has discussed the foregoing scheduling and informal workshop-style discussion approach with IREC, the Public Staff, Duke Energy, and Dominion North Carolina Power and these stakeholders agree with and/or support this approach.

Generator Interconnection Procedures ("SGIP") in Order No. 792 as well as other emerging interconnection best practices; and (2) other interconnection-related matters that may be raised by the parties or the Commission.

Respectfully submitted, this the 8th day of April, 2014.

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CERTIFICATE OF SERVICE

I hereby certify that all persons on the docket service list have been served true and accurate copies of the foregoing Petition, together with any attachments, by hand delivery, first class mail deposited in the U.S. mail, postage pre-paid, or by email transmission with the party's consent.

This the 8th day of April, 2014.

Michael D. Youth
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Section 1. General Requirements

1.1 Applicability

1.1.1 This Standard contains the requirements, in addition to applicable tariffs and service regulations, for the interconnection and parallel operation of Generating Facilities with Utility Systems in North Carolina. These procedures apply to Generating Facilities that are interconnecting to Utility Systems in North Carolina where the Interconnection Customer is not selling the output of its Generating Facility to an entity other than the Utility to which it is interconnecting.

1.1.1.1 A request to interconnect a certified inverter-based Generating Facility no larger than 46.25 kW shall be evaluated under the Section 2 46.25 kW Inverter Process. (See Attachments 3 and 4 for certification criteria.)

1.1.1.2 A request to interconnect a certified Generating Facility no larger than 2.5 MW, depending on line capacity and distance from substation as detailed in the table in Section 3.1, shall be evaluated under the Section 3 Fast Track Process. (See Attachments 3 and 4 for certification criteria.)

1.1.1.3 A request to interconnect a Generating Facility larger than 2.5 MW, or a Generating Facility that does not qualify for or pass the Fast Track Process or the 46.25 kW Inverter Process, shall be evaluated under the Section 4 Study Process.

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

1.1.3 This Standard shall not apply to Generating Facilities already interconnected or approved for interconnection as of the effective date of this Standard, unless so agreed to by the Utility and the Interconnection Customer. However, this Standard shall apply if the Interconnection Customer proposes Material Modifications or transfers ownership of the Generating Facility after such date.

1.1.4 Prior to submitting its Interconnection Request, the Interconnection Customer may ask the Utility's interconnection contact employee or office whether the proposed interconnection is subject to these procedures. The Utility shall respond within 15 Business Days.

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

1.1.6 References in these procedures to Interconnection Agreement are to the North Carolina Interconnection Agreement. (See Attachment 9.)

1.2 Pre-Request

1.2.1 The Utility shall designate an employee or office from which information on the application process and on an Affected System can be obtained through informal requests from the Interconnection Customer presenting a proposed project for a specific site. The name, telephone number, and e-mail address of such contact employee or office shall be made available on the Utility's Internet web site. Electric system information provided to the Interconnection Customer should include relevant system studies, interconnection studies, and other materials useful to an understanding of an interconnection at a particular point on the Utility's System, to the extent such provision does not violate confidentiality provisions of prior agreements or critical infrastructure requirements. The Utility shall comply with reasonable requests for such information.

1.2.2 In addition to the information described in Section 1.2.1, which may be provided in response to an informal request, an Interconnection Customer may submit a formal written request form along with a non-refundable fee of $300 for a Pre-Application Report on a proposed project at a specific site. The Utility shall provide the pre-application data described in Section 1.2.3 to the Interconnection Customer within 20 Business Days of receipt of the completed request form and payment of the $300 fee. The pre-application report produced by the Utility is non-binding, does not confer any rights, and the Interconnection Customer must still successfully apply to interconnect to the Utility's system. The written pre-application report request form shall include the information in Sections 1.2.2.1 through 1.2.2.8 below to clearly and sufficiently identify the location of the proposed Point of Interconnection.

1.2.2.1 Project contact information, including name, address, phone number, and email address.

1.2.2.2 Project location (street address with nearby cross streets and town).

1.2.2.3 Meter number, pole number, or other equivalent information identifying proposed Point of Interconnection, if available.

1.2.2.4 Generator Type (e.g., solar, wind, combined heat and power, etc.)

1.2.2.5 Size (alternating current kW)

1.2.2.6 Single or three phase generator configuration

Comment [SS1]: The Pre-Application Report process was adopted by FERC in the changes to SGIP and is also in place in Ohio, MA, and CA.
1.2.2.7 Stand-alone generator (no onsite load, not including station service—Yes or No?)

1.2.2.8 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.

1.2.3. Using the information provided in the pre-application report request form in Section 1.2.2, the Utility will identify the substation/area bus, bank or circuit likely to serve the proposed Point of Interconnection. This selection by the Utility 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 1.2.4, the pre-application report will include the following information:

1.2.3.1 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.

1.2.3.2 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.

1.2.3.3 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.

1.2.3.4 Available capacity (in MW) of substation/area bus or bank and circuit likely to serve the proposed Point of Interconnection (i.e., total capacity less the sum of existing aggregate generation capacity and aggregate queued generation capacity).

1.2.3.5 Substation nominal distribution voltage and/or transmission nominal voltage if applicable.

1.2.3.6 Nominal distribution circuit voltage at the proposed Point of Interconnection.

1.2.3.7 Approximate circuit distance between the proposed Point of Interconnection and the substation.

1.2.3.8 Relevant line section(s) actual or estimated peak load and minimum load data, including daytime minimum load as described.
1.2.3.9 Number and rating of protective devices and number 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.

