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Nov 21 2014

November 21, 2014

VIA ELECTRONIC FILING

Gail L. Mount
Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4325

Re: Small Generator Interconnection Standards Revision
Docket No. E-100, Sub 101

Dear Ms. Mount:

Pursuant to the Commission's April 11, 2014 *Order Requesting Discussion and Comments* and the October 30, 2014 *Order Granting Fourth Extension of Time to File Comments*, I enclose the Joint Initial Comments of Duke Energy Carolinas, LLC, Duke Energy Progress, Inc., and Dominion North Carolina Power for filing in connection with the referenced matter.

Thank you for your attention to this matter. If you have any questions, please let me know.

Sincerely,

Lawrence B. Somers

Enclosure

cc: Parties of Record

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CERTIFICATE OF SERVICE

I certify that a copy of the Joint Initial Comments of Duke Energy Carolinas, LLC, Duke Energy Progress, Inc., and Dominion North Carolina Power in Docket Number E-100, Sub 101, has been served by electronic mail (e-mail), hand delivery, or by depositing a copy in the United States Mail, first class postage prepaid, properly addressed to the following parties of record:

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This, the 21st day of November, 2014.

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STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-100, SUB 101

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of	)	JOINT INITIAL COMMENTS OF DUKE
Petition for Approval of Revisions to	)	ENERGY CAROLINAS, DUKE
Generator Interconnection Standards	)	ENERGY PROGRESS, AND
	)	DOMINION NORTH CAROLINA
	)	POWER

In response to the North Carolina Utilities Commission's ("Commission") April 11, 2014 *Order Requesting Discussion and Comments* ("Order Reopening Proceeding") and subsequent procedural Orders,[1] Duke Energy Carolinas, LLC ("DEC"), Duke Energy Progress, Inc. ("DEP"), and Virginia Electric & Power Company, d/b/a Dominion North Carolina Power ("DNCP" and together with DEC and DEP, "the Utilities"), have worked diligently over the past five months with numerous other parties to attempt to develop stakeholder-supported revisions to North Carolina's Interconnection Procedures, Forms and Agreements ("NC Interconnection Procedures"). As set forth in more detail below, the Utilities are pleased with the significant efforts by the stakeholder working group over the past five months to jointly develop improvements to the NC Interconnection Procedures.

The Utilities' Initial Comments in this proceeding will provide the Commission:

1) <u>An Overview of the Existing Interconnection Landscape in North Carolina</u>: Much time has been spent during the stakeholder process educating other participants concerning issues faced by the Utilities and receiving feedback from these participants. A working understanding of the current interconnection landscape in North Carolina is critical to understanding the challenges that specific recommendations in the Utilities' revised North Carolina interconnection procedures proposal ("RNCIPP") are designed to solve.

[1] The Commission issued Orders in this proceeding on May 14, 2014, July 18, 2014, August 29, 2014, and October 30, 2014, each extending the time for comments to be filed in order to allow the stakeholder working group process to continue.

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2) An Overview of the Stakeholder Process from Utilities' Perspective: The Utilities, the Public Staff, numerous distributed generation developers ("DG Developers"), the North Carolina Sustainable Energy Association ("NCSEA"), and the Interstate Renewable Energy Council ("IREC") have invested hundreds of hours over the past five months developing the RNCIPP.[2] The Utilities present the RNCIPP as successfully balancing a number of important policy considerations that were considered at length during the stakeholder process and are summarized herein.

3) An Overview of Key Consensus Recommendations: The RNCIPP recommends substantial process improvements and prospective solutions to improve efficiency, increase transparency, and reduce congestion in the Utilities' interconnection queues. This section highlights the major proposed revisions to the existing NC Interconnection Procedures.

4) Non-Consensus Issues for Commission Decision: While the Utilities and other parties have worked diligently to compromise and provide consensus recommendations for the Commission's consideration, the Utilities and other stakeholders were not able to agree on every issue. Certain issues that remain in dispute, principally between the Utilities and IREC, will need to be decided by the Commission.

5) Recommendation to Establish Reporting: During the stakeholder process, the Utilities committed to increased queue status and performance reporting to the Commission on processing of interconnect requests ("IRs"). The Utilities' recommendations are presented in this section.

6) A Stakeholder-Developed Revised NC Interconnection Standards Proposal: Similar to the 2004 rulemaking process first adopting NC Interconnection Procedures,[3] the Utilities are submitting stakeholder-developed revisions to the NC Interconnection Procedures. The Utilities' proposal is presented as Attachments A-C to these Comments.

As set forth in greater detail in the following Initial Comments, the Utilities respectfully submit that adoption of the RNCIPP will serve the public interest and improve the Utilities' ability to meet their Public Utility Regulatory Policy Act[4] ("PURPA") obligation to interconnect distributed generation facilities in a just,

[2] As explained in Section VI below, the RNCIPP has been developed with the participation and input of each of these stakeholders over the past five months. However, to avoid any confusion, only the Utilities support the full RNCIPP. Further, the Commission should be aware that the most recent November 20 version of the RNCIPP filed as Attachment A to these Comments reflects an updated draft based upon further stakeholder discussions over the past 10 days between the Utilities, NCSEA, Strata Solar, and Carolina Solar Energy. This updated November 20 draft was circulated to counsel for the Public Staff, NCSEA, IREC, and EcoPlexus at 5:22 pm on Thursday, November 20. The Utilities expect to continue collaborative efforts with the other parties subsequent to the filing of initial comments in an effort to reach further consensus.

