

On July 31, 2014, interested stakeholders reconvened for a second discussion. Several parties had worked together prior to the meeting to outline a consensus approach for addressing existing queue management challenges through potential revisions to the NC Interconnection Standard. This outline was discussed at the meeting. Following that meeting, a working group consisting of representatives of the utilities and developers of qualifying facilities (QFs or ICs for purposes of this order) continued to discuss and work on the outline, taking into account stakeholder feedback received during the meeting. Subsequently, on August 27, 2014, NCSEA filed a motion requesting that the Commission grant a further extension of time to October 31, 2014, to file initial comments and November 30, 2014, to file reply comments. On August 29, 2014, the Commission issued an order granting the motion.

On October 28, 2014, the Public Staff filed a motion requesting a further extension of time to allow initial comments to be filed on November 21, 2014, and reply comments on December 17, 2014. On October 30, 2014, the Commission issued an order granting the motion.

On November 21, 2014, the Commission received initial comments from: Duke Energy Carolinas, LLC (Duke); Duke Energy Progress, Inc. (DEP or Progress); and Virginia Electric and Power Company, d/b/a Dominion North Carolina Power (jointly filing as the Utilities); NCSEA; Ecoplexus Inc. (Ecoplexus); the Interstate Renewable Energy Council (IREC); and the Public Staff.

On December 16, 2014, the Public Staff made a verbal motion requesting that the date for reply comments be extended for all parties from December 17, 2014, to December 22, 2014, which was granted by the Commission. On December 22, 2014, the Commission received reply comments from: the Utilities; NCSEA; Ecoplexus; IREC; and the Public Staff.

On February 10, 2015, the Commission issued a Notice of Technical Conference, which was held on February 23, 2015. On March 9, 2014, IREC filed documents requested at the technical conference.

Background of the Federal and State Interconnection Standards

On June 4, 2004, Progress, Duke and Dominion jointly filed in this docket a proposed model small generator interconnection standard, application, and agreement to be applicable in North Carolina. 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. The proposal was intended to streamline the interconnection process and standardize the interconnection criteria for safety and reliability. By Orders dated March 22, 2005, and July 6, 2005, the Commission addressed the remaining issues in dispute and approved a small generator interconnection standard for North Carolina, the NC Interconnection Standard.

Having previously adopted an interconnection standard for larger generators,¹ on May 12, 2005, the FERC issued Order No. 2006 adopting a federal small generator interconnection standard for generators up to 20 MW (FERC Interconnection Standard).² The final rule required utilities to amend their open access transmission tariffs (OATT) to include Small Generator Interconnection Procedures (SGIP) and a Small Generator Interconnection Agreement (SGIA). The SGIP contains the technical procedures a small generator and a utility must follow once the small generator requests interconnection. In addition to the default study process, which may be used by any small generator, the FERC Standard provides two procedures that use technical screens to evaluate proposed interconnections: (1) the “Fast Track Process” for interconnecting certified generators no larger than 2 MW, and (2) the “10 kW Inverter Process” for interconnecting certified inverter-based generators no larger than 10 kW. On June 9, 2008, the Commission issued an order adopting a modified version of the FERC small generator interconnection procedures, forms and agreements as the new NC Interconnection Standard, which is the current version in effect.

On November 22, 2013, the FERC issued Order No. 792 adopting modifications to the SGIP.³ The major modifications included: the adoption of a Pre-Application Report; the modification of the eligibility limit for the Fast Track Process; and the creation of a Supplemental Review Process. As stated above, in response to FERC Order No. 792, NCSEA filed a request with the Commission to review the NC Interconnection Standard. Interested parties participated in discussions regarding the NC Interconnection Standard and what changes were appropriate taking into account the unique circumstances of North Carolina. On November 21, 2014, along with its initial comments, the Utilities filed a recommended Revised North Carolina Interconnection Procedures Proposal (RNCIPP), representing a somewhat collaborative document, although consensus was not reached on all of the issues.

As further discussed below, the November 21, 2014 RNCIPP is unique to North Carolina and addresses interconnection issues in North Carolina and, thus, does not track the revisions the FERC made to the SGIP in 2013. All of the parties filing comments, except for Ecoplexus, indicated general support for the RNCIPP. Ecoplexus

¹ Standardization of Generator Interconnection Agreements and Procedures, Order No. 2003, 68 FR 49845 (Aug. 19, 2003), FERC Stats. & Regs. ¶ 31,146 (2003) (Order No. 2003), order on reh'g, Order No. 2003-A, 69 FR 15932 (Mar. 26, 2004), FERC Stats. & Regs. ¶ 31,160 (2004) (Order No. 2003-A), order on reh'g, Order No. 2003-B, 70 FR 265 (Jan. 4, 2005), FERC Stats. & Regs. ¶ 31,171 (2005) (Order No. 2003-B), order on reh'g, Order No. 2003-C, 70 FR 37661 (Jun. 16, 2005), FERC Stats. & Regs. ¶ 31,190 (2005) (Order No. 2003-C), aff'd sub nom. National Ass'n of Regulatory Util. Comm'rs v. FERC, 475 F.3d 1277 (D.C. Cir. 2007), cert. denied, 76 U.S.L.W. 3454 (Feb. 25, 2008).

² Standardization of Small Generator Interconnection Agreements and Procedures, Order No. 2006, FERC Stats. & Regs. ¶ 31,180, order on reh'g, Order No. 2006-A, FERC Stats. & Regs. ¶ 31,196 (2005), order on reh'g, Order No. 2006-B, FERC Stats. & Regs. ¶ 31,221 (2006).

³ Small Generator Interconnection Agreements and Procedures, 78 Fed. Reg. 73,240 (December 5, 2015 [FERC SGIP]; 145 FERC ¶ 61,159, Order No. 792 (December 5, 2013).

strongly recommended that the Commission adopt the FERC's revisions to the SGIP as set forth in Order No. 792 instead of the RNCIPP. On December 22, 2014, in their joint reply comments, the Utilities attached further revisions to the RNCIPP based upon further collaboration among the parties. The next two sections of this order will provide a general overview of the current NC Interconnection Standard and a general overview of the RNCIPP's notable changes and additions. Many of the parties indicated that the Commission should adopt the RNCIPP as an interim approach to address the current issues unique to North Carolina. These parties indicated that once the queue is at a manageable level, the NC Interconnection Standard should be reviewed and revised.

After careful consideration of all of the comments filed in this docket, the Commission finds good cause to adopt the revised generator interconnection standard attached as Appendix A to this Order as an interim measure to address North Carolina's current challenges, with the understanding that the standard will be reviewed and potentially revised in two years. The positions of the parties and the Commission's conclusions with respect to the most significant issues raised in the comments are set forth below in the issues sections of this order. Proposals not specifically discussed below have been considered and decided as reflected in the attached revised NC Standard.

General Overview of Current Interconnection Process

There are five sections contained within the current NC Interconnection Standard: Section 1 sets forth the General Requirements; Section 2, the Optional 10 kW Inverter Process; Section 3, the Optional Fast Track Process; Section 4, the Study Process; and Section 5, the Provisions that Apply to All Interconnection Requests. Under the current NC Interconnection Standard, prior to an application being filed, an Interconnection Customer (IC) has the option of requesting pre-request information from the Utility about a particular point of interconnection on the system, including, but not limited to, any relevant system studies and interconnection studies. No fee or application form is necessary for this informal process. Thereafter, the IC can decide whether to file for an application under the Fast Track Process or through the full Section 4 Study Process. Under the Fast Track Process, the application fee for a generating facility less than 10 kW in size is \$100, the fee for a generating facility larger than 10 kW but not larger than 100 kW is \$250, and the fee for a generating facility larger than 100 kW but not larger than 5 MW is \$500. If the generating facility does not pass the Fast Track Process or chooses to initiate a full study, the IC pays a \$1,000 deposit to be applied to the study costs. Once the IC files its interconnection request, the Utility has three business days to state it has been received and ten business days to state whether the request is complete or incomplete and if incomplete listing the needed information. If the request is incomplete, the IC has ten business days to provide the missing information. If the IC does not provide the information within the ten days, the request is deemed withdrawn. The queue position number is assigned upon receipt of a complete interconnection request.

An IC applying for generating facilities under 10 kW proceed through the Inverter Track Process, where the IC merely pays the \$100 fee and the Utility performs minimum screens prior to interconnection.

An IC with an interconnection request for generating facilities no larger than 2 MW has the option to proceed through the Fast Track Process. Under this process, within fifteen business days, the Utility performs an initial review using technical screens to assure the interconnected facility will be safe to operate. If the project passes the screens, the interconnection request is approved and the Utility provides the IC with an executable interconnection agreement within five business days of the determination. Generally, if the project fails the screens and the Utility determines the project cannot be interconnected without small modifications or further study, the Utility has five days from that determination to provide the results to the IC. The IC then has ten business days to request a customer options meeting to discuss the issues and options available, such as to agree to pay for supplemental review or to move into a full Section 4 Study Process.

The Section 4 Study Process is for generating facilities that choose to start at the Study Process or for facilities that did not pass the Fast Track Process or the 10 kW Inverter Process. The Study Process begins with a scoping meeting that is held within ten days of a completed interconnection request. The IC and Utility discuss the project and determine whether to begin with a Feasibility Study or move straight into a System Impact Study, Facilities Study, or an Interconnection Agreement.

The Feasibility Study, if chosen, identifies any potential adverse system impacts that would result from the interconnection. System Impact Studies identify and detail the electric system impacts that would result if a proposed Generating Facility were interconnected without project modifications or electric system modifications. System Impact Studies evaluate the impact of the proposed interconnection on the reliability of the electric system.

The Facilities Study specifies and estimates the cost of the equipment, engineering, procurement and construction work (including overheads) needed to implement the conclusions of a Feasibility Study and/or System Impact Study and to allow the Generating Facility to be interconnected and operated safely and reliably. Upon completion of a Facilities Study, and with the agreement of the IC to pay for Interconnection Facilities and Upgrades identified in the Facilities Study, the Utility shall provide the IC an executable Interconnection Agreement within five business days. After receiving an Interconnection Agreement from the Utility, the IC has thirty business days, or another mutually agreeable timeframe, to sign and return the Interconnection Agreement. If the IC does not sign the Interconnection Agreement within such time, the Interconnection Request shall be deemed withdrawn.

Overview of RNCIPP's Notable Changes and Additions

There are six sections contained within the RNCIPP: Section 1 sets forth the General Requirements; Section 2, the Optional 20 kW Inverter Process; Section 3, the Optional Fast Track Process; Section 4, the Study Process; Section 5 a new section entitled Interconnection Agreement and Scheduling which sets forth criteria around the construction planning meeting, the interconnection agreement and interconnection construction; and Section 6, the Provisions that Apply to All Interconnection Requests.

Within the three tracks to begin the interconnection request process, the size requirements are changed. Under the RNCIPP, the 10 kW Inverter Process changes to the 20 kW Inverter Process. The eligibility to apply for the Fast Track Process changes from facilities under 2 MW to a chart detailing the eligibility based upon size, line voltage and distance from a substation. The application fees remain the same, but the study deposits are changed. All generating facilities that do not qualify for the 20 kW Inverter Process or the Fast Track Process, or that fail the Fast Track and Supplemental Review Process, are evaluated under the Section 4 Study Process, where an interconnection request deposit is required in the sum of \$20,000, plus \$1 per kWac of the nameplate capacity specified in the Interconnection Request Application Form, not to exceed a total deposit of \$100,000. This new deposit requirement would apply to all proposed facilities currently in the queue, as well as new interconnection requests.

The RNCIPP adopts the FERC's Pre-Application Report which formalizes the prior pre-request process. Under the Pre-Application Report Process, the IC submits a \$300 processing fee and the Utility provides a more in-depth report regarding a particular project than under the pre-request process. Once the report is filed for a specific site, the utility has ten business days to provide the IC with a Pre-Application Report that includes information including, but not limited to, which substation would likely serve as the point of interconnection, the total capacity of that substation, and the estimated peak load and minimum load for that substation.

The RNCIPP adds a requirement for site control, requiring that both existing and new interconnection requests must have to demonstrate site control. Existing interconnection requests would have to demonstrate site control within 30 calendar days following the later of the effective date of the revised standard or the posted date of notice in writing from the utility. New interconnection requests would be required to demonstrate site control at the time the request is submitted.

The RNCIPP adds a section entitled Interdependent Projects. The goal of the addition to this section is to create a mechanism for dealing with interdependencies. The interdependencies of projects and the effect this has on the timely processing of interconnection requests was not envisioned in the earlier process. At this time, facilities with higher queue numbers are being left in an uncertain position as to the potential timing and cost of the interconnection of their proposed facilities, and this problem is likely to become even more magnified as multiple interdependencies develop. The

RNCIPP includes a new Section 1.8 on interdependent projects, and adds definitions for Project A and B to the glossary.

For facilities identified as a Project A (the facilities with the lower queue number on a particular line, for example), the process for completing the interconnection process does not change due to interdependencies. After a determination of any potential interdependencies, these Project As will move forward through the Section 3 Fast Track Process or the Section 4 Study Process, as appropriate. For facilities that are identified as Project Bs, whereby the Utilities' ability to accommodate them without upgrades is dependent on whether a Project A moves forward or withdraws, the RNCIPP requires the utility to provide greater information regarding a QF's queue position relative to other interdependent projects. For projects identified as Project Bs, the utility, upon the request of the Project B IC, will complete the System Impact Study assuming that its Project A facility completes construction and interconnection and a second System Impact Study assuming its Project A has been withdrawn. For projects with a higher queue number than the Project B, the RNCIPP directs the utilities to make a preliminary determination and to notify all interconnection customers of the number and type of interdependencies a queued facility is facing. The RNCIPP also directs the Utilities not to study the higher queued facilities until they move into a Project B position. One other change in the Section 4 Study Process is the RNCIPP removes the option of a Feasibility Study and combines the Feasibility Study and the System Impact Study into one study.

The RNCIPP also makes changes to the Fast Track Process. The RNCIPP amends the Section 3 Fast Track Process by making adjustments to the size of facilities that are eligible for the Fast Track Process, as well as adjusting the screens that are applicable to determining whether a project is eligible. The Fast Track Process is an area of disagreement and is discussed more fully later in this Order.

The RNCIPP also makes changes regarding payments for interconnection upgrades and facilities and the use of financial security. Section 5 governs activities following the completion of all of the studies. The provisions impose deadlines on the IC to request a construction planning meeting following the receipt of the Facilities Study Report, and on the utility to schedule such a requested meeting. Following this meeting, the utility has to provide a final executable interconnection agreement containing the detailed estimated upgrade charges, interconnection facility charges and other information within a stated deadline. The IC then has to execute and return the Final Interconnection Agreement within a stated time limit. A proposed new section of the RNCIPP allows an IC to use an approved subcontractor for construction if the utility cannot meet the deadlines. Proposed Section 5.2.4 states that the Final Interconnection Agreement must specify milestones for payment and financial security that are required prior to the design and construction of Upgrades and Interconnection Facilities. Payment and financial security must be received by close of business 60 days after the date the Interconnection Agreement is delivered to the IC for signature.

Lastly, the RNCIPP establishes clearly defined and enforceable due dates for each step of the process for both the utilities and the ICs. Under the current NC Interconnection Standard, there are several steps in the process for which the ICs do not have a deadline for responding. The RNCIPP creates deadlines for each step of the process.

The remaining sections of this order address the areas of disagreement by the parties using the RNCIPP as filed by the Utilities on December 22, 2014, as Exhibit B, as the base RNCIPP document for the comments filed by the parties.