1.2.3.10 Number of phases available at the proposed Point of Interconnection. If a single phase, distance from the three-phase circuit.

1.2.3.11 Limiting conductor ratings from the proposed Point of Interconnection to the distribution substation.

1.2.3.12 Whether the Point of Interconnection is located on a spot network, grid network, or radial supply.

1.2.3.13 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.

1.2.4 The pre-application report need only include existing data. A pre-application report request does not obligate the Utility to conduct a study or other analysis of the proposed generator in the event that data is not readily available. If the Utility cannot complete all or some of a pre-application report due to lack of available data, the Utility shall provide the Interconnection Customer with a pre-application report that includes the data that is available. The provision of information on "available capacity" pursuant to Section 1.2.3.4 does not imply that an interconnection 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. Notwithstanding any of the provisions of this section, the Utility shall, in good faith, include data in the pre-application report that represents the best available information at the time of reporting.

1.3 Interconnection Request

1.3.1 Each Utility shall allow Interconnection Requests to be submitted through the Utility's web site.
1.3.2 Each Utility shall dedicate a page on their website to interconnection procedures. That page shall be able to be reached by no more than three logical, prominent hyperlinks from the Utility’s home page. The relevant website page shall include:

1) The Utility’s interconnection procedures and attachments in an electronically searchable format.

2) The Utility’s Interconnection Request forms in a format that allows for electronic entry of data.

3) The Utility’s Interconnection Agreements, and

4) The Utility’s point of contact for submission of Interconnection Requests including email and phone number.

1.3.3 Each Utility shall allow electronic signatures to be used for Interconnection Requests.

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

1.4 Modification of the Interconnection Request

Any Material Modification not agreed to in writing by the Utility and the Interconnection Customer may be deemed a withdrawal of the Interconnection Request and may require submission of a new Interconnection Request, unless proper notification of each Party by the other and a reasonable time to cure the problems created by the changes are undertaken.
1.5 Site Control

Documentation of site control is not required to be submitted with the Interconnection Request. However, the Utility may request a demonstration of site control if two or more proposed Generating Facilities are competing for capacity on the same circuit. The Interconnection Customer that can demonstrate site control will have higher Queue Position than one that is on the same circuit and cannot demonstrate site control within 20 Business Days of such a request. The Interconnection Customer must submit documentation of site control to the Utility at or before the time of execution of the Interconnection Agreement. Site control may be demonstrated through:

1.5.1 Ownership of, a leasehold interest in, or a right to develop a site for the purpose of constructing the Generating Facility;

1.5.2 An option to purchase or acquire a leasehold site for such purpose; or

1.5.3 An exclusivity or other business relationship between the Interconnection Customer and the entity having the right to sell, lease, or grant the Interconnection Customer the right to possess or occupy a site for such purpose.

1.6 Queue Position

The Utility shall assign a Queue Position based upon the date- and time-stamp of the Interconnection Request. The Queue Position of each Interconnection Request will be used to determine the cost responsibility for the Upgrades necessary to accommodate the interconnection. Generating Facilities shall retain the Queue Position assigned to their initial Interconnection Request throughout the review process, including where moving from Sections 2, 3, or 4. At the Utility's option, Interconnection Requests may be studied serially or in clusters for the purpose of the System Impact Study, should one be required. (See Section 4.4.)

1.7 Interconnection Requests Submitted Prior to the Effective Date of these Procedures

Nothing in this Standard affects an Interconnection Customer's Queue Position assigned before the effective date of these procedures. The Parties agree to complete work on any interconnection study agreement executed prior to the effective date of these procedures in accordance with the terms and conditions of that interconnection study agreement. Any new studies or other additional work will be completed pursuant to this Standard.

Section 2. Optional 10-25 kW Inverter Process for Certified Inverter-Based Generating Facilities No Larger than 10-25 kW

2.1 Applicability

The 10-25 kW Inverter Process is available to an Interconnection Customer proposing to...
interconnect its inverter-based Generating Facility with the Utility's System if the Generating Facility is no larger than 40,250 kW and if the Interconnection Customer's proposed Generating Facility meets the codes, standards, and certification requirements of Attachments 3 and 4 of these procedures, or if the Utility has reviewed the design or tested the proposed Generating Facility and is satisfied that it is safe to operate.

2.2 Interconnection Request

The Interconnection Customer shall complete the Interconnection Request for a certified inverter-based Generating Facility no larger than 40,250 kW (see Attachment 5) and submit it to the Utility, together with the non-refundable processing fee specified in the Interconnection Request.

2.2.1 The Utility shall notify the Interconnection Customer of receipt of the Interconnection Request within three Business Days of receipt.

2.2.2 The Utility shall evaluate the Interconnection Request for completeness and notify the Interconnection Customer within ten Business Days of receipt as to whether the Interconnection Request is complete or incomplete and, if incomplete, advise the Interconnection Customer what material is missing.

2.2.3 The Utility shall 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.) The Utility has 15 Business Days to complete this process.