[3] *Order Approving, In Part, Proposed Interconnection Standard*, at 1 Docket No. E-100, Sub 101 (Mar. 22, 2005 (noting collaborative process through which Utilities and other interested stakeholders first developed and recommended adoption of interconnection standards).

[4] 18 C.F.R. 292.303(c) (establishing Utilities' obligation to interconnect qualifying facilities).

reasonable, and fair manner, while also ensuring that system safety, grid reliability, and resiliency remain uncompromised.

UTILITIES' INITIAL COMMENTS

I. The North Carolina Interconnection Landscape Has Changed Drastically Since 2008.

Since the Commission's June 9, 2008 *Order Approving Revised Interconnection Standard* in this docket, which adopted the modified version of the Federal Energy Regulatory Commission ("FERC") Small Generator Interconnection Procedures ("SGIP") that is currently in effect in North Carolina,[5] the interconnection landscape in our state has changed drastically. The number of solar qualifying facilities ("QF"), the project sizes, the developers of the projects, and the location of the projects has shifted significantly over the past few years. These market shifts have created corresponding stresses and challenges to the Utilities' current interconnection process, queues, and standard. In 2008, DEC and DEP had a combined total of 74 solar QF projects interconnected to their systems, representing a total of only 1.3 megawatts ("MW") of generation capacity. As of November 18, 2014, DEC and DEP have more than 2,000 solar QF projects interconnected to their systems, representing approximately 500 MW of generation capacity. DEC and DEP also have more than 450 pending MW-scale solar QF projects representing approximately 3,300 MW in their transmission and distribution interconnection queues.

Development of solar QF projects in DNCP's service territory has also exploded recently, albeit on a somewhat delayed timeline compared to DEC and DEP. A summary review of DNCP's annual E-100 Sub 101A interconnection status reports for

[5] Subsequent minor modifications related to external disconnect switches were approved by Commission orders of December 16, 2008 and June 16, 2009.

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the past four years (along with data through September 30, 2014) shows dramatic growth in IRs beginning in 2013:

	# of Projects	Aggregate Megawatts (MW) Proposed
2010	4	5.6 MW
2011	4	15.5 MW
2012	1	0.5 MW
2013	75	532 MW
2014 YTD[6]	63	310 MW

In total, North Carolina now has over 700 proposed solar QF projects representing over 4,000 MWs in the Utilities' North Carolina interconnection queues.[7]

This unprecedented and dramatic increase in the number of solar QF projects proposing to interconnect to the Utilities' North Carolina electric grids has been driven by a combination of federal and state policy incentives subsidizing development of renewable energy along with material year-over-year reductions in the cost of solar photovoltaic ("PV") components. Specifically, implementation of North Carolina's Renewable Energy and Energy Efficiency Portfolio Standard enacted by Senate Bill 3[8] combined with significant state (35%)[9] and federal (30%)[10] tax credit incentives subsidize the installed cost of solar PV projects by up to 65%.

[6] Reflects DNCP's IR data through September 30, 2014.
[7] In addition to the above North Carolina projects, DNCP also has distribution-level projects in its PJM and Virginia interconnection queues.
[8] See N.C.G.S. § 62-133.8, as enacted by 2007 Session Law 397.
[9] N.C.G.S. § 105-129.16A.
[10] 26 US Code § 48.