ISSUE 1. Adoption of the FERC Standard

In its comments, the Public Staff outlined the current state of interconnection requests in North Carolina. The Public Staff indicated one of the major problems that has arisen since 2008 that was not envisioned when the NC Interconnection Standard was first approved is the significant amount of interactions and interdependencies between and among projects. The Public Staff stated that “[d]ue to the significant increase in the number of interconnection requests and the number of those facilities not eligible for Fast Track processing, these interdependencies have become a major issue for both the utilities and developers,” creating clogged interconnection queues. The Public Staff asserted that while FERC Order No. 792 was aimed at improving the interconnection process for small generators, the revisions within FERC’s SGIP would not result in clearing North Carolina’s clogged queues. The Public Staff asserted that the workgroup identified clearing the queue as a top priority and worked toward a consensus to resolve the clogged queue, and to a lesser extent discussed how the NC Interconnection Standard should read after the interconnection queues are cleared. The Public Staff indicated that requiring a significant deposit from the QFs, requiring site control by the QFs, establishing clear and enforceable deadlines for both the utilities and the QFs, and creating a mechanism for dealing with interdependencies would all assist in clearing the interconnection queue. These proposed changes to the NC Interconnection Standard, as set forth in the Utilities’ RNCIPP, were not the focus of the FERC’s revisions. The Public Staff indicated general support for the RNCIPP set forth by the Utilities, with a few suggested revisions that will be further discussed below, including, but not limited to, changes to the Fast Track Process and the use of financial security. The Public Staff also urged the Commission to view the proposed revisions to the NC Interconnection Standard as a transitioning mechanism to clear the queue, with an intent, either express or implicit, for the Commission to review the NC Interconnection Standard in one or two years.

The Utilities also outlined the unique circumstances that North Carolina currently faces with respect to small generation interconnection. The Utilities indicated that the number of QFs, as well as the project sizes, has changed significantly over the past few years. This increase in number of projects is due to a variety of factors, such as the expiration of the state tax credit of 35% on December 31, 2015, and the expiration of the federal tax credit of 30% on December 31, 2016, as well as the implementation of

North Carolina's Renewable Energy and Energy Efficiency Portfolio Standard enacted by Senate Bill 3.⁴ The Utilities stated that "no state in the nation has faced an aggregate interconnection queue that has ballooned from less than 100 [MW] in 2010 to over 4,000 MW" as of December 22, 2014. Lastly, the Utilities indicated that a new type of QF has entered North Carolina, which the Utilities labeled as "originators." According to the Utilities, these originators have submitted over 200 solar projects for interconnection, yet have failed to actually construct a single project. The Utilities stated that the current NC Interconnection Standard cannot effectively address the current landscape. In an effort to address these challenges, they stated that they and other stakeholders have "invested substantial time and effort attempting to design queue management initiatives," as well as other recommendations "to meet North Carolina's unique interconnection challenge — while also achieving the solar deployment opportunity that North Carolina's policies and incentives have fostered." The result of the stakeholder process, the RNCIPP, does not reflect FERC's revisions to the SGIP, but rather addresses North Carolina's current dilemma of the clogged interconnection queue.

IREC indicated support to many of the proposed changes in the RNCIPP, but also detailed further revisions of the RNCIPP, which track in large measure the revisions within FERC Order No. 792. IREC's further suggested revisions are the issues where disagreement between many of the stakeholders remains. IREC recommended: 1) a refinement of the Fast Track Process eligibility size limit by using the table approved by the FERC rather than the table proposed in the RNCIPP; 2) the removal of the two additional Fast Track Process screens proposed in the RNCIPP, which are not FERC-approved; 3) the addition of a more structured and transparent Supplemental Review Process identical to the process approved by the FERC; 4) support for electronic submittal, signatures, and improvements of the utilities' websites; 5) the inclusion of energy storage within the definition of a generating facility; 6) the proposed modifications to the study process, in particular their impact on 20-kW inverter-based and Fast Track projects; and 7) the need for quarterly reporting by the Utilities regarding their pending interconnection requests. IREC urged support of the RNCIPP with these revisions.

Ecoplexus strongly recommended that the Commission adopt the federal revisions to the SGIP as set forth in FERC Order No. 792. Ecoplexus recommended that if the Commission was not inclined to adopt the federal SGIP in its entirety, the Commission should consider the federal SGIP and SGIA provisions relating to financial security arrangements, billing and payment procedures, cost responsibility for network upgrades, the study process, material modification and cluster studies.

NCSEA echoed the other parties regarding the current problems facing the Utilities' North Carolina interconnection queues. NCSEA stated that when the current interconnection standard was last revised no one anticipated the large amount of

⁴ G.S. 62-133.8.

interconnection requests that have been made over the past two years. NCSEA stated that as a result of the influx of requests, the Utilities' interconnection queues are clogged, which in turn delays projects and poses a real economic threat to QFs' eligibility for the state energy tax credit and, ultimately, to projects' financial viability. NCSEA outlined the major revisions of FERC Order No. 792, which were three-fold: 1) a pre-application report to increase access to information about the electric system to help potential interconnectors to select appropriate project locations, 2) a modification of the eligibility thresholds for the Fast Track Process (allowing appropriately sited projects up to 5 MW compared to the current 2 MW threshold); and 3) inclusion of a more robust Supplemental Review Process to avoid the need to send some projects through the full study process. NCSEA stated it generally supported the RNCIPP and stated that the discussions among the stakeholders produced many areas of agreement. NCSEA recommended that the Commission, in its order approving the RNCIPP, should also: 1) direct the stakeholders to suggest conforming changes to the forms and agreements attached which are a part of the NC Interconnection Standard but were not fully vetted in the current process within 30 days; 2) direct the Utilities to file periodic reports on the status of their queues; 3) acknowledge the revisions are on a trial or probationary basis and require review no later than one year after implementation; 4) direct the Utilities to begin paying interest on deposit at the statutory interest rate beginning on the 91st day after a deposit was received from the interconnection customer; and 5) incorporate IREC's proposed revisions to the 20 kW Inverter Process and the Fast Track and Supplemental Review Processes.

The Commission concludes that, based upon the discussion above, the RNCIPP, as modified by this Order, provides the most workable means to achieve some amount of consistency with the FERC Standard while retaining and adopting policies that will serve North Carolina's current unique interconnection landscape, especially clearing the queues over the next two years.

ISSUE 2. Required Deposit

As stated above, the Public Staff, the Utilities, the NCSEA and IREC all indicated that one of the key problems identified by the working group is unresponsive developers maintaining projects in the queue that do not appear to be progressing. Therefore, the stakeholders agreed upon a mechanism to incent QFs to either move forward or withdraw their interconnection requests. The mechanism agreed upon by the stakeholder group is that facilities that do not qualify for the 20 kW Inverter Process or the Fast Track Process, or that fail the Fast Track and Supplemental Review Process, shall be evaluated under the Section 4 Study Process, where an interconnection request deposit is required, which shall be \$20,000, plus \$1 per kWac of the nameplate capacity specified in the Interconnection Request Application Form, not to exceed a total deposit of \$100,000. This requirement would apply to all proposed facilities in the queue as well as new interconnection requests. The only party opposed to this type of change is Ecoplexus, and its opposition is based mainly upon its position that the federal standards should be adopted. Ecoplexus advocated that the study payments be made on a stage by stage basis instead of via an upfront deposit. At the technical conference, the Utilities stated

that the consensus was to promote efficiency to clear the queue at the current time and requiring a stage by stage study payment mechanism would decrease the efficiency that a single upfront deposit would provide.

During the technical conference, the Utilities further indicated that under the current process, certain QFs disputed that the Utilities could collect any money above the \$1,000 deposit for studies during the study process. The Utilities provided an example of a QF that refused to pay for the studies being performed by the utility and thereafter sold its project for \$6.2 million and only paid the \$1,000 deposit for study costs that were far above \$1,000.

The Public Staff supports changing the NC Interconnection Standard so that the deposit be applied to the proposed facilities in the queue with the caveat that a QF would receive credit for study payments already made against the new deposit.

The Commission finds that the stakeholder agreement resulting in the RNCIPP deposit for facilities that must go through the Section 4 Study Process is a reasonable method of addressing the clogged queue issue in North Carolina and that applying the deposit to existing as well as new interconnection requests will promote efficiency and clear the clogged queue by providing an incentive for developers to withdraw projects that they do not intend to pursue. The Commission further finds the Public Staff's request that current ICs be given credit for payments already made against the new deposit is reasonable.

ISSUE 3. Interest on Deposit

In its initial and reply comments, NCSEA urged the Commission to require the Utilities to pay interest on the new and existing deposits made by ICs at the statutory interest rate beginning on the 91st day after the deposit was received by the utility. The NCSEA argued that it and a number of its business members, in supporting the new deposit requirement, have put "skin in the game" to unclog the queue. NCSEA further stated that under the RNCIPP, when an IC does not timely meet a deadline, the IC would be removed from the queue. However, no penalties exist in the RNCIPP for the failure of a utility to adhere to its express deadlines. NCSEA proposed that a way for the Utilities to "put skin in the game" is by paying interest on the deposit at 8 percent beginning on the 91st day after the deposit is received by the utility. NCSEA cites to Commission Rule R12-4(c), which provides for interest on deposit when a utility requires a deposit for electric service and argued that interconnection deposits are no different.

In their reply comments, the Utilities stated that retail service security deposits, which account for credit risk, are not similar to interconnection deposits which are intended to fund the Utilities' actual costs incurred in processing interconnection requests. Furthermore, the Utilities stated that the interconnection process is complex and can be affected by numerous variables beyond the Utilities' control. Therefore, the

Utilities should not be liable for interest based upon delays or deferrals that are beyond the Utilities' control.

The Commission agrees with the Utilities on this issue. Deposits for electric service and interconnection study deposits are not the same in substance. These deposits serve different purposes. A deposit required for electric service is to safeguard against non-payment of an account, whereas the proposed interconnection deposit is for the utility to use to pay for actual work to be performed by the Utility at the request of the IC. The interconnection deposit would not sit unused during the parties' relationship and only used for a guarantee. Rather, the utility would reduce the interconnection study deposit as the studies are performed for the IC. The parties indicated that with most interconnection requests that require this new deposit, the Utilities will deplete that deposit before the upgrade phase of interconnection. The Utilities did indicate during the technical conference that if any IC exited the interconnection queue with a study deposit balance, any unused portion of the study deposit would be returned to the IC. The Commission finds and concludes that an interest on such study deposits is not appropriate.

ISSUE 4. Site Control

In the Commission's June 2008 Order, the Commission, on its own initiative revised the site control requirement in FERC's Interconnection standard and made site control only applicable to the execution of an interconnection agreement, rather than being required at the time the interconnection request is made. The Commission rejected the FERC's approach requiring an IC to have site control when the IC submits an interconnection request reasoning that the provision could make generator interconnections more difficult for small generators.

According to the Public Staff, the current consensus of the stakeholders is that both existing and new interconnection requests should have to demonstrate site control. The consensus is that ICs with existing interconnection requests should be required to demonstrate site control within 30 calendar days and ICs with new interconnection requests should be required to demonstrate site control at the time the request is submitted, which is consistent with the FERC interconnection standard.

The Commission finds that the volume of interconnection requests as well as the solar landscape in North Carolina has evolved and changed since 2008 and that good cause exists to accept the consensus position that site control be a requirement for all interconnection requests prior to the execution of the interconnection agreement. The Commission, therefore, agrees with the language within the RNCIPP requiring an IC filing new interconnection requests to have site control at the time of the request and that current ICs with a pending interconnection request shall have 30 days from the date of this order to obtain site control.

ISSUE 5. Fast Track Eligibility Limits and Supplemental Review

As all parties stated in their comments, the proposed revisions to the Fast Track Process is an area of disagreement among the parties. The issues involve the Fast Track eligibility size limits and the enhanced Supplemental Review Process. Currently, under the NC Interconnection Standard, to be eligible for the Fast Track Process, a proposed generator must only have a capacity of 2 MW or less, regardless of generator type or location on the system.

In IREC's initial comments, it recommended that the Fast Track Process currently in Section 3 of the North Carolina Interconnection Standard be amended to track the changes made by FERC in the pro forma SGIP for inverter-based projects and proposed the adoption of the following eligibility table:

Line Voltage	Fast Track Eligible Regardless of Location	Fast Track Eligibility on a Mainline and < 2.5 Electrical Circuit Miles from Substation
<5 kV	≤ 500 kW	≤ 500 kW
≥ 5 and < 15 kV	≤ 2 MW	≤ 3 MW
≥ 15 and < 30 kV	≤ 3 MW	≤ 4 MW
≥ 30 and ≤ 69 kV	≤ 4 MW	≤ 5 MW

IREC noted that FERC recognized that when it adopted the Original SPIG, it did not consider other factors such as line voltage and the location of the generator. Thus, the 2 MW size limit may be unduly conservative in some cases and not conservative enough in others. IREC reiterated in its comments that in addition to project size, the other two main factors that would help predict whether a project was capable of passing the Fast Track technical screens were the line voltage and the location of the generator on the circuit. As a result, the table proposed by IREC for inverter-based systems contains three columns: the first indicating the voltage of the line where the generator would interconnect; the second indicating the eligibility limit for a generator based upon line voltage no matter where it is located on the circuit; and the third column providing the greater size eligibility limits for generators that are located on a main line and within 2.5 miles of a substation.

IREC indicated in its initial comments that these size limits are merely eligibility limits and do not guarantee that a project would pass the Fast Track screens. IREC opposed the Utilities proposed table in the RNCIPP stating that the proposed table would make fewer projects eligible for the Fast Track Process than under the current NC Standard. IREC stated that the Utilities' eligibility table is unduly conservative. IREC further stated that the revised eligibility table would have the greatest positive impact if the Commission also adopted an improved supplemental review approach as adopted by FERC. IREC indicated that under the current Fast Track Process, the Utilities currently use a 15% of peak load screen. This screen is to determine "whether there is a

risk that generation could exceed load on the circuit at any point, possibly resulting in backfeeding electricity onto the distribution system.” IREC stated that the enhanced Supplemental Review would capture the projects that fail the 15% screen or another screen, but can still be safely interconnected without going through the full Section 4 Study Process. IREC stated that if the Utilities applied a 100% of minimum load screen as well as two additional screens (the voltage and power quality screen and the safety and reliability screen) during Supplemental Review, they could connect more projects without undermining safety, reliability or power quality. IREC provided two examples in California using Southern California Edison (SCE) and Pacific Gas and Electric Company (PG&E) where the Supplemental Review Process has allowed projects to avoid the more costly full study. IREC indicated that while many projects failed the 15% of peak load screen, 44% of PG&E’s failed projects and 21% of SCE failed projects were able to pass the enhanced supplemental review and avoid the full study process.

At the technical conference, IREC conceded that the Utilities are “absolutely right” in that a “huge number” of projects would fail the screens in the 2 MW to 5 MW range. Even so, IREC stated that if the Commission expanded the Supplemental Review Process, it could improve efficiency by expanding the small number of projects that could pass under the Supplemental Review Process and avoid the Full Study Process.

The Utilities, in their initial comments, stated that they did not support IREC’s proposal. Specifically, the Utilities stated the following:

The Utilities have held a number of calls with IREC and its technical experts to discuss its proposals and California and Massachusetts experiences. The Utilities feel strongly that the North Carolina DG landscape is new, unique and evolving rapidly. The Utilities further believe there are currently unquantified risks to system safety and reliability and questionable benefits to North Carolina associated with expanding the Fast Track process. The Utilities unequivocally do not support reducing the level of technical rigor applied to study DG interconnections exceeding two MWs in size. The Utilities feel strongly that further evaluation of IREC’s proposals to expand the Fast Track process is needed before they could be implemented in North Carolina. However, the Utilities submit their near term focus should be on resolving the substantial backlog of MW-scale projects in their respective interconnection queues. Therefore, IREC’s recommendations that are not included in the RNCIPP should be rejected.