2.2.4 Screens failure: Despite the failure of one or more screens, the Utility, at its sole option, may approve the interconnection provided such approval is consistent with safety and reliability. If the Utility cannot determine that the Generating Facility may nevertheless be interconnected consistent with safety, reliability, and power quality standards, the Utility shall provide the Interconnection Customer with detailed information on the reason(s) for failure in writing. In addition, the Utility shall either:

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

2.5 Approval: If the Utility determines that the Generating Facility meets all of the applicable Fast Track screens, or otherwise determines that the Generating Facility can be interconnected safely and reliably, the Utility shall approve the Interconnection Request. If the Utility determines and demonstrates that the Generating Facility cannot be interconnected safely and reliably, the Utility shall notify the Interconnection Customer within the following:

Comment [SS5]: This is also set out in section 1.3, it may be duplicative and clearer to only have it in one place. Section 1.3 is more specific on what happens if the application is not complete.

Comment [SS6]: This process avoids the need to re-run the project through the Fast Track screens (since they are identical) and instead moves the project directly into supplemental review.

Comment [SS7]: This section has been added since we recommend removing the "no construction screen". Where interconnection facilities or minor modifications only are identified, a full study is not necessary. Therefore this process allows the utility to provide a cost estimate within the Section 2 process. Similar changes are made in Section 3.
2.2.5.1 If the proposed interconnection requires no construction of facilities by the Utility on its own system, the signed Interconnection Request shall be provided within 3 Business Days. If the Utility does not notify an Interconnection Customer in writing or by email within 20 Business Days whether an Interconnection Request is approved or denied, the Interconnection Request signed by the Interconnection Customer as part of Section 2.2 shall be deemed effective.

2.2.5.2 If the proposed interconnection requires only Interconnection Facilities or Minor System Modifications, the Interconnection Customer along with a non-binding good faith cost estimate and construction schedule for such upgrades, shall be provided within 15 Business Days after notification of the screen results.

2.2.5.3 If the proposed interconnection requires more than Interconnection Facilities and Minor System Modifications, the Utility may elect to either provide an Interconnection Agreement along with a non-binding good faith cost estimate and construction schedule for such upgrades within 30 Business Days after notification of the screen results, or the Utility may notify the Interconnection Customer that the Utility will need to complete a Facilities Study under Section 4.5 to determine the necessary upgrades.

2.3 Certificate of Completion

2.3.1 After installation of the Generating Facility, the Interconnection Customer shall return the Certificate of Completion to the Utility. (See Attachment 5.) Prior to parallel operation, the Utility may inspect the Generating Facility for compliance with standards which may include a witness test, and may schedule appropriate metering replacement, if necessary.

2.3.2 The Utility shall notify the Interconnection Customer in writing that interconnection of the Generating Facility is authorized. If the witness test is not satisfactory, the Utility has the right to disconnect the Generating Facility. The Interconnection Customer has no right to operate in parallel with the Utility until a witness test has been performed, or previously waived on the Interconnection Request. The Utility is obligated to complete this witness test within ten Business Days of the receipt of the Certificate of Completion. If the Utility does not inspect within ten Business Days or by mutual agreement of the Parties, the witness test is deemed waived.

2.3.3 Interconnection and parallel operation of the Generating Facility is subject to the Terms and Conditions stated in Attachment 5 of these procedures.
2.4 **Contact Information**

The Interconnection Customer must provide the contact information for the legal applicant (i.e., the Interconnection Customer). If another entity is responsible for interfacing with the Utility, that contact information must also be provided on the Interconnection Request.

2.5 **Ownership Information**

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

2.6 **UL 1741 Listed**

The Underwriters' Laboratories (UL) 1741 standard (Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources) addresses the electrical interconnection design of various forms of generating equipment. Many manufacturers submit their equipment to a nationally recognized testing laboratory that verifies compliance with UL 1741. This "listing" is then marked on the equipment and supporting documentation.

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**Comment [SS10]:** These changes were adopted by FERC and came out of an agreement reached with EEI, BREA, SEIA, and others. Ohio has also adopted this new eligibility approach.
Attachments 3 and 4 of these procedures, or the Utility has to have reviewed the design or
tested the proposed Generating Facility and is satisfied that it is safe to operate.

<table>
<thead>
<tr>
<th>Line Voltage</th>
<th>Fast Track Eligibility Regardless of Location</th>
<th>Fast Track Eligibility on a Mainline(^1) and &lt; 2.5 Electrical Circuit Miles from Substation(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 5 kV</td>
<td>&lt; 500 kW</td>
<td>&lt; 500 kW</td>
</tr>
<tr>
<td>&gt; 5 kV and &lt; 15 kV</td>
<td>&lt; 2 MW</td>
<td>&lt; 3 MW</td>
</tr>
<tr>
<td>&gt; 15 kV and &lt; 30 kV</td>
<td>&lt; 3 MW</td>
<td>&lt; 4 MW</td>
</tr>
<tr>
<td>&gt; 30 kV and &lt; 69 kV</td>
<td>&lt; 4 MW</td>
<td>&lt; 5 MW</td>
</tr>
</tbody>
</table>

### 3.2 Initial Review

Within 15 Business Days after the Utility notifies the Interconnection Customer it has received a complete Interconnection Request, the Utility shall perform an initial review using the screens set forth below, shall notify the Interconnection Customer of the results, and include with the notification copies of the analysis and data underlying the Utility's determinations under the screens.

#### 3.2.1 Screens

1. **3.2.1.1** The proposed Generating Facility's Point of Interconnection must be on a portion of the Utility's Distribution System.

2. **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 shall not exceed 15\% of the line section annual peak load as most recently measured at the substation. A line section is that portion of a Utility's System connected to a customer bounded by automatic sectionalizing devices or the end of the distribution line.

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\(^1\) 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 793 kcmil.