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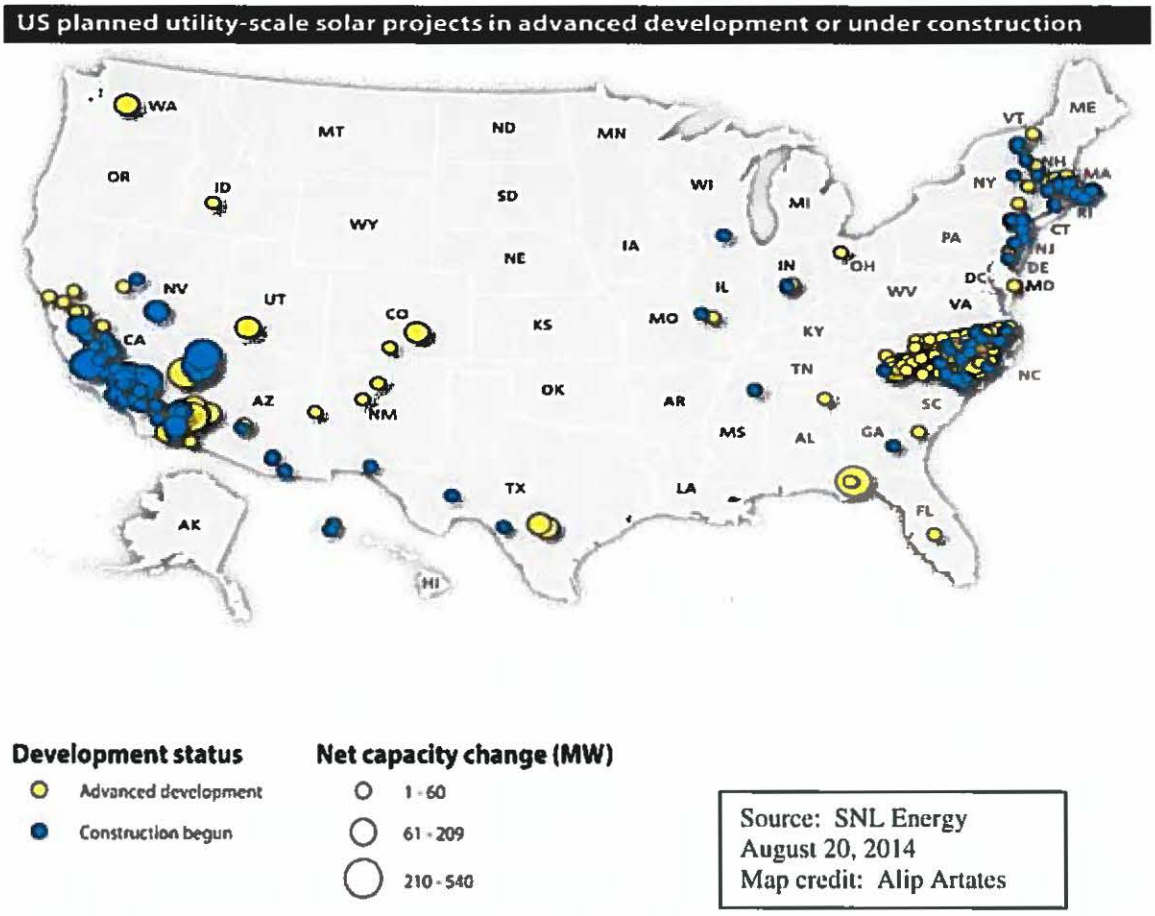
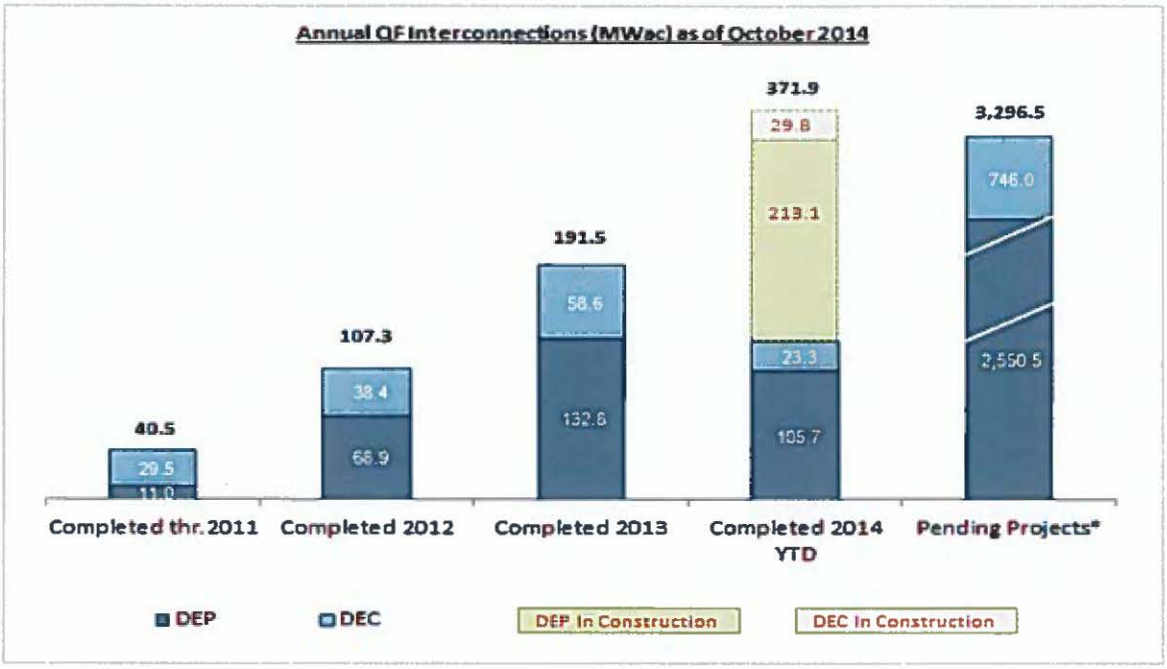
As the Commission has seen from the sheer volume of new solar project certificate and renewable energy facility registration requests that appear on the Commission's agenda each week, North Carolina has quickly become a leader in new solar development. The Solar Energy Power Association ("SEPA") rankings show North Carolina ranked 8th in the nation for installed solar capacity at the end of 2012.[11] In the latest SEPA rankings published in April of this year, North Carolina has leaped to 4th in the nation in installed solar capacity through the end of 2013.[12] The following map demonstrates North Carolina's high concentration of planned utility-scale solar projects in advanced development relative to other states across the nation:



[11] http://www.solarelectricpower.org/media/51303/sepa-top-10-executive-summary_final-v2.pdf
[12] http://www.solarelectricpower.org/media/169342/solar-rankings-infographic-2013.pdf

The following chart illustrates the growth in annual QF interconnections for DEC and DEP[13]:



The Utilities see no short-term change in the trends that have led to the explosion of solar QF development in North Carolina. Indeed, the recent flood of proposed new solar QF projects has been further accelerated by DG Developers' efforts to complete their projects prior to the December 31, 2015, expiration of the afore-mentioned North Carolina state tax credit. Expiration of the federal investment tax credit will occur a year later on December 31, 2016. Thus, current levels of solar development and associated IRs could even increase in the future.

In addition to the dramatic increase in the number of solar QF projects that have been constructed and proposed since 2008, the Utilities have also seen a significant shift in the size of the projects requesting to interconnect. In 2008, nearly all of the solar QF projects on the DEC, DEP and DNCP systems were small, residential and commercial rooftop projects. Since that time, the vast majority of new solar QF projects that have

[13] The bar charts reflect cumulative data. Also note, the Pending Projects column is not to scale.