As a result, the RNCIPP filed by the Utilities proposed the following Fast Track Process eligibility size limits for Inverter-Based systems:

Line Voltage	Fast Track Eligible Regardless of Location	Fast Track Eligibility on a Mainline and < 2.5 Electrical Circuit Miles from Substation
< 5 kV	≤ 100 kW	≤ 250 kW
≥ 5 kV and < 15 kV	≤ 500 kW	≤ 1 MW
≥ 15 kV and < 35 kV	≤ 1 MW	≤ 2 MW
≥ 35 kV	<i>Not eligible</i>	<i>Not eligible</i>

The Utilities stated in their reply comments that they have “proposed a scaled voltage- and location-based Fast Track eligibility table designed to ensure that projects eligible for Fast Track have a reasonable likelihood of passing the Fast Track screens.” The Utilities stated that the Utilities’ experience with Fast Track in North Carolina is that projects above 1 MW rarely passed the screens, especially when interconnecting to lines of lower voltage and at increasing distances away from a substation. The Utilities, in responding to IREC’s comments that 280 of the 349 solar projects interconnected in North Carolina have capacities of 3 MW, clarified that 220 of these 280 projects are below 1 MW in size and would still be eligible under the Utilities’ proposed table. The Utilities indicated that other projects were between 2 MW and 3 MW are not currently eligible. Further, the Utilities indicated that currently there are over 400 interconnection requests in the queue between 2 MW and 5 MW that are highly unlikely to pass the Fast Track screens. The Utilities argued that expanding the Fast Track Process by expanding the eligibility limits and the enhanced Supplemental Review Process, where most projects will inevitably fail and need to go through the Full Study Process is inefficient, especially given the current clogged queue.

The Utilities stated that they limited the upper limit of the distribution system line voltage in the table to 35 kV (from FERC’s 69 kV) because the largest distribution line in North Carolina is 34.5 kV. They indicated that projects interconnecting above 35 kV are evaluated as transmission interconnections requiring full study.

The Utilities urged the Commission to reject “formalizing” the existing Supplemental Review Process and requiring mini-studies of projects failing the initial Fast Track screens. At the technical conference, the Utilities stated that based upon their review and experience, the table and supplemental process they proposed promotes the efficiency in both cost and time. Referring to IREC’s California example, the Utilities stated that when the statistics are flipped, if the Commission formalized the Supplemental Review Process as requested by IREC, the Utilities will be spending time and money to study projects where 60 to 80 percent will not pass and will need to go through a full study. They further clarified that these 1 MW to 3 MW projects would need modeling to understand the impact on the system, which would amount to a mini-study. The Utilities argued that during a time when the parties are attempting to clear the

queue, spending resources on projects that will not pass the Fast Track Process and result in an interconnection agreement is not efficient.

NCSEA stated in its reply comments that it supported IREC’s proposed revisions to the Fast Track and Supplemental Review Processes to the extent that the revisions do not conflict with any other NCSEA position advocated in this docket.

In its reply comments, the Public Staff stated that the Fast Track Process does not reduce the level of technical rigor to the point that significant risks to system safety and reliability are raised, and that the Fast Track and Supplemental Review Processes provide the Utilities with adequate opportunities to ensure that the safety and reliability of the grid is protected. The Public Staff stated that improving the Fast Track Process would be helpful in preventing increased future congestion in the interconnection queue. The Public Staff argued that the Utilities’ proposed table would actually reduce the availability of the Fast Track Process for a significant number of projects from the current NC Interconnection Standard. Thus, the Public Staff agreed with IREC’s proposed table except that the Public Staff agreed with the Utilities that a full study would be more appropriate for projects on distribution lines greater than 35 kV. The Public Staff recommended the following eligibility table:

Line Voltage	Fast Track Eligible Regardless of Location	Fast Track Eligibility on a Mainline and < 2.5 Electrical Circuit Miles from Substation
<5 kV	≤ 500 kW	≤ 500 kW
≥ 5 and < 15 kV	≤ 2 MW	≤ 3 MW
≥ 15 and < 35 kV	≤ 3 MW	≤ 4 MW
≥ 35 kV	<i>Not eligible</i>	<i>Not eligible</i>

The Public Staff further requested that the Commission direct the Utilities to file semi-annual reports detailing how many Fast Track projects failed the initial screening for each category and provide which screens caused the fail, and to indicate the number of facilities that failed the initial screen, but later passed the Supplemental Review Process and that the Commission request comments on the reports within two years. The Public Staff further supported IREC’s enhanced Supplemental Review Process stating that it “presents a more structured and transparent ... process intended to help utilities handle increasing volumes and penetrations of distributed generation efficiently without compromising the safety and reliability of their electrical systems.” When asked at the technical conference why the Public Staff supported mainly IREC’s proposal, the Public Staff indicated that it was trying to find a reasonable balance between what the other states have had work while attempting to provide a margin for the Utilities to ensure safety and reliability.

For the reasons discussion below, the Commission finds that the following eligibility table provides the most efficiency during this period of time:

Line Voltage	Fast Track Eligible Regardless of Location	Fast Track Eligibility on a Mainline and < 2.5 Electrical Circuit Miles from Substation
<5 kV	≤ 100 kW	≤ 500 kW
≥ 5 and < 15 kV	≤ 1 MW	≤ 2 MW
≥ 15 and < 35 kV	≤ 2 MW	≤ 2 MW
≥ 35 kV	<i>Not eligible</i>	<i>Not eligible</i>

The Commission agrees with IREC and the Public Staff that the Utilities' proposed eligibility table is on the conservative side and that the purpose of the eligibility table is to allow the option to go through the Fast Track Process but does not guarantee approval under the Fast Track Process. By agreeing that the Utilities may have been too conservative in some of the project sizes in its proposed eligibility table, the Commission modifies the RNCIPP table and determines that the eligibility limit for projects interconnecting to a line with a voltage < 5 kV but on a mainline and < 2.5 electrical circuit miles from a substation shall be ≤ 500 kW; projects interconnecting to a line with a voltage ≥ 5 kV and < 15 kV regardless of location shall be ≤ 500 kW and those on a mainline and < 2.5 electrical circuit miles from a substation shall be ≤ 1 MW; and projects interconnecting to a line with a voltage ≥ 15 kV and < 35 kV regardless of location shall be ≤ 1 MW. However, the Commission does not agree with IREC and the Public Staff that the eligibility threshold should be increased to greater than the current NC Interconnection Standard during this period of time when the Utilities are working to clear a clogged queue. Therefore, the eligibility threshold approved by the Commission shall not be greater than 2 MW.

The Commission agrees with the Utilities that during this interim period when the goal is to clear the clogged queue, it is counterintuitive to increase the Fast Track eligibility and expand the Supplemental Review Process which would divert resources to potentially fruitless projects and results. The Commission agrees with the Utilities and IREC that a large amount of projects between the 2 MW and 5 MW range would not pass the Fast Track screens, thereby making it inefficient to expand the Fast Track Process to them. Further, the Commission is not convinced that an enhanced Supplemental Review Process at this time would provide sufficient efficiency to warrant changing the current process which allows for supplemental review. The Commission finds that the Utilities' resources should not be used on performing mini-studies, under an expanded Supplemental Review Process, on projects in which 60 to 80 percent will most likely still need to proceed to the Section 4 Full Study Process.

However, the Commission is of the opinion that once the queue is unclogged that a more robust Supplemental Review Process might very well assist in maintaining an efficient queue. Therefore, the Commission orders the parties to collaborate to create a

workable Supplemental Review Process that adds some structure to the currently flexible and undefined Supplemental Review Process, but that is not as structured as IREC's proposal in which the Utilities are forced to perform inefficient studies for projects that most likely will not pass, diverting resources that can be better spent performing full studies. The parties shall provide the Commission with its results when the Commission reviews this matter in approximately two and one-half years after the ordered stakeholder meeting process.

ISSUE 6. Interdependency

The RNCIPP adds a section entitled Interdependent Projects. The parties achieved consensus to add this section to the NC Interconnection Standard. However, two issues remain with respect to the wording of this new section. The two issues revolve around 1) including Fast Track projects in the interdependency review located within Section 1.8.1, and 2) the removal of the option for cluster studies that currently is within Section 1.6 of the NC Interconnection Standard. As stated above, the goal of the addition of the Interdependent Projects section is to create a mechanism for dealing with interdependencies. The interdependencies of projects and the delays this has on processing interconnection requests was not envisioned when the Commission approved the current process. At this time, facilities with higher queue numbers are being left in an uncertain position as to the potential timing and cost of the interconnection of their proposed facilities, and this problem is likely to become magnified as multiple interdependencies develop. The RNCIPP includes a new Section 1.8 on interdependent projects, and adds definitions for Project A and B to the glossary.

For facilities identified as a Project A (the facilities with the lower queue number on a particular line, for example), the process for completing the interconnection process does not change due to interdependencies. After a determination of any potential interdependencies, these Project As will move forward through the Section 3 Fast Track Process or the Section 4 Study Process, as appropriate. For facilities that are identified as Project Bs, whereby the Utilities' ability to accommodate them without upgrades is dependent on whether a Project A moves forward or withdraws, the RNCIPP requires the utility to provide greater information regarding a QF's queue position relative to other interdependent projects. For projects identified as Project Bs, the utility, upon the request of the Project B IC, will complete the System Impact Study assuming that its Project A facility completes construction and interconnection and a second System Impact Study assuming its Project A has been withdrawn. For projects with a higher queue number than the Project B, the RNCIPP directs the utilities to make a preliminary determination and to notify all interconnection customers of the number and type of interdependencies a queued facility is facing. The RNCIPP also directs the Utilities not to study the higher queued facilities until they move into a Project B position. One other change in the Section 4 Study Process is the RNCIPP removes the option of a Feasibility Study, or combines the Feasibility Study and the System Impact Study into one study.

In their reply comments, IREC recommended (and the Public Staff agreed) that the Commission should remove from Section 1.8.1 regarding interdependency any reference to Fast Track projects. IREC argued that Fast Track projects should not be unduly delayed or studied as a result of potential interdependencies under Section 1.8. The Public Staff tended to agree with IREC and contended that because the Fast Track screen most likely considered interdependencies, that requiring another review under Section 1.8.1 may be redundant.

In their reply comments, the Utilities disagreed with IREC that Fast Track projects up to 2 MW (or up to IREC's recommended 5 MW) have "little to no impact on the utilities' systems. The Utilities stated that with the increasing solar penetration on distribution lines, smaller projects in combination with larger projects can push the safety and reliability limit of a line. The Utilities did recognize that smaller Fast Track projects (potentially up to 50 or 100 kW) may not pose sufficient system impacts and could be exempted from Section 1.8, but that the Utilities should be allowed time to make such a determination.

At the technical conference, the Utilities, IREC and the Public Staff all agreed that there existed some confusion around this issue during negotiations and during the comment period. IREC stated that a 5 kW rooftop system should not be held up for two years while other studies on the line are performed; but IREC recognized that larger projects might have impacts that need to be assessed. IREC maintained that the current language of Section 1.8.1 should be modified to state what smaller projects may be exempt from Section 1.8.

The Commission agrees with the parties that smaller projects that do not pose sufficient system impacts should be exempt from Section 1.8.1. Therefore, the Commission orders the Utilities to determine the appropriate size limit for small projects that should be exempt from Section 1.8 within four months of this order and modify all of the documents accordingly.

ISSUE 7. Cluster Studies

A related issue to the new interdependency section is whether cluster studies should remain an option in the RNCIPP. Ecoplexus recommended that the option of cluster studies remain a part of the NC Interconnection Standard. Ecoplexus indicated that where substantial upgrades are required, cluster studies could be utilized to allow ICs to work together and share in the costs to facilitate interconnection. Ecoplexus recommended that the option of studying interconnection requests in clusters should be retained in the NC Interconnection Standard.

At the technical conference, IREC indicated that with the current clogged queue, cluster studies would be problematic due to the fact that restudies would be required when speculative projects dropped out. IREC supports cluster studies once the queue is cleared.

At the technical conference, the Public Staff indicated that it was supportive of the A/B interdependency study process as proposed by the RNCIPP in Section 1.8 and that the A/B process and the cluster studies cannot coexist.

The Commission agrees with IREC and the Public Staff that with the current clogged queue, the cluster studies option is not an efficient way to manage the queue. However, the Commission further agrees with Ecoplexus that there could be benefits for ICs for the interconnection process to allow for the option of cluster studies once the queue issues are resolved and the queue has a manageable number of projects. The Commission strongly encourages the parties to continue to work through the issues surrounding cluster studies and resolve such issues when the parties begin meeting to further enhance the NC Interconnection Standard in two years. For the current NC Interconnection Standard, the Commission approves the A/B process as set forth in the RNCIPP to handle the interdependency issues.

ISSUE 8. Payments for Interconnection Facilities, Distribution and Network Upgrades and Financial Security

Except for Ecoplexus, the parties involved in the stakeholder process agreed that the Utilities could require prepayment of Interconnection Upgrades, Distribution Upgrades and Network Upgrades. These are upgrades to the grid required to allow the IC to connect. Interconnection Facilities are infrastructure improvements built between the generating facility and the point of interconnection to the grid. Distribution Upgrades are upgrades made on the utility side of the point of interconnection to the utilities' distribution system. Network Upgrades are upgrades made to the transmission system. Distribution Upgrades and Network Upgrades will hereinafter be referred to as (Upgrades). Under the current NC Interconnection Standard, operation and maintenance (O&M) costs for Interconnection Facilities are paid by the IC because the facilities are not on the utility side of the interconnection. The Upgrades' ongoing O&M costs are paid by the Utilities. The NCSEA, the Public Staff, IREC and the Utilities agreed that the Utilities should be allowed to require financial assurances, such as prepayment, that system upgrade costs are paid by a QF developer who needs the upgrades prior to construction of the infrastructure. The parties disagree on what form the financial assurance should take when discussing prepayment of Upgrades.

The NCSEA recommended in its reply comments that a definition of financial security be inserted into section 5.2.4, and that definition should include a line of credit.

In its reply comments, the Public Staff agreed with the NCSEA that financial security should be allowed for both the interconnection facility charge and the upgrade charges. The Public Staff stated that the currently approved NC Interconnection Agreement provides for "the use of financial security in the form of a guarantee, a surety bond, letter of credit or other form of security that is reasonably acceptable to the Utility and is consistent with the Uniform Commercial Code of North Carolina." The Interconnection Agreement further provides that such security can be used for both the Interconnection Facilities and Upgrades.

In its reply comments, Ecoplexus stated that Section 6.3 of the Interconnection Agreement under the currently approved NC Standard allows the IC to provide the interconnecting utility a guarantee, a surety bond, letter of credit or other form of security prior to the commencement of the design, procurement, installation, or construction of the applicable portion of the Interconnection Facilities and Upgrades. Ecoplexus is concerned that proposed Section 5.2.4 of the RNCIPP does not make clear that an IC may post security to cover the costs for constructing, designing, procuring, and installing the Interconnection Facilities and Upgrades. Ecoplexus further stated that the Utilities have proposed to strike the option of using a surety bond from the Interconnection Agreement.

Ecoplexus was the only party to question the prepayment for Interconnection Facilities and Upgrades. Specifically, in its reply comments, Ecoplexus stated that some confusion exists with respect to the current charges as written and that there seems to be the potential for double recovery by the Utilities. Further, Ecoplexus argued that the federal standard of “pay as you go” is a better way to handle the costs of both Interconnection Facilities and Upgrades.

In their reply comments, the Utilities outlined that the RNCIPP would establish that the IC must make payment and financial security within 60 days of being tendered the interconnection agreement by the utility. The Utilities indicated that financial security may be used to guarantee Interconnection Facilities, but that upfront payment must be made for Upgrades. The Utilities indicated that payment is required prior to construction of Upgrades for several reasons. First, upfront payment provides that the IC is committed. Second, upfront payment for Upgrades is necessary for the Utility to purchase expensive equipment with long lead times. Third, because the Utilities are deploying finite interconnection infrastructure construction crews at a time when many interconnection customers are waiting to interconnect, upfront payments assist the Utilities to prioritize the deployment of those crews. As for financial security, the Utilities stated that any financial security that is allowed for Interconnection Facilities must be reasonably acceptable to the interconnecting utility.

During the technical conference, the Public Staff indicated that it is supportive of prepayment of Interconnection Facilities and Upgrades as long as financial security can be used for both. The Utilities argued that they cannot commit to purchasing equipment with long lead items until the utility has been paid. The Utilities argued that surety bonds are merely insurance instruments and if the insured quits paying on the bond after the Utility has begun construction and the bond is cancelled, then the utility could be left with a stranded asset. The Utilities further stated that they should not be the bank for these developers with respect to Upgrade costs that could be as much as \$1,000,000, when they are ordering equipment with long lead times. The Utilities further stated that based upon experience, some developers have not opted to use the surety bond in the past, but rather have paid the Upgrade costs upfront.

