



434 Fayetteville Street
Suite 2800
Raleigh, NC 27601
Tel (919) 755-8700 Fax (919) 755-8800
www.foxrothschild.com

KAREN M. KEMERAIT
Direct No: 919.755.8764
Email: kkemerait@foxrothschild.com

June 15, 2020

Ms. Kimberley A. Campbell, Chief Clerk
North Carolina Utilities Commission
430 N. Salisbury Street
Raleigh, NC 27603

***RE: Petition for Approval of Revisions to Generator Interconnection Standards
Comments of North Carolina Clean Energy Business Alliance and North Carolina Sustainable Energy Association
NCUC Docket No. E-100, Sub 101***

Dear Ms. Campbell:

On behalf of North Carolina Clean Energy Business Alliance and North Carolina Sustainable Energy Association, we submit the attached **Comments of North Carolina Clean Energy Business Alliance and North Carolina Sustainable Energy Association** in the above-referenced docket.

Should you have any questions concerning the Comments attached hereto, please do not hesitate to contact me.

Sincerely,

/s/ Karen M. Kemerait

Karen M. Kemerait

Skb

cc: All parties of record
Enclosures

A Pennsylvania Limited Liability Partnership

California Colorado Delaware District of Columbia Florida Georgia Illinois Minnesota
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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

Petition for Approval of Revisions to
Generator Interconnection Standards

**COMMENTS OF NORTH CAROLINA
CLEAN ENERGY BUSINESS
ALLIANCE AND NORTH CAROLINA
SUSTAINABLE ENERGY
ASSOCIATION**

NOW COME the North Carolina Clean Energy Business Alliance (“NCCEBA”) and the North Carolina Sustainable Energy Association (“NCSEA”), by and through counsel, and respectfully submit the following comments regarding Duke Energy Carolinas, LLC’s and Duke Energy Progress, LLC’s (together, “Duke Energy” or “Duke”) Queue Reform Proposal pursuant to the North Carolina Utilities Commission’s (“Commission”) *Order Requiring Queue Reform Proposal and Comments* (“Queue Reform Order”) issued on August 27, 2019, and subsequent Orders granting extensions of time in the above-referenced docket.

In support of this filing, NCCEBA and NCSEA submit the following:

I. PROCEDURAL BACKGROUND

The Commission began considering whether it is necessary for Duke to transition from the long-standing serial study process (in which projects are studied on a project-by-project basis in sequential order) to a cluster study process (in which two or more projects are studied in clusters and allowed to share network upgrade costs) during its evaluation of revisions to the NC Interconnection Procedures (“NC Procedures”) in 2019 in this docket. The Commission heard from a number of witnesses about significant issues with

Duke's interconnection queue during the evidentiary hearing.¹ Witnesses expressed many concerns about Duke's interconnection queue, including that it is "bloated" and that Duke is slow to process Interconnection Requests.² No party disputed that the current serial study process is unsustainable based upon the current and growing volumes of Interconnection Requests and that reform is needed.³ The Commission highlighted the unsustainable nature of Duke's interconnection queue with Duke witness testimony in its June 14, 2019 *Order Approving Revised Interconnection Standard and Requiring Reports and Testimony* ("June 14, 2019 Interconnection Order"):

Duke witness Freeman testified that although [Duke] proposed only limited changes to the NC Interconnection Standard at this time, a more comprehensive reform is need in the near term to address the continued growth of the interconnection queue. Witness Freeman testified that because the interconnection queue and study complexities continue to increase, the current serial study process is not sustainable, and that it would likely require decades to serially study and potentially connect the 14,000 MW of renewable generating facilities that are in the current North and South Carolina Duke Utilities' queues.

Witness Freeman explained that when larger network upgrades are triggered by an Interconnection Request, the serial study process results in large upgrade costs being assigned to one project even though it is extremely unlikely that a single project could absorb such significant cost. This will result in paralysis in certain areas, as project after project will be forced to withdraw from the queue. Witness Freeman testified that Duke believed that it is now necessary to transition from a serial study process to a cluster study process, like that used by an increasing number of regional transmission organizations (RTOs) and utilities in other areas of the country.⁴

¹ The evidentiary hearing for the Interconnection Docket was held beginning on January 28, 2019.

² *Queue Reform Order*, p. 2.

³ *Order Approving Revised Interconnection Standard and Requiring Reports and Testimony*, issued on June 14, 2019 in Docket No. E-100, Sun 101 ("June 14, 2019 Interconnection Order"), pp. 59-61.

⁴ *Id.* at 59.