\(^2\) 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.
3.2.1.3 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, shall not exceed the smaller of 5% of a network's maximum load or 50 kW.3

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

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

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

<table>
<thead>
<tr>
<th>Primary Distribution Line Type</th>
<th>Type of Interconnection to Primary Distribution Line</th>
<th>Result/Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three-phase, three wire</td>
<td>3-phase or single phase, phase-to-phase</td>
<td>Pass Screen</td>
</tr>
<tr>
<td>Three-phase, four wire</td>
<td>Effectively-grounded three-phase or single phase, line-to-neutral</td>
<td>Pass Screen</td>
</tr>
</tbody>
</table>

3.2.1.7 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, shall not exceed 65% of the transformer nameplate rating of the proposed Generating Facility is to be interconnected on single-phase.

Comment [SS11]: The need for a dedicated transformer has been arising as a commonly disputed issue in many states in recent years. This change reflects the recommendations from a Solar ABCs report (see: http://www.solarabc.org/publications/reports/ferc-screens/) and is modeled after a change adopted in New Mexico. This change is more technically accurate as it provides a measurement based upon the actual size of the transformer (which can vary, thus making a 20 kW limit not always appropriate).

3 A spot network is a type of distribution system found within modern commercial buildings to provide high reliability of service to a single customer. (Standard Handbook for Electrical Engineers, 11th edition, Donald Fink, McGraw Hill Book Company.)
3.2.1.8 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 shall not create an imbalance between the two sides of the 240 volt service of more than 20% of the nameplate rating of the service transformer.

3.2.2.1 If the proposed interconnection requires no construction of facilities by the Utility on its own system, the Interconnection Agreement shall be provided within 5 Business Days.

3.2.2.2 If the proposed interconnection requires only Interconnection Facilities or Minor System Modifications, the Interconnection Agreement, along with a non-binding good faith cost estimate and construction schedule for such upgrades, shall be provided within 15 Business Days after notification of the Section 3.2.1. screen results.

3.2.2.3 If the proposed interconnection requires more than Interconnection Facilities and Minor System Modifications, the Utility may elect to either provide an Interconnection Agreement along with a non-binding good faith cost estimate and construction schedule for such upgrades within 30 Business Days after notification of the screen results, or the Utility may notify the Interconnection Customer that the Utility will
need to complete a Facilities Study under Section 4.5 to determine the necessary upgrades.

3.2.3 If the proposed interconnection fails the screens, but the Utility determines that the Generating Facility may nevertheless be interconnected consistent with safety, reliability, and power quality standards, the Utility shall provide the Interconnection Customer an executable Interconnection Agreement within five Business Days after the determination.

3.2.4 If the proposed interconnection fails the screens, but and the Utility 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 Utility shall provide the Interconnection Customer with the opportunity to attend a customer options meeting.

3.3 Customer Options Meeting

If the Utility determines the Interconnection Request cannot be approved without (1) minor modifications at minimal cost, (2) a supplemental study or other additional studies or actions, (3) or at or incurring significant cost to address safety, reliability, or power quality problems, within the five Business Day period after the determination, the Utility shall notify the Interconnection Customer of that determination within five Business Days and provide copies of all data and analyses underlying its conclusion. Within ten Business Days of the Utility's determination, the Utility shall 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 Utility's determination, or at the customer options meeting, the Utility shall:

3.3.1 Offer to perform facility modifications or minor modifications to the Utility's System (e.g., changing meter, fuses, relay settings) and provide a non-binding good faith estimate of the limited cost to make such modifications to the Utility's System and of the Interconnection Customer expenses to pay for the modifications to the Utility's electric system. The Utility will provide the Interconnection Customer with an acceptable interconnection agreement within ten Business Days of the customer options meeting.

3.3.2 Offer to perform a supplemental review if the Utility concludes that the supplemental review might determine that the Generating Facility could continue to qualify for interconnection pursuant to the Fast Track Process, in accordance with Section 3.4 and provide a non-binding good faith estimate of the costs of such review; or

3.3.3 Obtain the Interconnection Customer's agreement to continue evaluating the Interconnection Request under the Section 4 Study Process. Offer to continue evaluating the Interconnection Request under the Section 4 Study Process.
3.4 Supplemental Review

3.4.1 If the Interconnection Customer agrees to accept the offer of a supplemental review, the Interconnection Customer shall agree in writing within 15 Business Days of the offer, and submit a deposit for the estimated costs of the supplemental review in the amount of the Utility's good faith estimate of the costs of such review, both within 15 Business Days of the offer. If the written agreement and deposit have not been received by the Utility within that timeframe, the Interconnection Request shall continue to be evaluated under the Section 4 Study Process unless it is withdrawn by the Interconnection Customer.

3.4.2 The Interconnection Customer may specify the order in which the Utility will complete the screens in Section 3.4.4.

3.4.3 The Interconnection Customer shall be responsible for the Utility's actual costs for conducting the supplemental review. The Interconnection Customer must pay any review costs that exceed the deposit within 20 Business Days of receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced costs, the Utility will return such excess within 20 Business Days of the invoice without interest.