In response, the Public Staff indicated at the technical conference that it agrees that if the utility is using the money to pay for expensive equipment, that it is reasonable

not to use a letter of credit. However, the Public Staff indicated that it did not think it would be fair for a utility to collect \$1,000,000 when a utility only needed \$100,000 immediately. Under those circumstances, a letter of credit seems more appropriate. NCSEA indicated that they support upfront payments and reiterated that a definition of financial security should be placed into the NC Interconnection Standard as opposed to only being in the interconnection agreement. The NCSEA argued that the definition within the current interconnection agreement should be used.

Lastly, Ecoplexus argued that the Utilities, by requiring prepayment, are treating ICs differently from large industrial and commercial customers, because when dealing with customers, the Utilities only require upfront payment when the upgrades are extraordinary. The Utilities responded by arguing that ICs are not similarly situated to a paying customer that will have a large load on the utility's system and will purchasing power from the utility.

The Commission agrees with the Public Staff, NCSEA, IREC and the Utilities that prepayment for Interconnection Facilities and Upgrades is reasonable under the present set of circumstances and that the practice of prepayment is nondiscriminatory. As for the issue of financial security, the Utilities and potentially ratepayers are responsible for abandoned assets if an IC walks away from a project after construction of the Upgrades occurs. To protect ratepayers, the Commission finds good cause to allow each utility to determine the amount of risk it will take with the acceptance of financial security in lieu of payment for Upgrades. The current Interconnection Agreement also allows the utility to waive the security requirements if its credit policies show that the financial risks involved are de minimus or if the utilities' policies allow the acceptance of an alternative showing of creditworthiness from the IC. This language should remain in the Interconnection Agreement giving this discretion to the Utilities.

At the technical conference, the Utilities indicated that, in the past, when a large outlay of funds is needed for a transmission upgrade, the utility has worked with the IC on a payment plan informally. The Commission finds that allowing for this flexibility between the Utilities and an IC can address the Public Staff's concern that an IC might pay too much on the front end too far in advance of a Utility's need for funds. However, the Commission shall not require the Utilities to accept any financial security in lieu of prepayment for Upgrades, but will leave such arrangements to the Utilities' discretion. Therefore, the Commission will not require the Utilities to accept financial security for the upfront payment of Upgrades. The Commission strongly urges that the Utilities accept financial security in a nondiscriminatory manner or work out payment plans through the flexibility that the Commission is allowing under appropriate circumstances as solely determined by the Utilities.

The Utilities should modify the documents to appropriately reflect the Commission's order of flexibility for the Utilities with respect to financial security and payment plans, if needed.

ISSUE 9. Material Modification

Section 1.5 of the RNCIPP sets forth the definition of “material modification.” The significance of the definition of material modification is that the definition may affect whether or not a project retains its position in the interconnection queue. The draft of the Utilities’ first RNCIPP defined material modification to include “a change or replacement of generating equipment such as generators ... that is not a direct substitution in size, ratings ...or capabilities of the equipment specified in the original or preceding interconnection request.”

Both the Public Staff and the NCSEA supported the definition of material modification, with one proposed language change. Both the Public Staff and NCSEA requested that the word “direct” in section 1.5.1.2 be changed to the words “like-kind.” During the technical conference, the Utilities indicated that they agreed with the wording change.

Ecoplexus urged the Commission to reject the proposed definition of material modification and adopt the federal definition, which defines it as “a modification that has a material impact on the cost or timing of any interconnection request with a later queue priority date.” Ecoplexus argued that this definition protects the next customer in the queue and incents an IC to avoid those changes that could cause delay for the next customer. Ecoplexus also stated that the additional language of the definition, as well as the language regarding the indicia of a material modification, creates more uncertainty and ambiguity, rather than certainty.

The Commission disagrees with Ecoplexus that the one-sentence federal definition provides more certainty than the more detailed definition agreed to by the Public Staff, NCSEA and the Utilities. The Commission finds that the additional language, including the indicia of a material modification, provide all parties common examples of what may or may not constitute a material modification. The Commission concludes that it is appropriate to adopt the definition of material modification as set forth in the Utilities’ proposed RNCIPP with one change, that being changing the word “direct” in section 1.5.1.2 to the words “like-kind.”

ISSUE 10. Reasonable Efforts Versus Best Efforts and Flexibility

NCSEA proposed in its reply comments to change the language in the first sentence of Section 6.1. The first sentence of Section 6.1 currently reads, “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.” NCSEA suggested that the word “reasonable” be changed to the word “best.” NCSEA stated that NCSEA members have agreed to “put skin in the game” by agreeing to an upfront study deposit and, therefore, NCCSEA requests that the Utilities put skin in the game by using enhanced best efforts to meet deadlines.

NCSEA's second suggested change is to strike the words "unless the Utility and the Interconnection Customer agree to a different schedule." NCSEA argued that with the various interdependency issues involved in the interconnection queue, the current language would enable one utility and one developer to alter a single project's deadlines in such a way that interdependent projects with higher queue numbers could be detrimentally impacted.

At the technical conference, when asked about what "best" efforts would entail, NCSEA indicated that one dimension would be for the Utilities to ensure that they are staffed to handle the volume of interconnection requests in a timely fashion. Evidence at the technical conference indicated that the Utilities are meeting the construction deadlines; however, the study process is taking too long. The Utilities agreed that they are not meeting the current timelines and will not meet them for a while until the clogged queue is corrected. The Utilities stated that their actions of hiring additional staff and adding additional resources are reasonable. DEC and DEP indicated that the companies have gone from two engineers to ten engineers to perform studies. DEC and DEP predicted that this increased work force is reasonable to accommodate the current work flow and to catch up on the bottlenecked studies. DEC and DEP further indicated that the term "reasonable efforts" is a very common legal term, whereas "best efforts" is not commonly defined, but rather is an amorphous standard that is a higher standard than "reasonable." As for NCSEA's second requested change to the first sentence of Section 6.1, the Utilities argued that the language should not be removed. The main reason for the language is to allow for flexibility in unique circumstances. IREC indicated support for retaining language that allows for flexibility for unique circumstances that arise. Lastly, the Utilities stated that the new reporting requirements will also improve transparency and reduce frustration for the project developers.

The Commission concludes that the term "best efforts" is not well defined, making it subject to litigation, while the term "reasonable efforts" is a common legal term understood by the parties and this Commission. The Commission agrees with the Utilities that the additional resources DEC and DEP have added to address the current clogged queue are reasonable at the present time. The Commission further agrees with several parties regarding the need for flexibility between the Utilities and its ICs. Therefore, the Commission finds good cause to leave Section 6.1 of the RNCIPP unchanged.

ISSUE 11. Quarterly Reporting

The Utilities indicated in their initial and reply comments that increased transparency, subject to appropriate confidentiality protections, is needed to manage the current challenges of the interconnection queue. The Utilities initially proposed that two quarterly reports should be developed: 1) to provide a snapshot of the current interconnection queue to assist developers in assessing how many projects are potentially ahead of them in the queue; and 2) to provide the Commission with data on the Utilities' queue performance in moving interconnection requests through the study process and construction.

The Utilities worked with stakeholders and stated in their reply comments that they generally agree with NCSEA's reporting recommendations. The Utilities propose that the queue snapshot should be filed in spreadsheet form listing in separate columns: 1) each interconnection request identified by Queue Number and fuel type; 2) date of issuance of Queue Number; 3) the interconnection request's capacity; 4) the substation to which the project will be interconnected; and 5) the feeder/circuit to which the project will be interconnected. The Utilities indicated that they did not agree with NCSEA's proposal to include substation transformer size out of caution over releasing critical infrastructure information. Nor do the Utilities agree with providing a projected in-service date which is not within the Utilities' control. In the second report to be filed quarterly, the Utilities agreed that the Utilities should report on their performance in moving the interconnection requests through the study process to a final interconnection agreement and construction of any upgrades. The Utilities generally agreed with NCSEA regarding what data should be reported and that the Utilities should track interconnection requests from 1) the date a queue number is assigned to the date an interconnection agreement is sent by the Utility to the IC for execution; and 2) from the date the IC returns the executed interconnection agreement (along with payment to construct Upgrade and Interconnection Facilities) to the date the Interconnection Facilities (along with any required system Upgrades) are completed and ready and available for operation by the IC.

IREC indicated in its reply comments that it appreciated the Utilities' willingness to engage in additional reporting requirements to increase transparency, but requested that the Commission require the Utilities to provide more detailed information in the reports than the Utilities are willing to provide. IREC requested that the Commission require that the reports have the following information: "how many projects apply under each tier, their sizes and locations, what screens failed, study completion times, estimated upgrade costs and the final upgrade costs.

The Commission agrees with the parties that the Utilities should increase transparency in the interconnection process and shall provide two quarterly reports. The first is to provide a snapshot of the interconnection queue and shall be filed in spreadsheet form listing in separate columns: 1) each interconnection request identified by Queue Number and fuel type; 2) date of issuance of Queue Number; 3) the interconnection request's capacity; 4) the substation to which the project will be interconnected; 5) the feeder/circuit to which the project will be interconnected; and 6) interconnection requests that have been denied or withdrawn. In the second report filed quarterly, the Utilities shall report on queue performance in moving the interconnection requests through the study process to a final interconnection agreement and construction of any upgrades. The Utilities shall track interconnection requests from: 1) the date a queue number is assigned to the date an interconnection agreement is sent by the Utility to the IC for execution; and 2) from the date the IC returns the executed interconnection agreement (along with payment to construct Upgrades and Interconnection Facilities) to the date the Interconnection Facilities (along with any required Upgrades) are completed and available for operation by the IC. The Utilities shall only track the Project As and Project Bs for this report. The first

deadline for both reports shall be on September 1, 2015; and they shall be filed quarterly thereafter on or before November 1, February 1, and May 1 annually.

ISSUE 12. Interconnection Agreement, Forms, Websites, Uniform Utility Rate Schedules, Tariffs and Riders

NCSEA, in both its initial comments and its reply comments, requested that any Commission order approving revised interconnection procedures be accompanied by a direction that the stakeholders once again convene in an effort to identify and communicate to the Commission any revisions that should be made to the forms and agreements to make them conform to the new Commission-approved procedures.

The Public Staff recommended that the NC Interconnection Standard be formatted differently, and questioned whether or not a rule should be created. The Public Staff also recommended that the glossary be moved to the beginning of the procedures as opposed to the end of the document. The NCSEA generally agreed with these suggested changes.

IREC suggested that the Utilities be required to improve access to small generator interconnection-related information on their websites. IREC further urged that the Commission make this requirement a part of the NC Interconnection Standard and to require the Utilities' to update their websites to allow for electronic submittal of interconnection requests using electronic signatures. The Utilities committed to improving access on their respective websites, but disagreed with providing electronic submittal during this time due to costs and time concerns.

The Commission finds good cause to order the Utilities to revise all appropriate agreements, forms, websites, schedules, tariffs and riders to conform to the new NC Interconnection Standard. The Commission will not, however, require the Utilities to enter into another stakeholder process to make all of the documents consistent with this Order. The Commission further declines to order the Utilities to reallocate valuable resources that are needed to process pending interconnection requests to create an online filing system or to order the parties to participate in the conversion of the NC Interconnection Standard into a Commission rule. The Commission orders the Utilities to make their respective websites more accessible as it volunteered to do in the stakeholder process within two months from the date of this Order if a utility has not already done so during this process.

IT IS, THEREFORE, ORDERED as follows:

1. That the modified version of the RNCIPP, without the Interconnection Agreement, attached as Appendix A shall be, and hereby is, adopted as the generator interconnection standard for North Carolina, effective for all interconnection requests now pending or submitted after the date of this Order. The Interconnection Agreement shall be filed on Monday.

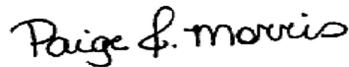
2. That the Utilities shall file with the Commission, not later than 30 days after the date of this Order, a list of all affected forms, including all of the attachments to the NC Interconnection Procedures including the Interconnection Agreement, rate schedules, tariffs, riders and service regulations and proposed revisions to them as necessary to comply with this Order.

3. That the Public Staff shall convene a workgroup of interested parties not later than two years after the date of this Order to determine if this NC Interconnection Standard needs revising or whether the NC Interconnection Standard should remain unchanged, and to report such recommendations from the stakeholder group within four months from the first meeting of the group which shall not be later than two years after the date of this Order.

ISSUED BY ORDER OF THE COMMISSION.

This the 15th day of May, 2015.

NORTH CAROLINA UTILITIES COMMISSION

A handwritten signature in black ink that reads "Paige J. Morris". The signature is written in a cursive, flowing style.

Paige J. Morris, Deputy Clerk

Commissioner Don M. Bailey did not participate in this decision.

NORTH CAROLINA
INTERCONNECTION PROCEDURES,
FORMS, AND AGREEMENTS
For State-Jurisdictional Generator Interconnections

Effective 5/15/2015

Docket No. E-100, Sub 101

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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.

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

The submission of a written request for a Section 1.2 Pre-Request Response and/or Section 1.3 Pre-Application Report is encouraged to identify potential interconnection issues unforeseen by the Interconnection Customer.

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

Notification by the Interconnection Customer to the Utility of change of ownership or change in control should be submitted pursuant to Section 6.11.

1.1.1.1 A request to interconnect a certified inverter-based Generating Facility no larger than 20 kW shall be evaluated under the Section 2, 20 kW Inverter Process. (See Attachments XX and XX 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 shall 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, shall 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 shall have the meanings specified in the Glossary of Terms in Attachment 1 or the body of these procedures.
- 1.1.3 The 2015 revisions to the Commission's interconnection standard shall not apply to Generating Facilities already interconnected as of the effective date of the 2015 revisions to this Standard, unless the Interconnection Customer proposes a Material Modification, transfers ownership of the Generating Facility, or application of the 2015 revisions to the Commission's interconnection standard are agreed to in writing by the Utility and the Interconnection Customer. This Standard shall apply if the Interconnection Customer has not actually interconnected the Generating Facility as of the effective date of the 2015 revisions.

Any Interconnection Customer that has not executed an interconnection agreement with the Utility prior to the effective date of the 2015 revisions to this Standard shall have 30 Calendar Days following the later of the effective date of the Standards or the posted date of notice in writing from the Utility to demonstrate site control pursuant to Section 1.6, and to post the deposit outlined in Section 1.4.

Any Interconnection Customer that has executed an interconnection agreement with the Utility prior to the effective date of this Standard but the Utility has not actually interconnected the Generating Facility, shall have 60 Calendar Days to submit Upgrade and Interconnection Facility payments (or Financial Security acceptable to the Utility for Interconnection Facilities only) required pursuant to Section 5.2. Any amounts previously paid by the Interconnection Customer at the time deposit or payment is due under this Section shall be credited towards the deposit amount or other payment required under this Section.

- 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 10 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 Response

- 1.2.1 The Utility shall designate an employee or office from which information on the application process 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.
- 1.2.2 The Interconnection Customer may request a Pre-Request Response by providing the Utility details of a potential project in writing, including site address, grid coordinates, project size 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 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 in a timely manner, not to exceed ten (10) Business Days. The Pre-Request Response produced by the Utility 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 Utility's system and to obtain a Queue Number. Any one developer shall 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 \$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 1.3.2 to the Interconnection Customer within ten (10) 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 and to obtain a Queue Number. The written Pre-Application Report request form shall 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 shall 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, 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 Type (e.g., solar, wind, combined heat and power, etc.)
 - 1.3.1.5 Size (alternating current kW).
 - 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 in Section 1.3.1, the Utility shall 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 1.3.3, the Pre-Application Report shall 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 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.
- 1.3.2.9 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 Utility 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 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 the 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 readily available. 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. 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 shall submit its Interconnection Request to the Utility, and the Utility shall notify the Interconnection Customer confirming receipt of the Interconnection Request within three (3) Business Days of receiving the Interconnection Request.