In regard to reform of the interconnection process, several parties stated that comprehensive reform is needed, and they proposed a grouping study process as a possible solution.⁵ In seeking to address the problems with the interconnection process, the Commission directed Duke to initiate a stakeholder process to discuss queue reform.⁶

Following an extended stakeholder process, Duke filed its Queue Reform Proposal on May 15, 2020. Duke proposes comprehensive and sweeping changes to the current interconnection process in its Queue Reform Proposal. NCCEBA and NCSEA are generally supportive of these changes, subject to the limited number of objections and suggested modifications discussed herein.

II. QUEUE REFORM STAKEHOLDER PROCESS

Even prior to the Commission's directive that Duke initiate a stakeholder process on queue reform in its *June 14, 2019 Interconnection Order*, Duke had hosted an initial stakeholder meeting in June 2018 to receive feedback regarding transitioning to a cluster study approach.⁷ Duke subsequently held ten stakeholder meetings between March 2019 and April 2020. All of the stakeholders meeting were well attended by NCCEBA members, NCSEA members, and other solar industry representatives.⁸ In advance of the eighth stakeholder meeting on March 10, 2020, Duke provided stakeholders a redlined version of the current NC Procedures showing the extensive changes Duke proposed to

⁵ *Id.*

⁶ *Id.*

⁷ *June 14, 2019 Interconnection Order*, p. 59.

⁸ For example, approximately 129 individuals attended the initial stakeholder meeting on March 28, 2019; approximately 107 people attended Stakeholder Meeting No. 2 on April 25, 2019; and about 95 people attended Stakeholder Meeting No. 3 on June 18, 2019. *See* Duke's Queue Reform Update, filed on July 31, 2019, in Docket No. E-100, Sub 101, p. 2.

make as part of the Queue Reform process. There then ensued over the next two months an iterative dialogue between Duke and NCCEBA and its members in which, on multiple occasions (i) NCCEBA provided detailed written comments on and proposed changes to Duke's draft, (ii) the parties discussed those comments and proposed changes, and (iii) Duke provided written responses to NCCEBA together with further revisions to the Duke draft to address issues raised by NCCEBA. Both Duke and NCCEBA members devoted countless hours to this process in an effort to reach consensus on queue reform, including an efficient and fair transition from the current serial process to a grouping study process. This collaborative process has resulted in substantial improvements to Duke's Queue Reform Proposal and greatly narrowed the points of disagreement between Duke and NCCEBA and NCSEA. NCCEBA and NCSEA are grateful to Duke for the constructive and inclusive approach it has taken to queue reform and for its responsiveness to many of NCCEBA's concerns.

That being said, there remain a limited number of significant issues that have not been resolved through the stakeholder process and NCCEBA's collaborative negotiations with Duke. NCCEBA and NCSEA provide the below comments addressing these issues.

III. NCCEBA'S AND NCSEA'S COMMENTS ON DUKE'S QUEUE REFORM PROPOSAL

NCCEBA and NCSEA support comprehensive reform of Duke's current interconnection process – specifically transitioning to a grouping or cluster study process – to solve problems with the clogged interconnection queue and to achieve a more efficient interconnection process. NCCEBA and NCSEA also support the use of “readiness” criteria combined with a requirement of significant financial commitments

from interconnection customers who do not meet those criteria as a means of limiting over-clogging of the queue in the future. However, any modified interconnection process must be fair and not unduly burdensome to Interconnection Customers. In addition, the transition from the current serial study process to a new grouping study process must be fair and equitable to Interconnection Customers that have been waiting – often for many years – in the interconnection queue to be studied and interconnected.

The following elements of Duke’s Queue Reform Proposal are the primary ones on which NCCEBA and Duke were not able to reach complete agreement and which remain of particular concern to NCCEBA and NCSEA: (1) eligibility criteria and financial commitments for the Transitional Serial Study Process; (2) certain aspects of the Transitional Cluster Study Process; (3) the frequency of cluster studies; (4) Resource Solicitation Cluster as it relates to Tranche 3 of the Competitive Procurement of Renewable Energy (“CPRE”); (5) Restudy provisions; (6) Readiness Milestones; (7) Security Requirements; and (8) Withdrawal Penalties. In addition, NCCEBA and NCSEA request that the Commission incorporate necessary interconnection cost control protocols as part of this round of modifications to the NC Procedures.⁹ NCCEBA’s and NCSEA’s recommended changes to Duke’s proposal will result in a more reasonable and equitable cluster study process and transition from the current serial study process. NCCEBA’s and NCSEA’s requested revisions will also prevent the new requirements from being overly burdensome to current and new Interconnection Customers.