3.4.4 Within 30 Business Days following receipt of the deposit for a supplemental review, the Utility shall (1) perform a supplemental review using the screens set forth below; (2) notify in writing the Interconnection Customer of the results; and (3) include with the notification copies of the analysis and data underlying the Utility's determinations under the screens. Unless the Interconnection Customer provided instructions for how to respond to the failure of any of the supplemental review screens below at the time the Interconnection Customer accepted the offer of supplemental review, the Utility shall notify the Interconnection Customer following the failure of any of the screens, or if it is unable to perform the screen in Section 3.4.4.1, within two Business Days of making such determination to obtain the Interconnection Customer's permission to: (1) continue evaluating the proposed interconnection under this Section 3.4.4; (2) terminate the supplemental review and continue evaluating the Generating Facility under Section 4; or (3) terminate the supplemental review upon withdrawal of the Interconnection Request by the Interconnection Customer, will determine if the Generating Facility can be interconnected safely and reliably.

3.4.4.1 If so, the Utility shall forward an executable Interconnection Agreement to the Interconnection Customer within five Business Days. Minimum Load Screen: Where 12 months of line section minimum load data (excluding onsite load but not station service load served by the proposed Generating Facility) are available, can be calculated, can be estimated from existing data, or determined from a power flow model, the aggregate Generating Facility capacity on the line section is less than 100% of the minimum load for all line sections.
bounded by automatic sectionalizing devices upstream of the proposed Generating Facility. If minimum load data is not available, or cannot be calculated, estimated or determined, the Utility shall include the reason(s) that it is unable to calculate, estimate or determine minimum load in its supplemental review results notification under Section 3.4.4.

3.4.4.1 The type of generation used by the proposed Generating Facility will be taken into account when calculating, estimating, or determining circuit or line section minimum load relevant for the application of screen 3.4.4.1. Solar photovoltaic (PV) generation systems with no battery storage use daytime minimum load (i.e., 10 a.m. to 4 p.m. for fixed panel systems and 8 a.m. to 6 p.m. for PV systems utilizing tracking systems), while all other generation uses absolute minimum load.

3.4.4.2 When this screen is being applied to a Generating Facility that serves some station service load, only the net injection into the Utility's electric system will be considered as part of the aggregate generation.

3.4.4.3 Utility will not consider as part of the aggregate generation for purposes of this screen generating facility capacity known to be already reflected in the minimum load data.

3.4.4.4 If so, and 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 Utility shall forward an executable Interconnection Agreement to the Interconnection Customer within five Business Days after confirmation that the Interconnection Customer has agreed to make the necessary modifications at the Interconnection Customer's cost.

Voltage and Power Quality Screen: In aggregate with existing generation on the line section: (1) the voltage regulation on the line section can be maintained in compliance with relevant requirements under all system conditions; (2) the voltage fluctuation is within acceptable limits as defined by Institute of Electrical and Electronics Engineers (IEEE) Standard 1453, or utility practice similar to IEEE Standard 1453; and (3) the harmonic levels meet IEEE Standard 519 limits.

3.4.4.3 If so, and minor modifications to the Utility's System are required to
allow the Generating Facility to be interconnected consistent with safety, reliability, and power quality standards under these procedures; the Utility shall forward an executable Interconnection Agreement to the Interconnection Customer within ten Business Days that requires the Interconnection Customer to pay the costs of such System modifications prior to interconnection. Safety and Reliability Screen: The location of the proposed Generating Facility and the aggregate generation capacity on the line section do not create impacts to safety or reliability that cannot be adequately addressed without application of the Study Process. The Utility shall give due consideration to the following and other factors in determining potential impacts to safety and reliability in applying this screen.

3.4.4.3.1 Whether the line section has significant minimum loading levels dominated by a small number of customers (e.g., several large commercial customers).

3.4.4.3.2 Whether the loading along the line section is uniform or even.

3.4.4.3.3 Whether the proposed Generating Facility is located in close proximity to the substation (i.e., less than 2.5 electrical circuit miles) and whether the line section from the substation to the Point of Interconnection is a Mainline rated for normal and emergency ampacity.

3.4.4.3.4 Whether the proposed Generating Facility incorporates a time delay function to prevent reconnection of the generator to the system until system voltage and frequency are within normal limits for a prescribed time.

3.4.4.3.5 Whether operational flexibility is reduced by the proposed Generating Facility, such that transfer of the line section(s) of the Generating Facility to a neighboring distribution circuit/substation may trigger overloads or voltage issues.

3.4.4.3.6 Whether the proposed Generating Facility employs equipment or systems certified by a recognized standards organization to address technical issues such as, but not limited to, Islanding, reverse power flow, or voltage quality.
3.4.5 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 Business Days. If the proposed interconnection passes the supplemental screens in Sections 3.4.4.1, 3.4.4.2, and 3.4.4.3 above, the Interconnection Request shall be approved and the Utility will provide the Interconnection Customer with an executable interconnection agreement within the timeframes established in Sections 3.4.5.1 and 3.4.5.2 below. If the proposed interconnection fails any of the supplemental review screens and the Interconnection Customer does not withdraw its Interconnection Request, it shall continue to be evaluated under the Section 3 Study Process consistent with Section 3.4.5.3 below.

3.4.5.1 If the proposed interconnection passes the supplemental screens in Sections 3.4.4.1, 3.4.4.2, and 3.4.4.3 above and does not require construction of facilities by the Utility on its own system, the interconnection agreement shall be provided within 10 Business Days after the notification of the supplemental review results.

3.4.5.2 If Interconnection Facilities or Minor System Modifications to the Utility's system are required for the proposed interconnection to pass the supplemental screens in Sections 3.4.4.1, 3.4.4.2, and 3.4.4.3 above, and the Interconnection Customer agrees to pay for the modifications to the Utility's electric system, the interconnection agreement, along with a non-binding good faith estimate for the Interconnection Facilities and/or Minor System Modifications, shall be provided to the Interconnection Customer within 15 Business Days after receiving written notification of the supplemental review results.