The Interconnection Request Application Form shall be date- and time-stamped 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 Generating Facilities 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 3.0 and are to be evaluated under the Section 4 Study Process, an Interconnection Request Deposit is required. The Interconnection Request Deposit shall 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 Utility's reasonably anticipated costs for conducting the System Impact Study and the Facilities Study. Such deposit shall, however, be applicable towards the cost of all studies, Upgrades and Interconnection Facilities.

- 1.4.1.3 A Site Control Verification letter (sample included within Attachment 3).
 - 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 The Utility shall notify the Interconnection Customer within ten (10) Business Days of the receipt of the Interconnection Request Application Form as to whether the Form and initial supporting documentation specified in Sections 1.4.1.1 through 1.4.1.6 are complete or incomplete. An Interconnection Request will be deemed complete upon submission of the listed information in Section 1.4.1 to the Utility.
- 1.4.4 If the Interconnection Request Application Form and/or the initial supporting documentation is incomplete, the Utility shall 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) Business Days after receipt of the notice to submit the listed information. If the Interconnection Customer does not provide the listed information or a request for an extension of time, not to exceed ten (10) additional Business 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. Material Modifications include project revisions proposed at any time after receiving notification by the Utility of a complete Interconnection Request pursuant to Section 1.4.3 that 1) alters the size or output characteristics of the

Generating Facility from its Utility-approved Interconnection Request submission; or 2) may adversely impact other Interdependent Interconnection Requests with higher Queue Numbers.

1.5.1 Indicia of a Material Modification, include, but are not limited to:

- 1.5.1.1 A change in Point of Interconnection (POI) to a new location, unless the change in a POI is on the same circuit less than two (2) poles away from the original location, and the new POI is within the same protection zone as the original location;
- 1.5.1.2 A change or replacement of generating equipment such as generator(s), inverter(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;
- 1.5.1.3 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);
- 1.5.1.4 A change of transformer connection(s) or grounding from that originally proposed;
- 1.5.1.5 A change to certified inverters with different specifications or different inverter control specifications or set-up than originally proposed;
- 1.5.1.6 An increase of the AC output of a Generating Facility; or
- 1.5.1.6 A change reducing the AC output of the generating facility by more than 10%.

1.5.2 The following are not indicia of a Material Modification:

- 1.5.2.1 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 Utility.
- 1.5.2.2 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;

- 1.5.2.3 An increase in the DC/AC ratio that does not increase the maximum AC output capability of the generating facility;
 - 1.5.2.4 A decrease in the DC/AC ratio that does not reduce the AC output capability of the generating facility by more than 10%.
- 1.5.3 To the extent Interconnection Customer proposes to modify any information provided in the Interconnection Request deemed complete by the Utility, the Interconnection Customer shall submit any such modifications to the Utility in writing. If the Utility determines that the proposed modification(s) constitutes a Material Modification, the Utility shall notify the Interconnection Customer in writing within ten (10) Business Days that the modification is a Material Modification and the Interconnection Request shall be withdrawn from the Queue unless the Interconnection Customer withdraws the proposed Material Modification within 15 Calendar Days of receipt of the Utility's written notification. If the modification is determined by the Utility not to be a Material Modification, then the Utility shall 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 Utility's determination that a modification constitutes a Material Modification shall 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 Utility to evaluate whether such modification to the original or most recent Interconnection Request is a Material Modification. The Interconnection Customer shall provide specific details on all changes that are to be considered by the Utility.
- 1.5.4.2 In response to Interconnection Customer's informal request, if the Utility evaluates the proposed modification(s) and determines that the changes are not Material Modifications, the Utility shall inform the Interconnection Customer in writing within ten (10) Business Days. If the Interconnection Customer wishes to proceed with the proposed modification(s), the Interconnection Customer shall submit a revised Interconnection Request Application Form that reflects the approved modifications.

1.6 Site Control

Documentation of site control shall be submitted to the utility with the Interconnection Request using the sample site control verification form included in the Interconnection Request in Attachment 3.

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 Utility, the Utility shall notify the Interconnection Customer in writing of the alleged lapse in site control. The Interconnection Customer shall have ten (10) Business Days from the posted date on the notice from the Utility 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 Utility shall assign a Queue Number pursuant to Section 1.4.2. 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 1.8, the Queue Number of each Interconnection Request shall 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 where moving through the processes covered by Sections 2, 3, and 4.

1.8 Interdependent Projects

"Interdependent Customer" (or "Project"), "Project A" and "Project B" 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 Utility shall 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 Utility that the Generating Facility does not create an Interdependency will result in the Interconnection Request being preliminarily designated as a Project A and the Utility shall

proceed immediately to either the Section 3 Fast Track Process or the Section 4 Study process, as applicable. The Utility shall 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 Utility as an Interdependent Project during the Section 4.3 System Impact Study Process. Once the System Impact Study report is issued by the Utility designated a Generating Facility as a Project A for purposes of the Section 4.4 Facilities Study, the Interconnection Request shall retain this designation without change.

1.8.2 If the Utility determines that that the Interconnection Customer's proposed Generating Facility is Interdependent with one (1) other Interconnection Request with a lower Queue Number, the Utility 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 Interconnect Request with the lower Queue Number completes construction and interconnection and another System Impact Study report that assumes the interdependent Project A Interconnect Request with the lower Queue Number is not constructed and is withdrawn.

1.8.2.2 The Utility shall not proceed to a Project B Facilities Study until after the Project B Interconnection Customer returns a signed Facilities Study Agreement to the Utility and the Utility 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 a Final Interconnection Agreement and makes payment for any required Upgrade, Interconnection Facilities, and other charges under Section 5.2. If the Project B Interconnection Customer with a signed 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 Utility 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 payment charge specified in Section 5.2.4 of these Interconnection Procedures or withdrawn.

1.8.3 If the Utility 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 Utility shall 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 The Utility shall not study a project if it is interdependent with more than one project, each of which has a lower Queue Number. The utility will study a project when interdependency with only one lower Queue Number project exists. The removal of interdependency with multiple projects may be the result of 1) upgrades to the Utility System which eliminate the cause of the interdependency, 2) withdrawal of interdependent project(s) with lower Queue Numbers, or 3) a lower Queue Number 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 Interconnection Request with a lower Queue Number, the Utility shall schedule the Section 4.2 Scoping Meeting and provide the new Project B an executable System Impact Study Agreement. Upon being designated by the Utility as a Project B the 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.

1.9 Interconnection Requests 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.

Should an Interconnection Customer fail to comply with Section 1.1.3 following receipt of written notice specifying how the Interconnection Customer failed to comply and the expiration of an opportunity to cure by the close of business on the tenth (10th) Business Day following the posted date of such notice to cure, such Interconnection Customer will lose its Queue Number and such Interconnection Request shall be deemed withdrawn.

Section 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 Utility'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 Utility has reviewed the design or tested the proposed Generating Facility and is satisfied that it is safe to operate.

The Utility may require the Interconnection Customer to install a manual load-break disconnect switch or safety switch as a clear visible indication of switch position between the Utility 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 Utility for certified, inverter-based generators no larger than 10 kW, the Utility shall reimburse the Interconnection Customer for the reasonable cost of installing a switch that meets the Utility's specifications (see also Section 6.16).

2.2 Interconnection Request

The Interconnection Customer shall 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 Utility, 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 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. Unless the Utility determines and demonstrates that the Generating Facility cannot be interconnected safely and reliably, the Utility shall approve the Interconnection Request upon fulfillment of all

requirements in Section 1.4 and return the Interconnection Request Application Form to the Interconnection Customer.

2.2.1.2 If the proposed interconnection passes the screens but the Utility determines that minor Utility construction is required to interconnect the Generating Facility to the Utility's system, the Interconnection Request shall be approved and the Utility will provide the Interconnection Customer a non-binding good faith estimate of the cost of interconnection along with the Interconnection Request Application Form within 15 Business Days after the determination.

2.2.1.3 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 Utility will notify the Interconnection Customer that the Utility will need to complete a Facilities Study under Section 4.4 to determine the necessary costs of interconnection.

2.2.2 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 be interconnected consistent with safety, reliability, and power quality standards, the Utility shall provide the Interconnection Customer with detailed information on the reasons for failure in writing. In addition, the Utility shall either:

2.2.2.1 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

2.2.2.2 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 shall submit the Certificate of Completion in the form provided in Attachment 6 to the Utility. Prior to parallel operation, the Utility 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 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 (10) Business Days of the receipt of the Certificate of Completion. If the Utility does not inspect within ten (10) 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 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 Utility, that contact information must also be provided on the Interconnection Request Application Form.

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.

Section 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 Utility'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. All Generating Facilities connecting to lines greater or equal to 35 kilovolt (kV) are ineligible for the Fast Track Process regardless of size. For inverter-based systems, 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 Utility 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 Systems ¹		
Line Voltage	Fast Track Eligibility Regardless of Location	Fast Track Eligibility on a Mainline ² and ≤ 2.5 Electrical Circuit Miles from Substation ³
< 5 kV	≤ 100 kW	≤ 500 kW
≥ 5 kV and < 15 kV	≤ 1 MW	≤ 2 MW
≥ 15 kV and < 35 kV	≤ 2 MW	≤ 2 MW

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.

³An 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 Initial Review

Within 15 Business Days after the Utility notifies the Interconnection Customer it has received a complete Interconnection Request pursuant to Section 1.4, 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

3.2.1.1 The proposed Generating Facility's Point of Interconnection must be on a portion of the Utility'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 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.
- 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 shall not exceed 90% of the circuit and/or bank minimum load at the substation.
- 3.2.1.4 All synchronous and induction machines must be connected to a distribution circuit where the local minimum load to generation ratio on the circuit line segment is larger than 3 to 1. A 3-1 load to generation ratio screen utilizes actual recorded data that is sufficient to establish the minimum threshold.
- 3.2.1.5 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 spot network's maximum load or 50 kW.
- 3.2.1.6 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.
- 3.2.1.7 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.

3.2.1.8 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 Utility'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

3.2.1.9 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.

3.2.1.10 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.

3.2.1.11 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 shall not exceed 10 MW in an area where there are known, or posted, transient stability limitations to generating units located in the general electrical vicinity (e.g., three or four transmission busses from the point of interconnection).

3.2.2 Screen Results

3.2.2.1 If the proposed interconnection passes the screens and requires no construction by the Utility on its own System, the Interconnection Request shall be approved and the Utility will provide the Interconnection Customer an executable Interconnection Agreement within ten (10) Business Days after the determination.

- 3.2.2.2 If the proposed interconnection passes the screens and the Utility is able to determine without further study or review that only minor Utility construction is required to interconnect the Generating Facility to the Utility's system, the Interconnection Request shall be approved and the Utility will provide the Interconnection Customer a non-binding good faith estimate of the cost of interconnection along with an executable Interconnection Agreement within 15 Business Days after the determination.
- 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 Utility will notify the Interconnection Customer that the Utility 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 Utility determines that the Generating Facility may nevertheless be interconnected consistent with safety, reliability, and power quality standards, and requires no construction by the Utility on its own System, the Utility shall provide the Interconnection Customer an executable Interconnection Agreement within ten (10) Business Days after the determination.
- 3.2.2.5 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 and the Utility is able to determine without further study or review that only minor Utility construction is required to interconnect with the Generating Facility, the Interconnection Request shall be approved and the Utility will provide the Interconnection Customer a non-binding good faith estimate of the cost of interconnection along with an executable Interconnection Agreement within 15 Business Days after the determination.
- 3.2.2.6 If the proposed interconnection fails the screens, 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 as described in Section 3.3 below.

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, or (3) incurring significant cost to address safety, reliability, or power quality problems, the Utility shall notify the Interconnection Customer of that determination within five (5) Business Days after the determination, and provide copies of all data and analyses underlying its conclusion. Within ten (10) 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 meters, fuses, relay settings) and provide a non-binding good faith estimate of the limited cost to make such modifications to the Utility's System. The Interconnection Customer shall have ten (10) Business Days to agree to pay for the modifications to the Utility's electric system or the Interconnection Request shall be deemed to be withdrawn. If the Interconnection Customer agrees to pay for the modifications to the Utility's electric system, the Utility will provide the Interconnection Customer with an executable Interconnection Agreement within ten (10) Business Days of the Interconnections Customer's agreement to pay; or
- 3.3.2 Offer to perform a supplemental review under Section 3.4 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, and provide a non-binding good faith estimate of the costs of such review. The Interconnection Customer shall have ten (10) Business Days to accept the Utility's offer to perform a Supplemental Review and post any deposit requirement for the Supplemental Review, or the Interconnection Request shall be deemed to be withdrawn; or
- 3.3.3 Offer to continue evaluating the Interconnection Request under the Section 4 Study Process. The Interconnection Customer shall have ten (10) Business 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 shall be deemed to be withdrawn.

3.4 Supplemental Review

If the Interconnection Customer agrees to 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 or the request shall be deemed to be withdrawn. 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.

3.4.1 Within ten (10) Business Days following receipt of the deposit for a supplemental review, the Utility will determine if the Generating Facility can be interconnected safely and reliably.

3.4.1.1 If so, the Utility shall forward an executable Interconnection Agreement to the Interconnection Customer within ten (10) Business Days.

3.4.1.2 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 15 Business Days 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, 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 (10) Business Days that requires the Interconnection Customer to pay the costs of such System modifications prior to interconnection.

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.

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 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 documentation, as may be requested by the Utility in writing, during the Study Process.

4.2 Scoping Meeting

4.2.1 A scoping meeting will be held within ten (10) 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 System Impact Study, a Facilities Study, or proceed directly to an Interconnection Agreement.

4.2.3 If the Utility, after consultation with the Interconnection Customer, determines that the project should proceed to a System Impact Study or Facilities Study, the Utility shall provide the Interconnection Customer, no later than ten (10) 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 or studies and a nonbinding good faith estimate of the cost to perform the study or studies, which cost shall 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 shall 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 Business 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 shall be as set forth in the System Impact Study Agreement.
- 4.3.3 The System Impact Study 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, or to study potential impacts, including, but not limited to, those identified in the scoping meeting. The System Impact Study shall 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 the Utility has determined that an Interdependency exists and the Project is designated as a Project B, the Project B Interconnection Request shall 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 shall inform the Utility 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 If requested by the Interconnection Customer following delivery of the System Impact Study report, the Utility shall provide the Interconnection Customer an executable Interim Interconnection Agreement within ten (10) Business Days. The Interim Interconnection Agreement shall be identical in form and content to the Final Interconnection Agreement, but will not include Detailed Estimated Upgrade Charges, Detailed Estimated

Interconnection Facility Charge, Appendix 4 (Construction Milestone schedule listing tasks, dates and the party responsible for completing each task), and other information that otherwise would be determined in Section 5.

- 4.3.9 At the time the System Impact Study Report is provided to the Interconnection Customer, the Utility shall 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 shall return the signed Facilities Study Agreement to the Utility in accordance with Section 4.4 below.

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 Utility shall 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 shall 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 shall 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 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 that critical infrastructure 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.

Section 5. Interconnection Agreement and Scheduling

5.1. Construction Planning Meeting

- 5.1.1. Within ten (10) Business Days of receipt of the Facility Study report, the Interconnection Customer shall request a Construction Planning Meeting, where failure to comply shall result in the Interconnection Request being deemed withdrawn. The Construction Planning Meeting request shall be in writing and shall 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 shall be scheduled within ten (10) Business Days of 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 shall be specific as to scope of action, responsible party, and date of deliverable and shall be recorded in the Final Interconnection Agreement (see Appendix 4 to Attachment XX) to be provided to Interconnection Customer pursuant to Section 5.2.1 below.

5.1.4. If the Utility 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 shall have the option of payment for work outside of normal business hours or hiring a Utility-approved subcontractor to perform the distribution Upgrades. Any Utility-approved subcontractor performance remains subject to Utility oversight during construction. The Utility shall make a list of Utility-approved subcontractors available to the Interconnection Customer promptly upon request.