A. Informational Interconnection Study (Section 1.4)

⁹ NCCEBA and Duke have been in negotiations regarding such protocols, but have not yet reached complete agreement on a joint proposal to the Commission. NCCEBA believes that agreement can be reached in the near future, or any disputes narrowed to a limited number of issues.

Duke proposes that prospective Transmission Level Interconnection Customers have the ability to request and receive an Informational Interconnection Study at any time prior to submitting an Interconnection Request at the Interconnection Customer's cost. Under Duke's proposal, Transmission Level Interconnection Customers and Distribution Level Interconnection Customers would still have the option to request and receive a Pre-Application Report.

NCCEBA and NCSEA are supportive of the proposed Information Interconnection Study. As noted in Duke's filing, Duke has agreed to develop a standardized Informational Interconnection Study scope of work to be offered at a predetermined cost and time to complete, which will be posted on Duke's interconnection website.¹⁰ NCCEBA and NCSEA request the opportunity to comment on this standardized scope of work once it is finalized and submitted by Duke.

B. Modification of the Interconnection Request (Section 1.6)

Duke is not proposing changes to the current Material Modification provisions of the NC Procedures. During the stakeholder process, NCCEBA and Duke discussed NCCEBA's concerns about the Material Modification provisions in Section 1.6.1.1.1, Section 1.6.1.4, Section 1.6.1.2.4, and Section 1.6.2.2.4 of the current NC Procedures. Duke indicated that it is not willing to consider modifications to the Material Modification standards in the queue reform proceeding, but Duke did agree to review the indicia of Material Modification when the Commission initiates its next review of the NC Procedures. NCCEBA and NCSEA appreciate Duke's commitment to revisit the Material Modification issue during the Commission's next review of the NC Procedures.

¹⁰ Duke's Queue Reform Proposal, p. 33.

C. Transitional Processes (Section 1.10)

A necessary element of any transition from one form of interconnection queue management to another is that certain Interconnection Customers, based on their advanced stage in the interconnection process, be able to retain their right to be studied in accordance with the current requirements upon which they have relied in making decisions about their projects (*i.e.*, receive “grandfathered” status). Duke proposes three options for Interconnection Customers currently in the interconnection queue (some of which have been in the queue for extended periods of time awaiting study and interconnection): (1) a Transitional Serial Study Process; (2) a Transitional Cluster Study Process; or (3) withdrawal from the queue and the option to reenter the queue and participate in a future Definitive Interconnection System Impact Study (“DISIS”) Cluster. The Transitional Serial Process under Section 1.10.1 would be available to projects that have already progressed through System Impact Study and have executed a Facilities Study Agreement and meet additional eligibility requirements. The Transitional Cluster Study Process under Section 1.10.2 would be available to all projects that have received a queue number by the date that the Commission approves Duke’s Queue Reform Proposal and meet certain eligibility requirements.¹¹ The Transitional Cluster would be limited to a single cluster study process for only those projects that meet the eligibility criteria.

In Duke’s proposal, if current Interconnection Customers do not meet the eligibility criteria for the Transitional Serial Process or the Transitional Cluster Study Process, the Interconnection Customers will be forced to withdraw from the queue and then participate in a future DISIS Cluster study process. Having to withdraw from the

¹¹ Thus, a project eligible for Transition Serial Study could opt to participate in the Transition Cluster study instead.

queue and participate in a future DISIS Cluster will have significant implications for those Interconnection Customers. Those Interconnection Customers will be subject to further delays in the interconnection study process, along with substantially increased costs required by the DISIS Cluster study process, as compared with the costs required in the current serial study process. For that reason, it is critical that the eligibility requirements for the Transitional Processes be both reasonable and fair to Interconnection Customers currently in the queue.

D. Transitional Serial Process (Section 1.10.1)

To be eligible for the Transitional Serial Process, an existing Interconnection Customer must have a completed System Impact Study and an executed Facilities Study Agreement as of the date that Queue Reform is approved.¹² Duke's explanation for this eligibility requirement is that it is necessary for an effective transition to the DISIS Cluster approach and to prevent "speculative" or "non-ready" projects to enter the Transitional Serial study.¹³ NCCEBA and NCSEA support an appropriate transition to the DISIS Cluster approach and in general agree that the requirement of an executed Facilities Study Agreement is a reasonable eligibility criterion for continued serial study. But Duke fails to acknowledge or address the fact that many projects that have been in the interconnection queue for an extended period of time have not received Facilities Study Agreements through no fault of their own. These advanced (and non-speculative projects), many of which are Projects A and B, should not be penalized because Duke has not completed the System Impact Studies and provided Facilities Study Agreements for

¹² Duke's Queue Reform Proposal, pp. 62-63.