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been constructed and proposed in North Carolina are substantially-larger, ground-mounted, utility-scale projects.[14] A significant number of the proposed and constructed QF solar projects are in the five (5) MW size range, and are designed to qualify for the Utilities' respective standard avoided cost tariff rates. However, all three Utilities also have materially larger projects ranging up to 20 MWs or larger planned in their service areas.

As the scale of solar projects has changed since 2008, so too has the "interconnection customer profile" of entities developing solar projects. In 2008, the Utilities (and presumably the other stakeholders involved) contemplated that solar projects would largely continue to be developed by "customer-generators," and that parties who sought to interconnect solar QF projects to the utilities' systems did so with the intention of developing and constructing their projects to bring them online as quickly as was reasonably possible. An important evolution has taken place in recent years. Since about 2011, the Utilities have seen three general categories of solar QF developers seeking to interconnect: (1) well-capitalized large project builders; (2) small, less well-capitalized builders; and (3) "originators." This last subset of solar QF developers has more recently emerged in North Carolina and their tactics, in particular, have had a negative impact on the interconnection process and queue.

[14] The number of small, rooftop solar projects has continued to grow as well.

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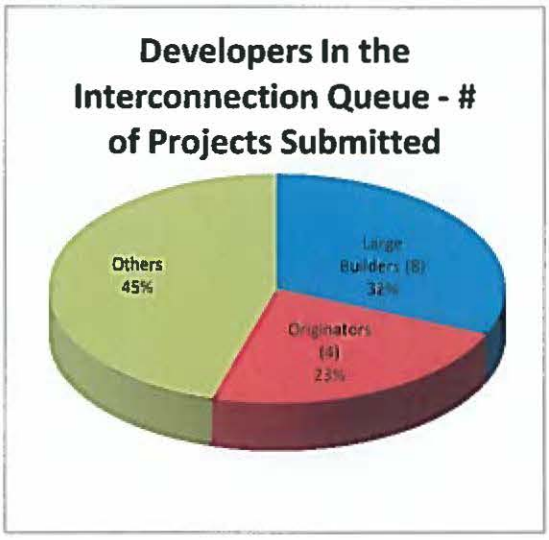
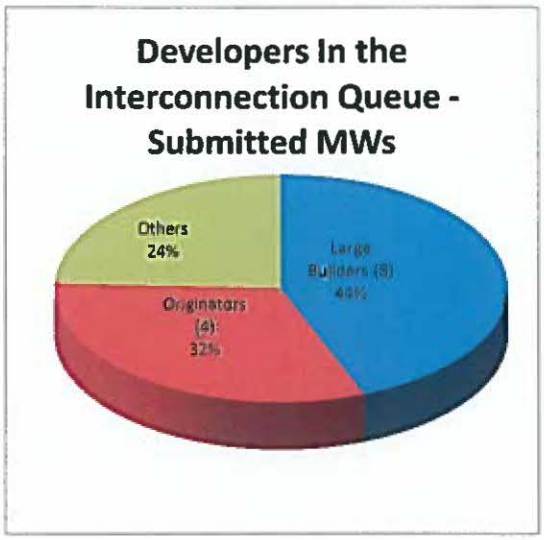
The following charts illustrate the relative status of the types of developers in DEC's and DEP's combined queues by number of projects and project size:





As these charts show, the originators comprise a sizeable portion of the projects submitted and overall MWs in DEC's and DEP's combined queues. Importantly, the originators have submitted over 200 solar QF projects for interconnection, *yet have failed to actually construct a single project*. Originators have also exercised their right to withdraw projects after months of sitting in the utility interconnection queues. As a result, these originators often require the utility to consume extensive engineering time with their projects, thereby delaying or preventing other "shovel-ready" projects from proceeding through the interconnection process. These developers have typically submitted dozens of projects in any given day, with at least one originator alone having submitted over 100 projects to DEC and DEP for interconnection study.

Another shift in the interconnection landscape since 2008 is the preferred location chosen for solar QF projects. Developers are typically seeking low-cost, cleared rural land for their project development. In the past couple of years, this has resulted in a greater percentage of new projects being proposed in eastern North Carolina – far away from concentrated load on the Utilities' systems. Importantly, the rural North Carolina

distribution circuits increasingly selected by solar QF developers were not designed to move large volumes of energy back up to the transmission system, and therefore typically require engineering studies and fairly significant distribution upgrade costs as part of their interconnection costs.

Only recently have solar QF projects increased in size to where some have proposed to interconnect to the transmission system. DEC and DEP have approximately 30 proposed transmission-interconnection projects, including projects ranging from 20 MWs up to 80 MWs in size.

The Utilities have responded to the increased study, engineering, and construction demands these changes have brought by adding resources and modifying administrative support and processes. The Utilities also acknowledge that as the interconnection queue has continued to grow, this effort has only brought limited relief to bringing the process under control. Each of the Utilities are committed to providing an efficient and transparent process (while respecting the appropriate confidentiality of interconnection customers' information) for interconnecting QF generators. However, the Utilities must also maintain their responsibilities to provide, safe, reliable and affordable electricity for their retail customers.

The Utilities respectfully assert that the current NC Interconnection Procedures approved by the Commission were never designed to manage this volume of activity and the dramatic changes discussed above, especially over such a short period of time. This level of activity has strained the current NC Interconnection Procedures to the point that they simply cannot effectively address the current North Carolina interconnection landscape. Therefore, as set forth below and in the attachments to these Comments, the Utilities request that the Commission adopt the RNCIPP modifications to the NC

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Interconnection Procedures to adapt them to the current North Carolina interconnection landscape.