5.2. Final Interconnection Agreement

5.2.1. Within fifteen (15) Business Days of the Construction Planning Meeting, the Utility shall provide an executable Final Interconnection Agreement containing the Detailed Estimated Upgrade Charges, Detailed Estimated Interconnection Facility Charge, Appendix 4 (Construction Milestone and payment schedule listing tasks, dates and the party responsible for completing each task), and other appropriate information, requirements, and charges. The Final Interconnection Agreement will replace any Interim Interconnection Agreement, which shall terminate upon execution of the Final Interconnection Agreement by the Interconnection Customer and the Utility.

5.2.2. Within ten (10) Business Days of receiving the Final Interconnection Agreement, the Interconnection Customer must execute and return the Final Interconnection Agreement, where failure to comply results in the Interconnection Request being deemed withdrawn.

5.2.3. After the Parties execute the Final Interconnection Agreement, the Utility shall return a copy of the Final Interconnection Agreement to the Interconnection Customer and interconnection of the Generating Facility shall proceed under the provisions of the Final Interconnection Agreement.

5.2.4. The Final Interconnection Agreement shall specify milestones for payment for Upgrades and Interconnection facilities and/or, provision of Financial Security for Interconnection facilities, if acceptable to the Utility, that are required prior to the start of design and construction of Upgrades and Interconnection Facilities. Payment and Financial Security must be received by close of business sixty (60) Calendar Days after the date the Interconnection Agreement is delivered to the Interconnection Customer for signature, where failure to comply results in the Interconnection Request being deemed withdrawn.

5.3 Interconnection Construction

Construction of the Upgrades and Interconnection Facilities will proceed as called for in the Final Interconnection Agreement and Appendices.

Section 6. Provisions that Apply to All Interconnection Requests

6.1 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 at its earliest opportunity 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.

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. Where an Interconnection Customer seeks to resolve a dispute involving its Queue Number according to the provisions of this section, any disputed loss of Queue Number shall not be final until Interconnection Customer abandons the process set out in this section or a final Commission order is entered.

6.2.2 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.

6.2.3 If the dispute has not been resolved within ten (10) 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.

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

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 Final Interconnection Agreement by providing the Utility with a written request for withdrawal.

6.3.2 An Interconnection Request shall be deemed withdrawn if the Interconnection Customer fails to meet its obligations specified in the Interconnection Procedures, System Impact Study Agreement or Facility 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 Utility 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 Utility for such work. If the Interconnection Customer's cost responsibility exceeds its previous aggregate payments, the Utility shall invoice the Interconnection Customer for the amount due and the Interconnection Customer shall make payment to the Utility within 30 Calendar Days. If the Interconnection Customer's previous aggregate payments exceed its cost responsibility under this Agreement, the Utility shall refund to the Interconnection Customer an amount equal to the difference within 30 Calendar Days of the final accounting report.

6.4 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.

6.5 Commissioning

Commissioning tests of the Interconnection Customer's installed equipment shall be performed pursuant to applicable codes and standards. If the Interconnection Customer is not proceeding under Section 2.3.2, the Utility must be given at least ten (10) 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.

6.6 Confidentiality

6.6.1 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.

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 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.

6.6.2.1 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.

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 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 non-public in accordance with North Carolina law and that the information be 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 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.

6.8 Record Retention

The Utility shall 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 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.

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 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.

6.10.2 The Interconnection Request shall be evaluated using the maximum rated capacity of the Generating Facility, unless otherwise agreed to by the Utility and the Interconnection Customer.

6.11 Sale of a Generation Facility

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

The Interconnection Customer shall promptly notify the Utility of the final date of sale and transfer date of ownership in writing. The purchaser of the Generation Facility shall confirm to the Utility 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 Generation 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 Utility's system. The Utility shall not withhold or delay the execution of an Interconnection Agreement with the new owner provided the Generation facility or proposed Generation facility complies with requirements of 6.11.

6.11.3 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.

6.12 Isolating or Disconnecting the Generating Facility

6.12.1 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.

6.12.2 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.

6.12.3 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 System.

6.12.4 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.

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, 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.

6.14 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, 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 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.

6.15 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 interconnection 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.

6.15.1 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 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 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.

6.15.3 For an Interconnection Customer that is a non-residential customer of the Utility proposing to interconnect a Generating Facility greater than 250 kW, the required coverage shall be comprehensive general liability insurance with coverage in the amount of at least \$1,000,000 per occurrence.

6.15.4 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.

6.16 Disconnect Switch

The Utility may require the interconnection Customer to install a manual load-break disconnect switch or safety switch as a clear visible indication of switch position between the Utility 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 Utility personnel. The switch must be in close proximity to, and on the Interconnection Customer's side of the point of electrical interconnection with the Utility's system. The switch must be labeled "Generator Disconnect Switch." The switch may isolate the Interconnection Customer and its associated load from the Utility's System or disconnect only the Generator from the Utility's System and shall be accessible to the Utility at all times. The Utility, in its sole discretion, determines if the switch is suitable and necessary. 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 Utility for certified, inverter-based generators no larger than 10 kW, the Utility shall reimburse the Interconnection Customer for the reasonable cost of installing a switch that meets the Utility's specifications.

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.

Glossary of Terms

20 kW Inverter Process - The procedure for evaluating an Interconnection Request for a certified inverter-based Generating Facility no larger than 20 kW that uses the Section 3 screens. The application process uses an all-in-one document that includes a simplified Interconnection Request Application Form, simplified procedures, and a brief set of Terms and Conditions. (See Attachment XX.)

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.

Auxiliary Load – The term “Auxiliary Load” shall mean power used to operate auxiliary equipment in the facility necessary for power generation (such as pumps, blowers, fuel preparation machinery, exciters, etc.)

Business Day - Monday through Friday, excluding State Holidays.

Calendar Days – Sunday through Saturday, including all holidays.

Commission - The North Carolina Utilities Commission.

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

Detailed Estimated Interconnection Facilities Charge - The estimated charge for Interconnection Facilities that is based on field visits and detailed engineering cost calculations and is presented in the Facility Study report and Final Interconnection Agreement. This charge is not final.

Detailed Estimated Upgrade Charge - The estimated charge for Upgrades that is based on field visits and detailed engineering cost calculations and is presented in the Facility Study report and Final 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 3.1, customer options meeting, and optional supplemental review.

Final Interconnection Agreement – The Interconnection Agreement that specifies the Detailed Estimated Upgrade Charges, Interconnection Facility Charge, mutually agreed upon Milestones, etc. and terminates and replaces the Interim Interconnection Agreement.

Financial Security – A letter of credit or other financial arrangement that is reasonably acceptable to the Utility and is consistent with the Uniform Commercial Code of North Carolina that is sufficient to cover the costs for constructing, designing, procuring, and installing the applicable portion of the Utility's Interconnection Facilities. Where appropriate, the Utility may deem Financial Security to exist where its credit policies show that the financial risks involved are de minimus, or where the Utility's policies allow the acceptance of an alternative showing of credit-worthiness from the Interconnection Customer.

Generating Facility - The Interconnection Customer's device for the production and/or storage for later injection 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.

In-Service Date – The date upon which the construction of the Utility’s facilities is completed and the facilities are capable of being placed into service.

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

Interconnection Facilities – Collectively, 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 Facilities Delivery Date – The Interconnection Facilities Delivery Date shall be the date upon which the Utility’s Interconnection Facilities are first made operational for the purposes of receiving power from the Interconnection Customer.

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.

Interdependent Customer (or Interdependent Project) means an Interconnection Customer (or Project) whose Upgrade or Interconnection Facilities requirements are impacted by another Generating Facility, as determined by the Utility.

Interim Interconnection Agreement – The Interconnection Agreement that specifies the Preliminary Estimated Upgrade Charges, excludes Milestones, and must be cancelled and replaced with a Final Interconnection Agreement.

“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. Material Modifications include project revisions proposed at any time after receiving notification by the Utility of a complete Interconnection Request pursuant to Section 1.4.3 that 1) alters the size or output characteristics of the Generating Facility from its Utility-approved Interconnection Request submission; or 2) may adversely impact other Interdependent Interconnection Requests with higher Queue Numbers.

Indicia of a Material Modification, include, but are not limited to:

- A change in Point of Interconnection (POI) to a new location, unless the change in a POI is on the same circuit less than two (2) poles away from the original location, and the new POI is within the same protection zone as the original location;
- A change or replacement of generating equipment such as generator(s), inverter(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;
- 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);
- A change of transformer connection(s) or grounding from that originally proposed;
- A change to certified inverters with different specifications or different inverter control specifications or set-up than originally proposed;
- An increase of the AC output of a Generating Facility; or
- A change reducing the AC output of the generating facility by more than 10%.

The following are not indicia of a Material Modification:

- 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 Utility.
- 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;
- An increase in the DC/AC ratio that does not increase the maximum AC output capability of the generating facility;
- A decrease in the DC/AC ratio that does not reduce the AC output capability of the generating facility by more than 10%.

Month – The term “Month” means the period intervening between readings for the purpose of routine billing, such readings usually being taken once per month.

Nameplate Capacity – The term “Nameplate Capacity” shall mean the manufacturer’s nameplate rated output capability of the generator. For multi-unit generator facilities, the “Nameplate Capacity” of the facility shall be the sum of the individual manufacturer’s nameplate rated output capabilities of the generators.

Net Capacity – The term “Net Capacity” shall mean the Nameplate Capacity of the Customer’s generating facilities, less the portion of that capacity needed to serve the Generating Facility’s Auxiliary Load.

Net Power - The term "Net Power" shall mean the total amount of electric power produced by the Customer's Generating Facility less the portion of that power used to supply the Generating Facility’s Auxiliary Load.

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.

North Carolina Interconnection Procedures – The term “North Carolina Interconnection Procedures” shall refer to the North Carolina Interconnection Procedures, Forms, and Agreements for State-Jurisdictional Generator Interconnections as approved by the North Carolina Utilities Commission.

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.

Preliminary Estimated Interconnection Facilities Charge - The estimated charge for Interconnection Facilities that is developed using unit costs and is presented in the System Impact Study report and Interim Interconnection Agreement. This charge is not based on field visits and detailed engineering cost calculations.

Preliminary Estimated Upgrade Charge - The estimated charge for Upgrades that is developed using unit costs and is presented in the System Impact Study report and Interim Interconnection Agreement. This charge is not based on field

visits and detailed engineering cost calculations.

Project A - An Interconnection Customer that has a lower Queue Number than Interdependent Project B.

Project B - An Interconnection Customer that has a higher Queue Number than Interdependent Project A.

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

Queue Number – The number assigned by the Utility that establishes a Customer's Interconnection Request's position in the study queue relative to all other valid Interconnection Requests. A lower Queue Number will be studied prior to a higher Queue Number, except in the case of Interdependent Projects Queue Number of each Interconnection Request shall be used to determine the cost responsibility for the Upgrades necessary to accommodate the interconnection.

Queue Position - The order of a valid Interconnection Request, relative to all other pending valid Interconnection Requests, based on Queue Number.

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, 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.

**NORTH CAROLINA
INTERCONNECTION REQUEST APPLICATION FORM**

Utility: _____

Designated Utility Contact: _____

E-Mail Address: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Telephone Number: _____

Fax: _____

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

Preamble and Instructions

An Interconnection Customer who requests a North Carolina Utilities Commission jurisdictional interconnection must submit this Interconnection Request Application Form by hand delivery, mail, e-mail, or fax to the Utility.

Request for: Fast Track Process ___ ___ Study Process _____

(All Generating Facilities larger than 2 MW must use the Study Process.)

Processing Fee or Deposit

Fast Track Process – Non-Refundable Processing Fees

If the Generating Facility is 20 kW or smaller, the fee is \$100.

If the Generating Facility is larger than 20 kW but not larger than 100 kW, the fee is \$250.

If the Generating Facility is larger than 100 kW but not larger than 2 MW, the fee is \$500.

Study Process – Deposit

If the Interconnection Request is submitted under the Study Process, whether a new submission or an Interconnection Request that did not pass the Fast Track Process, the Interconnection Customer shall submit to the Utility an Interconnection Facilities Deposit Charge of \$20,000 plus \$1.00 per kW_{AC}.

Change in Ownership – Non-Refundable Processing Fee

If the Interconnection Request is submitted solely due to a transfer of ownership or change of control of the Generating Facility, the fee is \$50.

Interconnection Customer Information

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

Name: _____

Contact Name: _____

Title: _____

E-Mail Address: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

County: _____

Telephone (Day): _____ (Evening): _____

Fax: _____

Facility Location (if different from above):

Address: _____

City: _____ State: _____ Zip: _____

County: _____

Alternative Contact Information (if different from the Interconnection Customer)

Contact Name: _____

Title: _____

E-Mail Address: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Telephone (Day): _____ (Evening): _____

Fax: _____

- Application is for: _____ New Generating Facility
_____ Capacity Change to a Proposed or Existing Generating Facility
_____ Change of Ownership of a Proposed or Existing Generating Facility to a new legal entity
_____ Change of Control of a Proposed or Existing Generating Facility of the existing legal entity.

If capacity addition to existing Generating Facility, please describe: _____

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

Net Metering? Yes _____ No _____

To Supply Power to the Interconnection Customer? Yes _____ No _____

To Supply Power to the Utility? Yes _____ No _____

To Supply Power to Others? Yes _____ No _____

(If yes, discuss with the Utility whether the interconnection is covered by the NC Interconnection Standard.)

Requested Point of Interconnection: _____

Requested In-Service Date: _____

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

Local Electric Service Provider:* _____

Existing Account Number: _____

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

Contact Name: _____

Title: _____

E-Mail Address: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Telephone (Day): _____ (Evening): _____

Fax: _____

Generating Facility Information

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

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

Diesel Natural Gas Fuel Oil Other (state type) _____

Prime Mover: Fuel Cell Recip Engine Gas Turbine Steam Turbine

Microturbine PV Other _____

Type of Generator: Synchronous _____ Induction _____ Inverter _____

Total Generator Nameplate Rating: _____ kW_{AC} (Typical) _____ kVAR

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

Interconnection Customer Generator Auxiliary Load: _____ kW

Typical Reactive Load (if known): _____ kVAR

Maximum Physical Export Capability Requested: _____ kW_{AC}

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

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

Generator (or solar panel information)

Manufacturer, Model Name, & Number of units: _____

Nameplate Output Power Rating in kW_{AC}: _____ Summer _____ Winter

Nameplate Output Power Rating in kVA: _____ Summer _____ Winter

Individual Generator Rated Power Factor: Leading _____ Lagging _____

Total Number of Generators in wind farm to be interconnected pursuant to this Interconnection Request (if applicable): _____ Elevation: _____

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

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

For solar projects provide the following information:

Latitude: _____ Degrees _____ Minutes North

Longitude: _____ Degrees _____ Minutes West

Orientation: _____ Degrees (Due South=180°)

Fixed Tilt Array Single Axis Tracking Array Double Axis Tracking Array

Fixed Tilt Angle: _____ Degrees

Generating Facility Characteristic Data (for inverter-based machines)

Max design fault contribution current: _____ Instantaneous ____ or RMS? ____

Harmonics Characteristics: _____

Start-up requirements: _____

Inverter Short-Circuit Model Data

Model and parameter data required for short-circuit analysis is specific to each PV inverter make and model. All data to be provided in per-unit ohms, on the equivalent inverter MVA base.

Inverter Equivalent MVA Base: _____ MVA

Short-Circuit Equivalent Pos. Seq. Resistance (R1), valid for initial 2 to 6 cycles: _____
p.u.

Short-Circuit Equivalent Pos. Seq. Reactance (XL1), valid for initial 2 to 6 cycles: _____
p.u.

Short-Circuit Equivalent Neg. Seq. Resistance (R2), valid for initial 2 to 6 cycles:
_____ p.u.

Short-Circuit Equivalent Neg. Seq. Reactance (XL2), valid for initial 2 to 6 cycles: _____
p.u.

Short-Circuit Equivalent Zero Seq. Resistance (R0), valid for initial 2 to 6 cycles:
_____ p.u.

Short-Circuit Equivalent Zero Seq. Reactance (XL0), valid for initial 2 to 6 cycles: _____
p.u.