¹³ *Id.* at 61.

execution. Additionally, “Covered Projects” under the Settlement Agreement entered into in January, 2018 among Duke and a number of Settling Developers regarding Duke’s imposition of a new Method of Service Guidelines (“Method of Service Guidelines Settlement”) have legal rights to be interconnected under the existing serial study process. All of these projects should be permitted to proceed with the Transitional Serial Process.

Apparently Duke has recognized the hardship that its Transitional Serial eligibility requirements will have for certain Interconnection Customers that should have been studied and received Facilities Study Agreements. Duke has therefore committed “to continue to diligently study and process Interconnection Requests in order to enable additional Interconnection Customers to be eligible for both the Transitional Serial and Transitional Cluster Study processes.”¹⁴ NCCEBA and NCSEA appreciate Duke’s commitment to study and process Interconnection Requests so that Interconnection Customers that should already be eligible for the Transitional Serial Process will in fact be eligible for that process (by having an executed Facilities Study Agreement when queue reform is approved). However, in the event that Duke is not able to study and process Interconnection Requests in the time frame that it strives for, NCCEBA and NCSEA request that the Transitional Study Process be available for Interconnection Customers that (1) have executed Facilities Study Agreements as of the date that Queue Reform is approved, (2) are Covered Projects under the Method of Service Guidelines Settlement, or (3) are Projects A and B that entered the queue prior to January 1, 2018. NCCEBA and Duke are continuing to negotiate in good faith to reach agreement about an

¹⁴ *Id.* at 64-65.

appropriate subset of additional Distribution-Level projects currently in the queue that would be entitled to participate the Transitional Serial Study Process.

In addition, in response to NCCEBA's concern that the cost estimate contained in the System Impact Study is only preliminary – as Duke has described, it is a “non-binding good faith estimate” – and may not accurately reflect the cost estimate included in the Interconnection Agreement, Duke proposes that the deposit would be refundable where the cost of System Upgrades identified in the Facilities Study Report (i) exceeded the Interconnection Customer's Minimum Deposit amount, and (ii) increased by more than twenty five percent (25%) compared to the costs identified in the Interconnection Customer's System Impact Study report.¹⁵ However, the System Impact Study report contains projected costs for both System Upgrades and Interconnection Facilities, both of which comprise the Interconnection Customer's cost responsibility with respect to the project. There could also be increases in the cost estimates between the Facilities Study report and the Interconnection Agreement. Therefore, NCCEBA and NCSEA request that the deposit be refundable where the estimated cost of System Upgrades and Interconnection Facilities has increased by more than twenty-five percent (25%) between the System Impact Study report and the Facilities Study Report or the Interconnection Agreement.

E. Transitional Cluster Process (Section 1.10.2)

NCCEBA and NCSEA appreciate the efforts Duke has made to work with NCCEBA on the design of the Transition Cluster process and generally support the

¹⁵ *Id.* at 66.

process proposed by Duke, subject to a few small qualifications.¹⁶ First, it is not clear how and when eligible Interconnection Customers apply to participate in the Transition Cluster; that should be spelled out. Second, NCCEBA and NCSEA believe there should be a bright-line standard for an Interconnection Customer to be able to withdraw from the Transition Cluster without penalty. As proposed by Duke, Duke could unilaterally choose not to allow withdrawal without penalty based on an amorphous standard of “Good Utility Practice.” Finally, an Interconnection Customer that is actively disputing whether it has established a legally enforceable obligation under PURPA and who otherwise qualifies should be eligible to participate in the Transition Cluster.

F. Definitive Interconnection System Impact Study Process (Section 4.4)

1. Single Annual Cluster Study

Duke proposes to reform its queue administration and interconnection study process by implementing a multi-phase DISIS Process on an annual basis.¹⁷ Duke states that the DISIS Process will consist of four main phases: (1) the 180-day DISIS Request Window, (2) an initial pre-DISIS Customer Engagement Window, (3) the initial DISIS (a cluster study of system impacts), (4) any necessary Restudy, and (5) the Facilities Study. The DISIS consists of three discrete phases: (1) Phase 1 is an initial 90-day power-flow and voltage study, (2) Phase 2 is a detailed 150-day stability and short circuit study, and (3) Phase 3 provides for restudying of the power flows/voltage analysis, short circuit analysis, and/or a stability analysis, as needed.

¹⁶ NCCEBA and NCSEA’s concurrence with Duke’s eligibility criteria for the Transition Cluster applicable to state-jurisdictional interconnection customers is not meant to preclude them from advocating for different criteria applicable to FERC-jurisdictional customers.

¹⁷ Duke’s Queue Reform Proposal, pp. 33, 34.