II. The Utilities' Perspective on the Stakeholder Process

The Utilities appreciate NCSEA requesting the Commission reopen this proceeding and the Public Staff for initiating the stakeholder process. As explained in Section I above, the Utilities have recently experienced exponential increases in the number of IRs in their respective North Carolina distribution interconnection queues. As more solar QFs and other distributed generation resources ("DG") seek to interconnect to the grid, the technical complexity associated with interconnecting additional generating facilities onto the Utilities' distribution systems has only increased. System safety, grid reliability, and resiliency are necessarily being scrutinized by the Utilities in new ways and to a greater extent than ever before. The stakeholder process has been a valuable forum for the Utilities and DG Developers to share their real world interconnection experiences (and frustrations) with each other and for all stakeholders to work together to improve the North Carolina interconnection process. The Utilities submit that the RNCIPP recommendations will allow them to better manage their substantially larger and more complex interconnection queues and to move IRs through the interconnection process in a fair and efficient manner. While it would be impossible to detail every issue analyzed or concern raised and addressed by the stakeholder process, the Utilities believe it is important to provide the Commission their perspective on the stakeholder process that formulated the RNCIPP recommendations.

The Utilities and other stakeholders have accomplished much in the past five months. On June 2, 2014, approximately 40-50 people representing numerous parties first met in the Commission's hearing room to "informally and cooperatively" review the NCSEA/IREC proposal, as directed by the Commission's *Order Reopening Proceeding*.

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While the meeting began with discussion of the changes adopted by the Federal Energy Regulatory Commission ("FERC") in its Order No. 792[15] and certain IREC proposals, DG Developers quickly began to express frustration about the lack of transparency in the existing interconnection process and long study times to move a project from IR submission to a financeable Interconnection Agreement ("IA"). The key concern shared by all participants was how to unclog the existing interconnection study queues and move serious, committed projects to a final IA and construction of interconnection facilities as quickly as possible. This stakeholder working group meeting generated the first of many draft revisions to the NC Interconnection Procedures. After this meeting, the Utilities also committed to work on parallel paths with IREC to evaluate the Order No. 792 changes to the federal SGIP and with an interested group of DG Developers to develop queue management solutions. In addition to the Utilities, this "Queue Management Working Group" included representatives from DG Developers Strata Solar, FLS Energy, and Holocene (and more recently Carolina Solar Energy).

Since June 2, 2014, the Utilities have coordinated and held five additional formal stakeholder meetings (July 31, September 30, October 14, October 24, and November 7); organized and held numerous additional meetings and calls with IREC; organized and held over a dozen additional meetings and calls with the Queue Management Working Group; and organized and held meetings with the Public Staff to seek input on recommendations proposed during the stakeholder process. In addition to these more formal meetings, each Utility has committed a cross-functional internal team focused on developing revised interconnection procedures that ensure system safety, grid reliability, and resiliency remain uncompromised, while also attempting to achieve the objectives and address concerns raised by DG Developers and other parties during the stakeholder

[15] *Small Generator Interconnection Agreements and Procedures*, Order No. 792, 145 FERC ¶ 61,159 (November 22, 2013) ("Order No. 792").

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process. The Utilities have also invested substantial time collaborating, reconciling views, and coordinating positions between themselves in order to develop consensus proposals to share with the broader stakeholder group. All of these substantial efforts have culminated in the RNCIPP being submitted to the Commission.

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III. Utilities' Perspective on Key Recommendations

The Utilities' current approach to managing DG interconnections under the existing NC Interconnection Procedures is simply incompatible with the new DG landscape in North Carolina. Due to the rapid growth of MW-scale solar DG in our state, the Utilities and DG Developers have experienced numerous new challenges at all stages of the interconnection process. The RNCIPP recommendations represent a collaborative effort to develop solutions that address these challenges. Following are brief summaries of the key recommendations proposed in the RNCIPP.

A. RNCIPP Adopts the Bulk of Order No. 792 and IREC Proposals

The *Order Reopening Proceeding* directed the Utilities and other interested parties to review the redline proposed by NCSEA/IREC and to evaluate whether changes to the federal SGIP adopted in Order No. 792 and other IREC proposals should be adopted in North Carolina. After a thorough review, the Utilities have supported adopting the bulk of the Order No. 792 and IREC recommendations.

A few of these recommendations incorporated in the RNCIPP are worth highlighting for the Commission. First, the RNCIPP generally adopts the federal pre-application request and reporting process. *See* RNCIPP § 1.3. This process allows an interested DG Developer to request a formal report from the utility detailing key technical information that will allow a DG Developer to make a more informed decision about whether to apply for interconnection of a potential DG project at a specified location. Order No. 792 set the fee to obtain this report at $300 and allowed the utility 20

business days to respond. While the Utilities have questioned whether $300 will cover the full cost of evaluating pre-application requests and reporting available information to the DG Developer, this minimal fee amount was agreed to in order to facilitate widespread adoption of the pre-request process. The Utilities have also committed to respond to pre-requests within ten (10) business days, while capping the number of pre-request applications that any one DG Developer can submit to five at a time.