Special notes regarding short-circuit modeling assumptions:

Generating Facility Characteristic Data (for rotating machines)

RPM Frequency: _____

(*) Neutral Grounding Resistor (if applicable): _____

Synchronous Generators:

Direct Axis Synchronous Reactance, X_d : _____ P.U.

Direct Axis Transient Reactance, X'_d : _____ P.U.

Direct Axis Subtransient Reactance, X''_d : _____ P.U.

Negative Sequence Reactance, X_2 : _____ P.U.

Zero Sequence Reactance, X_0 : _____ P.U.

KVA Base: _____

Field Volts: _____

Field Amperes: _____

Induction Generators:

Motoring Power (kW): _____

I_2^2t or K (Heating Time Constant): _____

Rotor Resistance, R_r : _____

Stator Resistance, R_s : _____

Stator Reactance, X_s : _____

Rotor Reactance, X_r : _____

Magnetizing Reactance, X_m : _____

Short Circuit Reactance, X_d'' : _____

Exciting Current: _____

Temperature Rise: _____

Frame Size: _____

Design Letter: _____

Reactive Power Required In Vars (No Load): _____

Reactive Power Required In Vars (Full Load): _____

Total Rotating Inertia, H: _____ Per Unit on kVA Base

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

Excitation and Governor System Data for Synchronous Generators Only

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

Interconnection Facilities Information

Will more than one transformer be used between the generator and the point of common coupling?

Yes ___ No ___ (If yes, copy this section and provide the information for each transformer used. This information must match the single-line drawing and transformer specification sheets.)

Will the transformer be provided by the Interconnection Customer? Yes ___ No ___

Transformer Data (if applicable, for Interconnection Customer-owned transformer):

Is the transformer: Single phase ___ Three phase ___ Size: _____ kVA

Transformer Impedance: _____ % on _____ kVA Base

If Three Phase:

Transformer Primary _____ Volts, Delta ___ Wye , floating neutral ___
Wye Grounded neutral ___

Transformer Secondary _____ Volts, Delta ___ Wye , floating neutral ___
Wye Grounded neutral ___

Transformer Tertiary: _____ Volts, Delta ___ Wye , floating neutral ___
Wye Grounded neutral ___

Transformer Fuse Data (if applicable, for Interconnection Customer-owned fuse):

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

Manufacturer: _____ Type: _____ Size: _____ Speed: ___

Interconnecting Circuit Breaker (if applicable):

Manufacturer: _____ Type: _____

Load Rating (Amps): _____ Interrupting Rating (Amps): _____ Trip Speed (Cycles):

Interconnection Protective Relays (if applicable):

If Microprocessor-Controlled:

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

	Setpoint Function	Minimum	Maximum
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____

If Discrete Components:

(Enclose Copy of any Proposed Time-Overcurrent Coordination Curves)

Manufacturer: __ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____

Manufacturer: __ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____

Manufacturer: __ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____

Manufacturer: __ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____

Manufacturer: __ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____

Current Transformer Data (if applicable):

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

Manufacturer: _____

Type: _____ Accuracy Class: _____ Proposed Ratio Connection:

Manufacturer: _____

Type: _____ Accuracy Class: _____ Proposed Ratio Connection:

Potential Transformer Data (if applicable):

Manufacturer: _____

Type: _____ Accuracy Class: _____ Proposed Ratio Connection: _____

Manufacturer: _____

Type: _____ Accuracy Class: _____ Proposed Ratio Connection: _____

General Information

1. One-line diagram

Enclose site electrical one-line diagram showing the configuration of all Generating Facility equipment, current and potential circuits, and protection and control schemes.

- The one-line diagram should include the project owner’s name, project name, project address, model numbers and nameplate sizes of equipment, including number and nameplate electrical size information for solar panels, inverters, wind turbines, disconnect switches, latitude and longitude of the project location, and tilt angle and orientation of the photovoltaic array for solar projects.
- The diagram should also depict the metering arrangement required whether installed on the customer side of an existing meter (“net metering/billing”) or directly connected to the grid through a new or separate delivery point requiring a separate meter.
- List of adjustable set points for the protective equipment or software should be included on the electrical one-line drawing.
- This one-line diagram must be signed and stamped by a licensed Professional Engineer if the Generating Facility is larger than 50 kW.
- Is One-Line Diagram Enclosed? Yes ___ No ___

2. Site Plan

- Enclose copy of any site documentation that indicates the precise physical location of the proposed Generating Facility (e.g., USGS topographic map, or other diagram or documentation) and the proposed Point of Interconnection.
- Proposed location of protective interface equipment on property (include address if different from the Interconnection Customer’s address) _____
- Is Site Plan Enclosed? Yes ___ No ___
- Is Site Control Verification Form Enclosed? Yes ___ No ___

3. Equipment Specifications

Include equipment specification information (product literature) for the solar panels and inverter(s) that provides technical information and certification information for the equipment to be installed with the application.

- Are Equipment Specifications Enclosed? Yes ___ No ___

4. Protection and Control Schemes

- Enclose copy of any site documentation that describes and details the operation of the protection and control schemes.
- Is Available Documentation Enclosed? Yes ___ No ___
- Enclose copies of schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits (if applicable).
- Are Schematic Drawings Enclosed? Yes ___ No ___

Applicant Signature

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

For Interconnection Customer:

Signature _____ Date: _____
(Authorized Agent of the Legal Entity)

Print Name _____

Generating Facility Pre-Application Report Form

Preamble and Instructions

An Interconnection Customer who requests a Pre-Application Report must submit this Pre-Application Report Request by hand delivery, mail, e-mail, or fax to the Utility along with the non-refundable fee of \$300.

DISCLAIMER: Be aware that this Pre-Application Report is simply a snapshot in time and is non-binding. System conditions can and do change frequently.

Check here if payment is enclosed. Fee is required for application to be considered complete.

Date: _____

Interconnecting Customer Name (print): _____

Contact Person: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____

E-Mail Address: _____

Alternative Contact Information (e.g., system installation contractor or coordinating company)

Name (print): _____

Role: _____

Contact Person: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____

E-Mail Address: _____

Facility Information:

1) Proposed Facility Location

Address (or cross-roads): _____

City: _____ State: _____ Zip Code: _____

Site Map provided (Google, Mapquest, etc.)

Grid Coordinates Latitude: _____ Longitude: _____

Pole or Tower number if available: _____

2) Generation Type

Solar Wind Combined heat & power

Hydroelectric Micro-hydro Other _____

3) Size: _____ kW_{AC}

4) Generator Configuration:

- Single-phase Three Phase

5) Interconnection Configuration

New Generation

Stand-alone

Addition to existing commercial or industrial customer's delivery

Customer's Electric Utility account number: _____

Customer's Electric meter number: _____

Is Customer's kW load going to increase or decrease?

No

Yes, Details _____

Proposed Point of Interconnection on Customer-side of Utility meter

OR

Addition to existing generation

Stand-alone

Addition to existing commercial or industrial customer's delivery

Customer's Electric Utility account number: _____

Customer's Electric meter number: _____

Is Customer's kW load going to increase or decrease?

No

Yes, Details _____

Type of Existing Generation: _____

Size of Existing Generation: _____ kW_{AC}

Proposed Point of Interconnection on Customer-side of Utility meter

Additional Comments

In the Matter of the Application of)
[Developer Name] for an)

SITE CONTROL VERIFICATION

Interconnection Agreement)

with [Utility Name])

I, [Authorized Signatory Name], [Title] of [Developer Name], under penalty of perjury, hereby certify that, [Developer Name] or its affiliate has executed a written contract with the landowner(s) noted below, concerning the property described below. I further certify that our written contract with the landowner(s) specifies the agreed rental rate or purchase price for the property, as applicable, and allows [Developer Name] or its affiliates to construct and operate a renewable energy power generation facility on the property described below.

This verification is provided to [Utility Name] in support of our application for an Interconnection Agreement.

Landowner Name(s): _____

Land Owner Contact information (Phone or e-mail): _____

Parcel or PIN Number: _____

County: _____

Site Address: _____

Number of Acres under Contract (state range, if applicable): _____

Date Contract was executed _____

Term of Contract _____

[signature] _____

[Authorized Signatory Name]

[Authorized Signatory Name], being first duly sworn, says that [he/she] has read the foregoing verification, and knows the contents thereof to be true to [his/her] actual knowledge.

Sworn and subscribed to before me this _____ day of _____, 201__.

[signature]_____

[Authorized Signatory Name]

[Title], [Developer Name]

[Signature of Notary Public]_____

Notary Public

Name of Notary Public [typewritten or printed]

My Commission expires_____

Certification Codes and Standards

- ANSI C84.1-1995 Electric Power Systems and Equipment – Voltage Ratings (60 Hertz)
- IEEE 1547, Standard for Interconnecting Distributed Resources with Electric Power Systems (including use of IEEE 1547.1 testing protocols to establish conformity)
- IEEE Std 100-2000, IEEE Standard Dictionary of Electrical and Electronic Terms
- IEEE Std 519-1992, IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems
- IEEE Std C37.108-1989 (R2002), IEEE Guide for the Protection of Network Transformers
- IEEE Std C37.90.1-1989 (R1994), IEEE Standard Surge Withstand Capability (SWC) Tests for Protective Relays and Relay Systems
- IEEE Std C37.90.2 (1995), IEEE Standard Withstand Capability of Relay Systems to Radiated Electromagnetic Interference from Transceivers
- IEEE Std C57.12.44-2000, IEEE Standard Requirements for Secondary Network Protectors
- IEEE Std C62.41.2-2002, IEEE Recommended Practice on Characterization of Surges in Low Voltage (1000V and Less) AC Power Circuits
- IEEE Std C62.45-1992 (R2002), IEEE Recommended Practice on Surge Testing for Equipment Connected to Low-Voltage (1000V and Less) AC Power Circuits
- NEMA MG 1-1998, Motors and Small Resources, Revision 3
- NEMA MG 1-2003 (Rev 2004), Motors and Generators, Revision 1
- NFPA 70 (2002), National Electrical Code
- UL 1741, Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources

Certification of Generator Equipment Packages

- 1.0 Generating Facility equipment proposed for use separately or packaged with other equipment in an interconnection system shall be considered certified for interconnected operation if (1) it has been tested in accordance with industry standards for continuous utility interactive operation in compliance with the appropriate codes and standards referenced below by any Nationally Recognized Testing Laboratory (NRTL) recognized by the United States Occupational Safety and Health Administration to test and certify interconnection equipment pursuant to the relevant codes and standards listed in Attachment XX of the North Carolina Interconnection Procedures, (2) it has been labeled and is publicly listed by such NRTL at the time of the Interconnection Request, and (3) such NRTL makes readily available for verification all test standards and procedures it utilized in performing such equipment certification, and, with consumer approval, the test data itself. The NRTL may make such information available on its website and by encouraging such information to be included in the manufacturer's literature accompanying the equipment.
- 2.0 The Interconnection Customer must verify that the intended use of the equipment falls within the use or uses for which the equipment was tested, labeled, and listed by the NRTL.
- 3.0 Certified equipment shall not require further type-test review, testing, or additional equipment to meet the requirements of this interconnection procedure; however, nothing herein shall preclude the need for an on-site commissioning test by the Parties to the interconnection nor follow-up production testing by the NRTL.
- 4.0 If the certified equipment package includes only interface components (switchgear, inverters, or other interface devices), then an Interconnection Customer must show that the generator or other electric source being utilized with the equipment package is compatible with the equipment package and is consistent with the testing and listing specified for this type of interconnection equipment.
- 5.0 Provided the generator or electric source, when combined with the equipment package, is within the range of capabilities for which it was tested by the NRTL, and does not violate the interface components' labeling and listing performed by the NRTL, no further design review, testing or additional equipment on the Interconnection Customer's side of the point of common coupling shall be required to meet the requirements of the North Carolina Interconnection Procedures.
- 6.0 An equipment package does not include equipment provided by the Utility.

**Interconnection Request Application Form
for Interconnecting a Certified Inverter-Based
Generating Facility No Larger than 20 kW**

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

Processing Fee

A non-refundable processing fee of \$100 must accompany this Interconnection Request Application Form.

If the Interconnection Request is submitted solely due to a transfer of ownership of the Generating Facility, the fee is \$50.

Interconnection Customer

Name: _____

Contact Person: _____

E-Mail Address: _____

Address: _____

City: _____ State: _____ Zip: _____

County: _____

Telephone (Day): _____ (Evening): _____

Fax: _____

Contact (if different from Interconnection Customer)

Name: _____

E-Mail Address: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone (Day): _____ (Evening): _____

Fax: _____

Owner(s) of the Generating Facility: _____

Generating Facility Information

Facility Location (if different from above) :

Address: _____

City: _____ State: _____ Zip: _____

County: _____

Utility: _____

Account Number: _____

Inverter Manufacturer: _____ Model _____

Nameplate Rating: _____ (kW) _____ (kVA) _____ (AC Volts)

System Design Capacity: _____ (kW) _____ (kVA)

Single Phase _____ Three Phase _____

Prime Mover: Photovoltaic Reciprocating Engine Fuel Cell

Turbine Other _____

Energy Source: Solar Wind Hydro Diesel Natural Gas

Fuel Oil Other (describe) _____

Is the equipment UL 1741 Listed? Yes ____ No ____

If Yes, attach manufacturer's cut-sheet showing UL 1741 listing

Estimated Installation Date: _____ Estimated In-Service Date: _____

The 20 kW Inverter Process is available only for inverter-based Generating Facilities no larger than 20 kW that meet the codes, standards, and certification requirements of Attachments 3 and 4 of the North Carolina Interconnection Procedures, or the Utility has reviewed the design or tested the proposed Generating Facility and is satisfied that it is safe to operate.

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

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

Interconnection Customer Signature

I hereby certify that, to the best of my knowledge, the information provided in this Interconnection Request Application Form is true. I agree to abide by the Terms and Conditions for Interconnecting a Certified Inverter-Based Generating Facility No Larger than 20 kW and return the Certificate of Completion when the Generating Facility has been installed.

Signed: _____

Title: _____ Date: _____

Contingent Approval to Interconnect the Generating Facility (For Utility use only)

Interconnection of the Generating Facility is approved contingent upon the Terms and Conditions for Interconnecting a Certified Inverter-Based Generating Facility No Larger than 20 kW and return of the Certificate of Completion.

Utility Signature: _____

Title: _____ Date: _____

Interconnection Request ID number: _____

Utility waives inspection/witness test? Yes ____ No ____

**Certificate of Completion
for Interconnecting a Certified Inverter-Based
Generating Facility No Larger than 20 kW**

Is the Generating Facility owner-installed? Yes ____ No ____

Interconnection Customer

Name: _____

Contact Person: _____

E-Mail Address: _____

Address: _____

City: _____ State: _____ Zip: _____

County: _____

Telephone (Day): _____ (Evening): _____

Fax: _____

Location of the Generating Facility (if different from above)

Address _____

City: _____ State: _____ Zip: _____

County: _____

Electrician

Name: _____

Company: _____

E-Mail Address: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone (Day): _____ (Evening): _____

Fax: _____

License Number: _____

Date Approval to Install Generating Facility granted by the Utility: _____

Interconnection Request ID Number: _____

Inspection:

The Generating Facility has been installed and inspected in compliance with the local building/electrical code of _____

Signed (Local electrical wiring inspector, or attach signed electrical inspection):

Signature: _____

Print Name: _____ Date: _____

As a condition of interconnection, you are required to send/ email/ fax a copy of this form along with a copy of the signed electrical permit to (insert Utility information below):

Utility Name : _____

Attention: _____

E-Mail Address: _____

Address: _____

City: _____ State: _____ Zip: _____

Fax: _____

Approval to Energize the Generating Facility (For Utility use only)

Energizing the Generating Facility is approved contingent upon the Terms and Conditions for Interconnecting a Certified Inverter-Based Generating Facility No Larger than 20 kW.