3.4.5.3 If the proposed interconnection would require more than Interconnection Facilities or Minor System Modifications to the Utility's system to pass the supplemental screens in Sections 3.4.4.1, 3.4.4.2, and 3.4.4.3 above, the Utility shall notify the Interconnection Customer, at the same time it notifies the Interconnection Customer with the supplemental review results, that the Interconnection Request shall be evaluated under the Section 4 Study Process unless the Interconnection Customer withdraws its Generating Facility.

Section 4. Study Process

4.1 Applicability

The Study Process shall be used by an Interconnection Customer proposing to interconnect its Generating Facility with the Utility's System if the Generating Facility is larger than 2 MVA.
4.2 Scoping Meeting

4.2.1 A scoping meeting will be held within ten Business Days after the Interconnection Request is deemed complete, or as otherwise mutually agreed to by the Parties. The Utility and the Interconnection Customer will bring to the meeting personnel, including system engineers and other resources as may be reasonably required to accomplish the purpose of the meeting. The scoping meeting may be omitted by mutual agreement.

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 shall further discuss whether the Utility should perform a Feasibility Study or proceed directly to a System Impact Study, a Facilities Study, or an Interconnection Agreement.

4.2.3 If the Parties agree that a Feasibility Study should be performed, the Utility shall provide the Interconnection Customer, as soon as possible, but not later than five Business Days after the scoping meeting, a Feasibility Study Agreement (Attachment 6), including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study.

4.2.4 If the Parties agree not to perform a Feasibility Study, but to proceed directly to a System Impact Study or Facilities Study, the Utility shall provide the Interconnection Customer, no later than five Business Days after the scoping meeting, 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 and a non-binding good faith estimate of the cost to perform the study.

4.2.5 If the Parties agree not to perform a Feasibility Study, but to proceed directly to an Interconnection Agreement, the Utility shall provide the Interconnection Customer an executable Interconnection Agreement within 15 Business Days of the scoping meeting.

4.3 Feasibility Study

4.3.1 The Feasibility Study shall identify any potential adverse system impacts that would result from the interconnection of the Generating Facility.

4.3.2 In order to remain in consideration for interconnection, the Interconnection Customer must return the executed Feasibility Study Agreement within 15 Business Days.
4.3.3 A deposit of the lesser of 50% of the good faith estimated Feasibility Study costs or earnest money of $1,000 may be required from the Interconnection Customer.

4.3.4 The scope of and cost responsibilities for the Feasibility Study are described in the Feasibility Study Agreement.

4.3.5 If the Feasibility Study shows no potential for adverse system impacts, the Utility shall send the Interconnection Customer within five Business Days a Facilities Study Agreement, including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study. If a Facilities Study is not required, the Utility shall send the Interconnection Customer an executable Interconnection Agreement within five Business Days.

4.3.6 If the Feasibility Study shows the potential for adverse system impacts, the review process shall proceed to the appropriate System Impact Studies.

4.4 System Impact Studies

4.4.1 The System Impact Studies shall identify and detail the electric system impacts that would result if the proposed Generating Facility were interconnected without project modifications or electric system modifications, focusing on the adverse system impacts identified in the Feasibility Study, or to study potential impacts, including, but not limited to, those identified in the scoping meeting. The System Impact Studies shall evaluate the impact of the proposed interconnection on the reliability of the electric system.

4.4.2 If potential adverse Distribution System impacts are identified in the scoping meeting or shown in the Feasibility Study, a Distribution System Impact Study must be performed. The Utility shall send the Interconnection Customer a Distribution System Impact Study Agreement within five Business Days of transmittal of the Feasibility Study or the scoping meeting if no Feasibility Study is to be performed, including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study.

4.4.3 If potential adverse Transmission System impacts are identified in the scoping meeting or shown in the Feasibility Study or Distribution System Impact Study, a Transmission System Impact Study must be performed. The Utility shall send the Interconnection Customer a Transmission System Impact Study Agreement within five Business Days of transmittal of the Feasibility Study or Distribution System Impact Study or the scoping meeting if no Feasibility Study or Distribution System Impact Study is to be performed, including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study.

4.4.4 In order to remain under consideration for interconnection, the Interconnection Customer must return an executed System Impact Study Agreement within 30
Business Days.

4.4.5 A deposit of the good faith estimated cost of a Distribution System Impact Study and one half of the good faith estimated cost of a Transmission System Impact Study may be required from the Interconnection Customer.

4.4.6 The scope of and cost responsibilities for a System Impact Study are described in the System Impact Study Agreement.

4.4.7 If the System Impact Studies show no potential for adverse system impacts, the Utility shall send the Interconnection Customer within five Business Days a Facilities Study Agreement, including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study. If no additional facilities are required, the Utility shall send the Interconnection Customer an executable Interconnection Agreement within five Business Days.

4.5 Facilities Study

4.5.1 The Facilities Study shall specify and estimate the cost of the equipment, engineering, procurement and construction work (including overheads) needed to implement the conclusions of Feasibility Study and/or System Impact Studies and to allow the Generating Facility to be interconnected and operated safely and reliably.