The Utilities have also agreed to a number of changes to the interconnection process proposed by IREC that were not adopted by Order No. 792. Most notably, the Utilities have agreed that efficiencies can be achieved in the interconnection study process without compromising system safety and reliability if IREC's suggestion to eliminate the existing Feasibility Study review is adopted. The Feasibility Study is currently the initial step in the interconnection study process that identifies high level potential adverse system impacts from interconnecting a new distributed generation facility. Under the existing NC Interconnection Procedures, the Utilities are allotted 30 business days to complete the Feasibility Study and issue a Feasibility Study report. For projects that are committed to moving forward with interconnection, the Feasibility Study added little incremental value, since the Utilities develop a more refined modeling analysis of potential adverse system impacts through the second step in the interconnection study process – the System Impact Study. Therefore, the Utilities have agreed to eliminate this initial Feasibility Study step.

The Utilities also compromised with IREC on small project eligibility for expedited study and approval by agreeing to expand expedited study eligibility up to 20 kilowatts ("kW") from the current 10 kW. See RNCIPP § 2.1. While IREC advocated for increasing the expedited small generator study track up to a 25 kW nameplate, the Utilities' analysis of this issue concluded that increasing this eligibility standard to 20 kW

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was more appropriate in order to be consistent with existing net metering tariffs in North Carolina.

The Utilities have also agreed conceptually with IREC's recommendations to develop improvements to each utility's respective website to facilitate increased customer understanding of the North Carolina interconnection process and improve access to forms and other information. While the Utilities do not believe that specific website requirements should be mandated in the interconnection procedures themselves, as requested in IREC's recommendations, the Utilities are currently evaluating the accessibility and content of their existing distributed generation interconnection webpages for the benefit of customers.[16,17]

In addition to the foregoing, the Utilities and IREC agreed to numerous smaller process-oriented recommendations that will facilitate efficiencies and improvements in the interconnection study process. However, as discussed Section IV below, the Utilities did not agree to certain changes recommended by IREC to the Section 3 Fast Track process. The Utilities appreciate IREC's involvement in the stakeholder process and willingness to provide insights into its experience advising on the DG interconnection process in California and other jurisdictions.

B. RNCIPP Responds to Interconnection Customers' Request for Improved Queue Efficiency

A primary challenge created by the North Carolina solar QF landscape has been managing the sheer volume of interconnection requests received by the Utilities in a short period of time. As noted in section V below, increases in IR processing times were a primary concern raised by DG Developers during the stakeholder process. In addition to managing an exponential increase in IRs, the Utilities, for their part, also noted that

[16] *See* http://www.duke-energy.com/generate-your-own-power/nc-connect-to-the-grid.asp
[17] *See* https://www.dom.com/business/dominion-virginia-power/b2b-services/using-our-facilities/parallel-generation-and-interconnection.

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efficiency has been compromised by originator developers stalling projects at various stages of the interconnection process, which impacts processing and study of subsequent IRs.

In addition to committing more engineering resources to manage the interconnection process, the Utilities have supported DG Developers' desire to "unclog" the existing interconnection queues. These efforts recognize that under the current NC Interconnection Procedures, a DG Developer seeking to interconnect must satisfy only minimal commitments to enter a utility's interconnection queue. For non-Fast Track projects (i.e., all projects above two MWs in size), the fee to submit an IA and obtain a queue number is currently only $1,000. This relatively low threshold incents submission of IRs that are not in final form and ready to move forward to IA execution and facility construction. For example, an originator developer with numerous projects in the DEC and DEP queues who, to date, has not constructed any facility in North Carolina recently submitted over 20 IRs in a single day.

The RNCIPP increases existing commitments and attempts to focus the Utilities' study efforts on projects that are actually ready to move forward through the study process to construction by:

1) Requiring verification of site control at the time of interconnection request. (*see* RNCIPP §§ 1.4.1; 1.6);
2) Requiring an upfront deposit of $20,000 plus one dollar ($1.00) per kWac nameplate up to a cap of $100,000 to be submitted at the time of interconnection request. This deposit amount is designed to cover the utility's reasonably anticipated study costs. (*see* RNCIPP §§ 1.4.1; 1.6); and
3) Requiring payment for utility system upgrades within 60 days of the date the utility provides the interconnection customer the final IA for signature or request is deemed withdrawn. (*see* RNCIPP § 5.2.4).

The Utilities want to be clear that these increased commitments are designed to apply equally to all future IRs as well as current applications for interconnection that desire to move forward with interconnection studies, final IA, and the construction process. *See*

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C. RNCIPP Prioritizes Fairness and Balances Interests of Interconnection Customers in Utilities' Interconnection Queues

The Utilities and other stakeholders have attempted to prioritize fairness in the IR review process and balance the competing interests of Interconnection Customers in the queue in two primary ways: 1) increasing precision in the definition of material modification ("MM"), and 2) prioritizing the study of non-interdependent IRs.

Material modification is an existing concept and definition in the NC Interconnection Procedures, which has been substantially overhauled through the recent stakeholder process. The Utilities' recommended definition of MM and a newly developed MM inquiry process are set forth in Section 1.5 of the RNCIPP. Basically, the proposed MM concept provides that changes to an IR that are "material" should require an IR to lose its interconnection queue priority (previously its "Queue Position" and now its "Queue Number") for purposes of prioritizing study by the Utilities and assignment of interconnection costs between interconnection customers. Under the current NC Interconnection Procedures, the Utilities did not have sufficiently clear guidelines to determine whether a proposed modification to a project constituted an MM. This generally resulted in the Utilities being lenient in determining whether a proposed change was an MM and whether the IR's queue number should be forfeited for moving forward with such a change. This leniency often resulted in "re-studies" of interconnection requests, which, in the aggregate, have become a substantial drain on the Utilities' engineering resources that evaluate and process IRs. The DG Developer stakeholders also emphasized that their financial partners disliked the risk associated with MMs, as MMs could impact both interconnection timing and cost. Therefore, DG Developers also sought to incorporate increased clarity into the standards regarding whether certain project modifications requested by the interconnection customer would constitute a MM.