Utility Signature: _____

Title: _____ Date: _____

**Terms and Conditions
for Interconnecting a Certified Inverter-Based
Generating Facility No Larger than 20 kW**

1.0 Construction of the Facility

The Interconnection Customer (Customer) may proceed to construct (including operational testing not to exceed two hours) the Generating Facility when the Utility approves the Interconnection Request and returns it to the Customer.

2.0 Interconnection and Operation

The Customer may interconnect the Generating Facility with the Utility's System and operate in parallel with the Utility's System once all of the following have occurred:

2.1 Upon completing construction, the Customer will cause the Generating Facility to be inspected or otherwise certified by the appropriate local electrical wiring inspector with jurisdiction, and

2.2 The Customer returns the Certificate of Completion to the Utility, and

2.3 The Utility has either:

2.3.1 Completed its inspection of the Generating Facility to ensure that all equipment has been appropriately installed and that all electrical connections have been made in accordance with applicable codes. All inspections must be conducted by the Utility, at its own expense, within ten Business Days after receipt of the Certificate of Completion and shall take place at a time agreeable to the Parties. The Utility shall provide a written statement that the Generating Facility has passed inspection or shall notify the Customer of what steps it must take to pass inspection as soon as practicable after the inspection takes place; or

2.3.2 If the Utility does not schedule an inspection of the Generating Facility within ten Business Days after receiving the Certificate of Completion, the witness test is deemed waived (unless the Parties agree otherwise); or

2.3.3 The Utility waives the right to inspect the Generating Facility.

2.4 The Utility has the right to disconnect the Generating Facility in the event of improper installation or failure to return the Certificate of Completion.

2.5 Revenue quality metering equipment must be installed and tested in accordance with applicable American National Standards Institute (ANSI) standards and all applicable regulatory requirements.

3.0 Safe Operations and Maintenance

The Customer shall be fully responsible to operate, maintain, and repair the Generating Facility as required to ensure that it complies at all times with the interconnection standards to which it has been certified.

4.0 Access

The Utility shall have access to the disconnect switch (if a disconnect switch is required) and metering equipment of the Generating Facility at all times. The Utility shall provide reasonable notice to the Customer, when possible, prior to using its right of access.

5.0 Disconnection

The Utility may temporarily disconnect the Generating Facility upon the following conditions:

5.1 For scheduled outages upon reasonable notice.

5.2 For unscheduled outages or emergency conditions.

5.3 If the Generating Facility does not operate in a manner consistent with these Terms and Conditions.

5.4 The Utility shall inform the Customer in advance of any scheduled disconnection, or as soon as is reasonable after an unscheduled disconnection.

6.0 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 to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or inactions of its obligations hereunder on

behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

7.0 Insurance

All insurance policies must be maintained with insurers authorized to do business in North Carolina. The Parties agree to the following insurance requirements:

- 7.1 If the Customer is a residential customer of the Utility, the required coverage shall be a standard homeowner's insurance policy with liability coverage in the amount of at least \$100,000 per occurrence.
- 7.2 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.
- 7.3 The Customer may provide this insurance via a self-insurance program if it has a self-insurance program established in accordance with commercially acceptable risk management practices.

8.0 Limitation of Liability

Each Party's liability to the other Party for any loss, cost, claim, injury, 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.

9.0 Termination

The agreement to interconnect and operate in parallel may be terminated under the following conditions:

9.1 By the Customer

By providing written notice to the Utility and physically and permanently disconnecting the Generating Facility.

9.2 By the Utility

If the Generating Facility fails to operate for any consecutive 12-month period or the Customer fails to remedy a violation of these Terms and Conditions.

9.3 Permanent Disconnection

In the event this Agreement is terminated, the Utility shall have the right to disconnect its facilities or direct the Customer to disconnect its Generating Facility.

9.4 Survival Rights

This Agreement shall continue in effect after termination to the extent necessary to allow or require either Party to fulfill rights or obligations that arose under the Agreement.

10.0 Assignment/Transfer of Ownership of the Facility

10.1 This Agreement shall not survive the transfer of ownership of the Generating Facility to a new owner.

10.2 The new owner must complete and submit a new Interconnection Request agreeing to abide by these Terms and Conditions for interconnection and parallel operations within 20 Business Days of the transfer of ownership. The Utility shall acknowledge receipt and return a signed copy of the Interconnection Request Application Form within ten Business Days.

10.3 The Utility shall not study or inspect the Generating Facility unless the new owner's Interconnection Request Application Form indicates that a Material Modification has occurred or is proposed.

System Impact Study Agreement

THIS AGREEMENT (“Agreement”) is made and entered into this ____ day of _____, 20____ by _____ and _____ between _____, a _____ organized and existing under the laws of the State of _____, (“Interconnection Customer,”) and _____, a _____ existing under the laws of the State of _____, (“Utility”). The Interconnection Customer and the Utility each may be referred to as a “Party,” or collectively as the “Parties.”

RECITALS

WHEREAS, the Interconnection Customer is proposing to develop a Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request completed by the Interconnection Customer, Dated _____ and received by the Utility on _____; and

WHEREAS, the Interconnection Customer desires to interconnect the Generating Facility with the Utility’s System; and

WHEREAS, the Interconnection Customer has requested the Utility to perform a system impact study to assess the impact of interconnecting the Generating Facility with the Utility’s System, and of any Affected Systems;

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

- 1.0** When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the North Carolina Interconnection Procedures.
- 2.0** The Interconnection Customer elects and the Utility shall cause to be performed a system impact study consistent with the North Carolina Interconnection Procedures.
- 3.0** The scope of the system impact study shall be subject to the assumptions set forth in Appendix A to this Agreement.

- 4.0A** system impact study will be based upon the technical information provided by Interconnection Customer in the Interconnection Request. The Utility reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the system impact study.
- 5.0**In performing the study, the Utility shall rely, to the extent reasonably practicable, on existing studies of recent vintage. The Interconnection Customer shall not be charged for such existing studies; however, the Interconnection Customer shall be responsible for charges associated with any new study or modifications to existing studies that are reasonably necessary to perform the feasibility study.
- 6.0**The System Impact Study Report shall provide the following analyses for the purpose of identifying any potential adverse system impacts that would result from the interconnection of the Generating Facility as proposed:
- 6.1.**Initial identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
 - 6.2.**Initial identification of any thermal overload or voltage limit violations resulting from the interconnection;
 - 6.3.** Initial review of grounding requirements and electric system protection
- 7.0**The System Impact Study shall model the impact of the Generating Facility regardless of purpose in order to avoid the further expense and interruption of operation for reexamination of feasibility and impacts if the Interconnection Customer later changes the purpose for which the Generating Facility is being installed.
- 8.0**The study shall include the feasibility of any interconnection at a proposed project site where there could be multiple potential Points of Interconnection, as requested by the Interconnection Customer and at the Interconnection Customer's cost.
- 9.0A** System Impact Study shall consist of a short circuit analysis, a stability analysis, a power flow analysis, voltage drop and flicker studies, protection and set point coordination studies, and grounding reviews, as necessary.

- 10.0** The System Impact Study will also include an analysis of distribution and transmission impacts as may be necessary to understand the impact of the proposed Generation Facility on electric system operation.
- 11.0** A System Impact Study shall state the assumptions upon which it is based, state the results of the analyses, and provide the requirement or potential impediments to providing the requested interconnection service.
- 12.0** The System Impact Study 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
- 13.0** The System Impact Study will provide the Preliminary Estimated Interconnection Facilities Charge, which is a preliminary indication of the cost and length of time that would be necessary to provide the Interconnection Facilities.
- 14.0** A system impact study shall provide the information outlined in Section 1.2.3 of the Interconnection Procedures.
- 15.0** A distribution System Impact Study shall incorporate a distribution load flow study, an analysis of equipment interrupting ratings, protection coordination study, voltage drop and flicker studies, protection and set point coordination studies, grounding reviews, and the impact on electric system operation, as necessary.
- 16.0** Affected Systems may participate in the preparation of a System Impact Study, with a division of costs among such entities as they may agree. All Affected Systems shall be afforded an opportunity to review and comment upon a System Impact Study that covers potential adverse system impacts on their electric systems, and the Utility has 20 additional Business Days to complete a system impact study requiring review by Affected Systems.
- 17.0** The Utility shall have an additional 15 days from the time set forth in Section 19.0 the System Impact Study Agreement to complete the dual scenario System Impact Study reports for a Project B.

- 18.0** If the Utility uses a queuing procedure for sorting or prioritizing projects and their associated cost responsibilities for any required Network Upgrades, the System Impact Study shall consider all generating facilities (and with respect to paragraph 8.3 below, any identified Upgrades associated with such higher queued interconnection) that, on the date the system impact study is commenced –
- 18.1.** Are directly interconnected with the Utility’s electric system; or
 - 18.2.** Are interconnected with Affected Systems and may have an impact on the proposed interconnection; and
 - 18.3.** Have a pending lower queued Interconnection Request to interconnect with the Utility’s electric system.
- 19.0** The System Impact Study shall be completed within a total of 65 Business Days if transmission system impacts are studied, and 50 Business Days if distribution system impacts are studied, but in any case, shall not take longer than a total of 65 Business Days unless the study involves Affected Systems per Section 16.0 or the studied Interconnection Request is a Project B per Section 17.0.
- 20.0** Any study fees shall be based on the Utility’s actual costs and will be deducted from the Interconnection Facilities Deposit made by the Interconnection Customer at the time of the Interconnection Request. After the study is completed, the Utility shall deliver a summary of professional time.
- 21.0** The Interconnection Customer must pay any study costs that exceed the Interconnection Request Deposit without interest within 20 business days of receipt of the invoice. If the deposit exceeds the invoiced fees and the Interconnection Customer withdraws the Interconnection Request, the Utility shall refund such excess within 40 business days of the notification of termination without interest.
- 22.0** Governing Law, Regulatory Authority, and Rules

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

23.0 Amendment

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

24.0 No Third-Party Beneficiaries

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

25.0 Waiver

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

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

26.0 Multiple Counterparts

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

27.0 No Partnership

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

28.0 Severability

If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall negotiate in good faith to restore insofar as practicable the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

29.0 Subcontractors

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

29.1. The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible to the other Party for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall the Utility be liable for the actions or inactions of the Interconnection Customer or its subcontractors with respect to obligations of the Interconnection Customer under this Agreement. Any applicable obligation imposed by this Agreement upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

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

30.0 Reservation of Rights

The Utility shall have the right to make a unilateral filing with the Commission to modify this Agreement with respect to any rates, terms and conditions, charges, or classifications of service, and the Interconnection Customer shall have the right to make a unilateral filing with the Commission to modify this Agreement; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before the Commission in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties except to the extent that the Parties otherwise agree as provided herein.

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

[Insert name of Utility]

[Insert name of Interconnection Customer]

Signed _____

Signed _____

Name (Printed):

Name (Printed):

Title _____

Title _____

Assumptions Used in Conducting the System Impact Study

The system impact study shall be based upon the Interconnection Request, subject to any modifications in accordance with the Interconnection Procedures, and the following assumptions:

1) Designation of Point of Interconnection and configuration to be studied.

2) Designation of alternative Points of Interconnection and configuration.

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

Facilities Study Agreement

THIS AGREEMENT (“Agreement”) is made and entered into this ____ day of _____, 20____ by _____ and _____ between _____, a _____ organized and existing under the laws of the State of _____, (“Interconnection Customer,”) and _____, a _____ existing under the laws of the State of _____, (“Utility”). The Interconnection Customer and the Utility each may be referred to as a “Party,” or collectively as the “Parties.”

RECITALS

WHEREAS, the Interconnection Customer is proposing to develop a Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request Application Form completed by the Interconnection Customer, Dated _____ and received by the Utility on _____; and

WHEREAS, the Interconnection Customer desires to interconnect the Generating Facility with the Utility’s System; and

WHEREAS, the Utility has completed a System Impact Study and provided the results of said study to the Interconnection Customer (this recital to be omitted if the Parties have agreed to forego the system impact study); and

WHEREAS, the Interconnection Customer has requested the Utility to perform a Facilities Study to specify and estimate the cost of the equipment, engineering, procurement and construction work needed to implement the conclusions of the system impact study and/or any other relevant studies in accordance with Good Utility Practice to physically and electrically connect the Generating Facility with the Utility’s System;

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

1. When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the North Carolina Interconnection Procedures.
2. The Interconnection Customer elects and the Utility shall cause to be performed a facilities study consistent with the North Carolina Interconnection Procedures.

3. The scope of the facilities study shall be subject to data provided in Appendix A to this Agreement.
4. The facilities study shall specify and estimate the cost of the equipment, engineering, procurement and construction work (including overheads) needed to implement the conclusions of the system impact studies. The facilities study shall also identify (1) the electrical switching configuration of the equipment, including, without limitation, transformer, switchgear, meters, and other station equipment, (2) the nature and estimated cost of the Utility's Interconnection Facilities and Upgrades necessary to accomplish the interconnection, and (3) an estimate of the construction time required to complete the installation of such facilities.
5. The Utility may propose to group facilities required for more than one Interconnection Customer in order to minimize facilities costs through economies of scale, but any Interconnection Customer may require the installation of facilities required for its own Generating Facility if it is willing to pay the costs of those facilities
6. A deposit of the good faith estimated facilities study costs is required from the Interconnection Customer. If the unexpended portion of the Interconnection Facilities Deposit made for the Interconnection Request exceeds the estimated cost of the facilities study, no payment will be required of the Interconnection Customer.
7. In cases where Upgrades are required, the facilities study must be completed within 45 Business Days of the Utility's receipt of this Agreement, or completion of the Facilities Study for an Interdependent Project A whichever is later. In cases where no Upgrades are necessary, and the required facilities are limited to Interconnection Facilities, the facilities study must be completed within 30 Business Days.
8. Once the facilities study is completed, a facilities study report shall be prepared and transmitted to the Interconnection Customer.
9. Any study fees shall be based on the Utility's actual costs and will be deducted from the Interconnection Request Deposit made by the Interconnection Customer at the time of the Interconnection Request. After the study is completed the Utility shall deliver a summary of professional time.
10. The Interconnection Customer must pay any study costs that exceed the deposit without interest within 20 Business Days of receipt of the invoice. If the deposit exceeds the invoiced fees, and the Interconnection Customer withdraws the Interconnection Request, the Utility shall refund

such excess within 20 Business Days of the notification of termination without interest.

11. Governing Law, Regulatory Authority, and Rules

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

12. Amendment

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

13. No Third-Party Beneficiaries

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

14. Waiver

- The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.
- Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Agreement. Termination or default of this Agreement for any reason by Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Utility. Any waiver of this Agreement shall, if requested, be provided in writing.

15. Multiple Counterparts

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

16. No Partnership

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

17. Severability

If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall negotiate in good faith to restore insofar as practicable the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

18. Subcontractors

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

- The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible to the other Party for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall the Utility be liable for the actions or inactions of the Interconnection Customer or its subcontractors with respect to obligations of the Interconnection Customer under this Agreement. Any applicable obligation imposed by this Agreement upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.
- The obligations under this article will not be limited in any way by any limitation of subcontractor's insurance.

19. Reservation of Rights

The Utility shall have the right to make a unilateral filing with the Commission to modify this Agreement with respect to any rates, terms and conditions, charges, or classifications of service, and the Interconnection Customer shall have the right to make a unilateral filing with the Commission to modify this Agreement; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before the Commission in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties except to the extent that the Parties otherwise agree as provided herein.

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

[Insert name of Utility]

[Insert name of Interconnection Customer]

Signed _____

Signed _____

Name (Printed):

Name (Printed):

Title _____

Title _____

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

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

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

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

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

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

Yes _____ No _____

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

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

What protocol does the control system or PLC use?

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

Physical dimensions of the proposed interconnection station:

Bus length from generation to interconnection station:

Line length from interconnection station to Utility's System.

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

Number of third party easements required for lines*:

* To be completed in coordination with Utility.

Is the Generating Facility located in Utility's service area?

Yes _____ No _____ If No, please provide name of local provider:

Please provide the following proposed schedule dates:

Begin Construction Date: _____

Generator step-up transformers
receive back feed power Date: _____

Generation Testing Date: _____

Commercial Operation Date: _____