4.5.2 The Utility shall design any required Interconnection Facilities and/or Upgrades under the Facilities Study Agreement. The Utility may contract with consultants to perform activities required under the Facilities Study Agreement. The Interconnection Customer and the Utility 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 Utility, under the provisions of the Facilities Study Agreement. If the Parties agree to separately arrange for design and construction, and provided security and confidentiality requirements can be met, the Utility shall make sufficient information available to the Interconnection Customer in accordance with confidentiality and critical infrastructure requirements to permit the Interconnection Customer to obtain an independent design and cost estimate for any necessary facilities.

4.5.3 In order to remain under consideration for interconnection, or, as appropriate, in the Utility's interconnection queue, the Interconnection Customer must return the executed Facilities Study Agreement or a request for an extension of time within 30 Business Days.

4.5.4 A deposit of the good faith estimated costs for the Facilities Study may be required from the Interconnection Customer.
4.5.5 The scope of and cost responsibilities for the Facilities Study are described in the Facilities Study Agreement.

4.5.6 Upon completion of the Facilities Study, and with the agreement of the Interconnection Customer to pay for Interconnection Facilities and Upgrades identified in the Facilities Study, the Utility shall provide the Interconnection Customer an executable Interconnection Agreement within five Business Days.

Section 5. Provisions that Apply to All Interconnection Requests

5.1 Reasonable Efforts

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

5.2 Disputes

5.2.1 The Parties agree to attempt to resolve all disputes arising out of the interconnection process according to the provisions of this section.

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

5.2.3 If the dispute has not been resolved within two Business Days after receipt of the Notice, either Party may contact the Public Staff for assistance in informally resolving the dispute. If the Parties are unable to informally resolve the dispute, either Party may then file a formal complaint with the Commission.

5.2.4 Each Party agrees to conduct all negotiations in good faith.

5.3 Interconnection Metering

Any metering necessitated by the use of the Generating Facility shall be installed at the Interconnection Customer’s expense in accordance with all applicable regulatory requirements or the Utility’s specifications.

5.4 Commissioning

Commissioning tests of the Interconnection Customer’s installed equipment shall be performed pursuant to applicable codes and standards. The Utility must be given at least five Business Days written notice, or as otherwise mutually agreed to by the Parties, of the tests and may be present to witness the commissioning tests.
5.5 Confidentiality

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

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

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

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

5.5.3 If information is requested by the Commission from one of the Parties that is otherwise required to be maintained in confidence pursuant to these procedures, the Party shall provide the requested information to the Commission within the time provided for in the request for information. In providing the information to the Commission, the Party may request that the information be treated as confidential and nonpublic in accordance with North Carolina law and that the information be withheld from public disclosure.

5.6 Comparability

The Utility shall receive, process, and analyze all Interconnection Requests received under these procedures in a timely manner, as set forth in these procedures. The Utility shall 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 Utility, its subsidiaries or affiliates, or others.

5.7 Record Retention
The Utility shall maintain for three 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.

5.8 Interconnection Agreement

After receiving an Interconnection Agreement from the Utility, the Interconnection Customer shall have 30 Business Days, or another mutually agreeable timeframe, to sign and return the Interconnection Agreement. If the Interconnection Customer does not sign the Interconnection Agreement within such time, the Interconnection Request shall be deemed withdrawn. The Utility may waive the withdrawal if no other Interconnection Requests are pending for Generating Facilities that propose to interconnect to the same circuit on the Utility's System. After the Parties sign the Interconnection Agreement, the interconnection of the Generating Facility shall proceed under the provisions of the Interconnection Agreement.

5.9 Coordination with Affected Systems

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

5.10 Capacity of the Generating Facility

5.10.1 If the Interconnection Request is for an increase in capacity for an existing Generating Facility, the Interconnection Request shall be evaluated on the basis of the new total capacity of the Generating Facility.

5.10.2 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 shall be evaluated on the basis of the aggregate capacity of the multiple devices, unless otherwise agreed to by the Utility and the Interconnection Customer.

Comment [SS17]: These changes were adopted by FERC in SJP.
Injecting into the Utility's electric system is limited (e.g., through use of a control system, power relays, or other similar device settings or adjustments), then the Interconnection Customer must obtain the Utility's agreement with such agreement not to be unreasonably withheld, that the manner in which the Interconnection Customer proposes to implement such a limit will not adversely affect the safety and reliability of the Utility's system. If the Utility does not so agree, then the Interconnection Request must be withdrawn or revised to specify the maximum capacity that the Generating Facility is capable of injecting into the Utility's electric system without such limitations. Furthermore, nothing in this Section shall prevent a Utility from considering an output higher than the limited output, if appropriate, when evaluating system protection impacts.

5.11 Interconnection Agreement Non-Transferable

5.11.1 The Interconnection Agreement is non-transferable. The Interconnection Customer shall notify the purchaser of the Generating Facility that a new Interconnection Request must be submitted to the Utility within 20 Business Days of the transfer of ownership or the Utility's Interconnection Facilities shall be removed or disabled and the Generating Facility disconnected from the Utility's System.

5.11.2 The technical requirements in the Interconnection Agreement shall 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.

5.12 Isolating or Disconnecting the Generating Facility

5.12.1 The Utility may isolate the Interconnection Customer's premises and/or Generating Facility from the Utility's System when necessary in order to construct, install, repair, replace, remove, investigate or inspect any of the Utility's equipment or part of Utility's System; or if the Utility determines that isolation of the Interconnection Customer's premises and/or Generating Facility from the Utility's System is necessary because of emergencies, forced outages, force majeure or compliance with prudent electrical practices.