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Considering the foregoing challenges and stakeholder concerns, the RNCIPP definition of MM is designed to balance the interests of DG Developer market participants and to move DG projects forward to construction as quickly as reasonably possible, so that Utility engineering resources can then be applied to study the next IR in the interconnection queue. The recommended MM definition in the RNCIPP provides a more transparent process and precise standard for both interconnection customers and the Utilities to determine whether a proposed modification constitutes an MM. A new "modification inquiry" concept has also been incorporated in RNCIPP Section 1.5.4 to ensure Utility feedback on a proposed change can be obtained by the interconnection customer prior to deciding whether to formally propose a change that may be an MM. Responding to the DG Developer stakeholders request for increased clarity in the MM definition, a list of indicia of MM and non-MM changes has also been added to the MM definition. Much stakeholder discussion and engineering focus by the Utilities has been applied to balancing DG Developers interest in flexibility to make modifications to their own pending IRs and fairness to other interdependent projects that may be impacted. The Utilities support this stakeholder-developed recommendation to clarify the MM concept as a fair and administratively efficient improvement to the interconnection review process.

The second concept of "Interdependency" is similarly designed to balance the interest of DG Developer market participants and to move projects forward to construction as quickly as reasonably possible. During the stakeholder process, it became increasingly apparent that the current sequential review of IRs based solely on queue position was creating substantial inefficiencies in the interconnection process. At a high level, this is because one project may be dependent on the decisions of another project ahead of it in the interconnection queue.

More specifically, if more than one project is proposing to connect to the same circuit, substation, or transmission line, the project with the lowest Queue Number has first priority to the capability of the circuit, substation, or transmission line. Importantly, any upgrade costs, if required for the first project, will be assigned to that first project. Depending on existing system capability, this can mean any later project proposing to connect to the circuit, substation, or transmission line incurs (or avoids) potentially hundreds of thousands of dollars in system upgrade costs, depending on whether the first project moves forward. Until the first project moves forward by paying for their required upgrades and those upgrades are made, all projects behind the first project will not have a clear picture of their interconnection charges. Their charges may be minimal if the first project moves forward, but if the first project withdraws from the queue, the second project would then be in first position and the upgrades charges could increase substantially.[18] In this manner, dependency can cascade through all projects that are proposing to connect to a circuit, substation, or transmission line. As the density of IRs in the Utilities' interconnection queues has increased, the Utilities have been required to complete numerous re-studies of projects that are impacted by projects ahead of them in the queue electing to withdraw its IR or change a project. In many cases, as discussed in Section I above, multiple projects are being proposed in close proximity to each other and requesting to interconnect to the same grid infrastructure.

Recommended RNCIPP Section 1.8 addressing "Interdependent Projects" attempts to balance the interests of "independent" or non-interdependent projects with higher queue numbers with the interests of interdependent projects ahead of them in the queue. In contrast to interdependent projects that are affected by other projects with

[18] Contrastingly, it is also possible that withdrawal of projects with lower queue numbers could decrease the cost of the subsequent project because sufficient capacity exists on the circuit, substation or transmission line to accommodate one project without requiring significant investment by the utility.

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lower Queue Numbers, described above, independent projects are in the primary position on the circuit, substation, or transmission line. For these projects, the cost and other information provided through the interconnection study process that is necessary to make an informed decision whether to move forward with a project or withdraw is not affected by other projects. Thus, the Utilities and other stakeholders are recommending an IR study process whereby review of independent IRs is prioritized ahead of interdependent IRs. Importantly, assignment of any upgrade costs continues to be dictated by Queue Number. *See* RNCIPP Section 1.7.1. The Utilities submit that RNCIPP Section 1.8 will create a substantially more efficient – and more equitable – process for North Carolina that balances the interests of all IRs seeking to progress through the Utilities' interconnection queues.

Briefly, RNCIPP Section 1.8 is designed to work as follows. Upon an Interconnection Customer's submission of an IR, the Utility will review the IR and make a preliminary determination concerning Interdependency. A preliminary determination by the Utility that the Generating Facility does not create Interdependency will result in the Interconnection Request proceeding as a "Project A" to either the Section 3 Fast Track Process or the Section 4 Scoping Meeting and Study process, as applicable.

If a project is interdependent, the utility will notify the interconnection customer, and describe the number and type of Interdependencies that exist impacting their project. If only one interdependency exists, the project will be designated a "Project B." Project Bs automatically receive a System Impact Study report that assumes both alternative scenarios for Project A: scenario one assumes the interdependent Project A completes construction and interconnection while scenario two assumes the Interdependent Project A is withdrawn. Project B will also have the option to proceed to a Facilities Study. Importantly, IRs must become a Project B – interdependent with only one other IR with a

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lower Queue Number – before the Utilities begin study of that IR. This recommendation allows the Utilities to assign their engineering resources in a more efficient manner that focuses on the independent and least interdependent IRs first to move those projects out of the study queue to IA development and interconnection construction. Importantly, this recommendation also provides interconnection customers a more transparent understanding of where their proposed IR fits in the utility's interconnection queue generally, as well as its queue position on the specific circuit, substation, or transmission line where interdependencies can arise.

D. Holding Ratepayers Harmless

The Utilities have attempted to ensure that the interconnection process does not disadvantage their retail customers or unfairly shift the cost of interconnecting DG to other customer classes. To the extent issues arise in the Utilities' interpretation or application of the RNCIPP, the Utilities request guidance from the Commission affirming that interconnection customers are responsible for the costs associated with all Interconnection Facilities, associated System Upgrades, and ongoing operations and maintenance expenses associated with a proposed DG facility.

IV. Non-Consensus Issues for Commission Resolution

The Utilities and other stakeholders were not able to achieve consensus on all issues. The most notable area of non-consensus or disagreement between the Utilities and other stakeholders, principally IREC, is whether to adopt IREC's proposals to expand the Section 3 Fast Track process. The Utilities do not support (and the RNCIPP does not reflect) IREC's proposals to expand Section 3.1 Fast Track eligibility, reduce the technical rigor applied in the Section 3.2.1 Fast Track screens, or expand the Section 3.4 Supplemental Review process.

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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.

Other non-consensus issues may exist. The Utilities are aware that NCSEA, IREC and potentially other parties plan to file comments and redline versions of the NC Interconnection Procedures. To the extent other parties raise non-consensus issues in their initial comments, the Utilities will respond accordingly through reply comments to ensure the Commission has a record sufficient to support approval of the RNCIPP.

V. Reporting Recommendations

During the stakeholder workshops, numerous DG Developers expressed frustration with the Utilities' perceived inability to process interconnection requests within the timeframes set forth in the NC Interconnection Procedures. Early in the stakeholder process, some even alleged purposeful delinquency by the Utilities. As described in Section I above, the root cause of extended interconnection study timeframes has unquestionably been the transformation of the solar development business in North Carolina and resulting exponential increases in IRs in the Utilities' interconnection

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queues. Indeed, the Utilities feel strongly that they have exceeded – and will continue to exceed – the reasonable efforts standard in the NC Interconnection Procedures and have worked in good faith with DG Developers to manage the challenges posed by the sheer volume of projects in their interconnection queues. The Utilities do, however, appreciate that some of the DG Developers' frustration is fueled by a lack of transparency in the existing process. Currently, only the Utilities have visibility into the ballooning size of their interconnection queues; the challenges of evaluating re-studies or holding interconnection customers accountable for MMs; managing project interdependencies that could affect system reliability; and monitoring the status of originator developers not making good faith efforts to move projects forward.

The Utilities agree that some level of increased transparency, subject to appropriate confidentiality protections of interconnection customer and utility information, can improve the North Carolina interconnection process. However, time constraints have precluded the Utilities from achieving consensus on the appropriate process for reporting. The recommendations presented below reflect proposals by DEC and DEP, which DNCP is currently evaluating and will either concur with or modify for itself, as needed, in reply comments.

DEC and DEP propose to develop quarterly queue status reports that will list each IR in table form by its queue number and project size, identify the circuit, substation and substation transformer(s) size. This report would assist developers in assessing the number of potentially interdependent projects ahead of their project in the queue.

DEC and DEP also support some level of reporting on queue performance in moving IRs through the study process to a final IA and construction is reasonable. This quarterly report would indicate both utility performance and interconnection customer performance in moving Project As and Project Bs through the interconnection process.

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The primary reporting metrics will be utility study time (broken down between System Impact Study and Facilities Study), developer dwell time, engineering time, and construction completion time.

DEC, DEP, and DNCP want to be forthcoming with the Commission that any performance reporting will likely initially show the Utilities not achieving the target timelines outlined in both the NC Interconnection Procedures and proposed RNCIPP. Through the stakeholder process, the Utilities have agreed not to stretch out the target timelines, but, instead, have committed to continue to make good faith and reasonable efforts to achieve the targets. These efforts will hopefully be aided by the queue management and other recommendations in the RNCIPP to focus the Utilities' study efforts on projects ready to move forward to construction. The Utilities goal will be to show the Commission measureable and progressive improvement in processing times.

The Utilities propose to make their initial quarterly queue status and performance reports no later than 120 days after the Commission's final order in this proceeding.

VI. Proposed RNCIPP Redlines of NC Interconnection Procedures

The Utilities submit a clean version of the RNCIPP as Attachment A to these Initial Comments, and a redline to the existing 2009 NC Interconnection Procedures as Attachment B for the Commission's consideration. While the RNCIPP has been developed through diligent stakeholder efforts over the past five months, the final RNCIPP is sponsored by the Utilities only and reflects incremental changes to a version circulated to all stakeholders on November 10, 2014. The Utilities are also submitting as Attachment C a redline of the changes between the November 10, 2014 version and the RNCIPP attached hereto to provide full transparency into the revisions made through further stakeholder discussions. While substantial work has been done to develop the RNCIPP, the focus has primarily been on the procedures themselves, while less attention

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has been given to ensuring the forms and agreements attached thereto conform to the recommended procedures. The Utilities have committed to other parties to undertake a further review of these forms and agreements in the coming weeks, and to file an updated redline for the Commission's consideration in its reply comments in this proceeding.

CONCLUSION

Wherefore, the Utilities respectfully request that the Commission accept the recommendations set forth in these initial comments.

Respectfully submitted, this the 21st day of November, 2014.

DUKE ENERGY CAROLINAS AND DUKE ENERGY PROGRESS

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