5.12.2 Whenever feasible, the Utility shall give the Interconnection Customer reasonable notice of the isolation of the Interconnection Customer's premises and/or Generating Facility from the Utility's System.

5.12.3 Notwithstanding any other provision of this Standard, if at any time the Utility determines that the continued operation of the Generating Facility may endanger either (1) the Utility's personnel or other persons or property or (2) the integrity or safety of the Utility's System, or otherwise cause unacceptable power quality problems for other electric consumers, the Utility shall have the right to isolate the Interconnection Customer's premises and/or Generating Facility from the Utility's
5.12.4 The Utility may disconnect from the Utility'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.

5.13 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, shall be limited to the amount of direct damage actually incurred. In no event shall either Party be liable to the other Party for any indirect, special, incidental, consequential, or punitive damages of any kind.

5.14 Indemnification

The Parties shall at all times indemnify, defend and save the other Party harmless from any and all damages, losses, claims, including claims and actions relating to injury or death of any person or damage to property, demand, suit, 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 other Party's action or inaction of its obligations hereunder on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

5.15 Insurance

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

5.15.1 For an Interconnection Customer that is a residential customer of the Utility proposing to interconnect a Generating Facility no larger than 250 kW, the required coverage shall be a standard homeowners' insurance policy with liability coverage in the amount of at least $100,000 per occurrence.

5.15.2 For an Interconnection Customer that is a non-residential customer of the Utility proposing to interconnect a Generating Facility no larger than 250 kW, the
required coverage shall be comprehensive general liability insurance with
coverage in the amount of at least $300,000 per occurrence.

5.15.3 An Interconnection Customer of sufficient credit-worthiness may propose to
provide this insurance via a self-insurance program if it has a self-insurance
program established in accordance with commercially acceptable risk
management practices, and such a proposal shall not be unreasonably rejected.
IREC Redline of NC Interconnection Procedures

ATTACHMENT 1

Glossary of Terms

2516 kW Inverter Process - The procedure for evaluating an Interconnection Request for a certified inverter-based Generating Facility no larger than 2516 kW that uses the Section 3 screens. The application process uses an all-in-one document that includes a simplified Interconnection Request, simplified procedures, and a brief set of Terms and Conditions. (See Attachment 5.)

Affected System - An electric system other than the Utility's System that may be affected by the proposed interconnection. The owner of an Affected System might be a Party to the Interconnection Agreement or other study agreements needed to interconnect the Generating Facility.

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

Business Day - Monday through Friday, excluding State Holidays.


Default - The failure of a breaching Party to cure its breach under the Interconnection Agreement.

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

Distribution Upgrades - The additions, modifications, and upgrades to the Utility's Distribution System at or beyond the Point of Interconnection to facilitate Interconnection of the Generating Facility and render the service necessary to allow the Generating Facility to operate in parallel with the Utility and to inject electricity onto the Utility's System. Distribution Upgrades do not include Interconnection Facilities.

Fast Track Process - The procedure for evaluating an Interconnection Request for a certified Generating Facility no larger than 2 MW that meets the eligibility requirements of Section 2.1 and includes the Section 3 screens, customer options meeting, and optional supplemental review.

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

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

Governmental Authority - Any federal, state, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power, provided, however, that such term does not include the Interconnection Customer, the Utility, or any affiliate thereof.

Interconnection Customer - Any entity, including the Utility, that proposes to interconnect its Generating Facility with the Utility's System.

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

Interconnection Request - The Interconnection Customer's request, in accordance with these procedures, to interconnect a new Generating Facility, or to increase the capacity of, or make a Material Modification to, an existing Generating Facility that is interconnected with the Utility's System.

Material Modification - 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.

Minor System Modifications - Modifications to the Utility's Distribution System, including activities such as changing the fuse in a fuse holder cut-out, changing the settings on a circuit recloser and other activities that usually entail less than four hours of work and less than $1000 in materials.

Network Upgrades - Additions, modifications, and upgrades to the Utility's Transmission System required to accommodate the interconnection of the Generating Facility to the Utility's System. Network Upgrades do not include Distribution Upgrades.

Operating Requirements - Any operating and technical requirements that may be applicable due to Regional Reliability Organization, Independent System Operator, control area, or the
Utility's requirements, including those set forth in the Interconnection Agreement.

Party or Parties - The Utility, Interconnection Customer, and possibly the owner of an Affected System, or any combination of the above.

Point of Interconnection - The point where the Interconnection Facilities connect with the Utility's System.

Public Staff - The Public Staff of the North Carolina Utilities Commission.

Queue Position - The order of a valid Interconnection Request, relative to all other pending valid Interconnection Requests, that is established based upon the date and time of receipt of the valid Interconnection Request by the Utility and a demonstration of site control, if requested.

Reasonable Efforts - With respect to an action required to be attempted or taken by a Party under the Interconnection Agreement, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

Standard - The interconnection procedures, forms and agreements approved by the Commission for interconnection of Generating Facilities to Utility Systems in North Carolina.

Study Process - The procedure for evaluating an Interconnection Request that includes the Section 4 scoping meeting, feasibility study, system impact study, and facilities study.

System - The facilities owned, controlled or operated by the Utility that are used to provide electric service in North Carolina.

Utility - The entity that owns, controls, or operates facilities used for providing electric service in North Carolina.

Transmission System - The facilities owned, controlled or operated by the Utility that are used to transmit electricity in North Carolina.

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