NCCEBA and NCSEA believe that it should be possible for Duke to perform more than one Definitive Interconnection Study Process per year. Duke has informed NCCEBA that it might be feasible for Duke to transition from a single annual cluster study process to a bi-annual cluster study process once Duke has more experience with the Definitive Interconnection Study Process. Duke has agreed to initiate a stakeholder process to consider transitioning to a bi-annual cluster study process after the second annual DISIS Cluster has been completed and to make an informational filing with the Commission no later than three years after the effective date of the Revised NC Procedures evaluating whether any modifications to the cluster study process would be beneficial.¹⁸ NCCEBA and NCSEA appreciate Duke's willingness to consider a bi-annual cluster study process after completion of the second DISIS Cluster, but request that Duke initiate a stakeholder process to consider transitioning to a bi-annual cluster study process upon completion of the first DISIS Cluster. NCCEBA and NCSEA believe that Duke should have sufficient experience with the DISIS Cluster study process at that time, as well as the ability to learn from other utilities or Regional Transmission Organizations ("RTOs") that participate in multiple clusters per year, to be able to consider transitioning to more than one cluster study per year.

2. Restudy

As noted above, Phase 3 of the Definitive Interconnection Study Process provides for restudying the power flows/voltage analysis, short circuit analysis, and/or a stability analysis, as needed, if an Interconnection Customer withdraws from the DISIS Cluster or otherwise modifies its Interconnection Request such that the results of the DISIS are no

¹⁸ Duke's Queue Reform Proposal, p. 74.

longer accurate.¹⁹ Duke estimates that restudy would require an additional 150 days to complete. Duke states that “[w]here an Interconnection Customer proposes non-material changes to its Interconnection Request requiring limited project-specific restudy within the Cluster, those costs shall be directly assigned to the requesting Interconnection Customer.”²⁰

NCCEBA and NCSEA acknowledge that project changes or the withdrawal of a project during the DISIS Cluster study process may require restudy of the applicable analysis affected by the change. However, NCCEBA and NCSEA request that Duke more specifically and definitively define (1) changes to a DISIS Cluster that will warrant restudy, and (2) individual project changes that will or will not require restudy.

NCCEBA and NCSEA also request that the estimated restudy timing be reduced to reflect the fact that the study models have already been developed and Duke only has to re-run the models with the updated cluster inputs. For example, in RTOs such as MISO or PJM, this process is typically 60 days.

Duke states in Section 4.4.7.4 that “[i]f one or more Interconnection Customer(s) withdraws from the Cluster, the Utility shall determine if a full system impact re-study is necessary.” However, Duke does not describe its evaluation process to determine whether a full re-study is necessary. NCCEBA and NCSEA do not disagree that project withdrawal may require restudy, but request that Duke be required to provide additional information regarding the threshold at which restudy would be required. This is true both

¹⁹ *Id.* at 40.

²⁰ *Id.* at 46.

for restudy caused by project withdrawals from the cluster, and also for individual project changes that may take place during the DISIS Cluster study process.

With respect to individual project changes, Duke appears to propose that any material project change would result in the project being removed from the cluster.²¹ Once the project is removed, Duke would presumably then determine whether restudy is required. Duke further states that any non-material change would require individual restudy of the project at the project's expense. NCCEBA and NCSEA request further clarification regarding the definition of "material change" that Duke proposes in this context. There may be "material" changes to a project that should not result in withdrawal from the cluster if they do not otherwise trigger a cluster restudy (or if a restudy is already taking place due to the withdrawal of other projects). Better understanding the thresholds for restudy at the outset – based either on project withdrawal or project modification – would assist all parties involved as they navigate the new DISIS Cluster process and should reduce confusion, dispute, and delay.

NCCEBA and NCSEA also recommend that the estimated time for restudy be reduced from 150 days to 60 days unless defined extenuating circumstances require additional time. By the time restudy is set to take place, Duke will have already set up the models necessary to conduct the restudy and will only need to re-run those models using the updated cluster. Because the restudy process can result in a substantial increase in the total time required to conduct the DISIS, particularly if multiple restudies are required, NCCEBA and NCSEA request additional clarity and definition regarding the

²¹ Duke states that "[w]here an Interconnection Customer proposes non-material changes to its Interconnection Request requiring limited project-specific restudy within the Cluster, those costs shall be directly assigned to the requesting Interconnection Customer." *Id.* at 46. This appears to imply that a material change would result in removal from the cluster.

circumstances that warrant restudy, including both project withdrawal and project modification, and that the estimated restudy timeline be reduced.

G. Resource Solicitation Cluster and CPRE Tranche 3 (Section 4.4.2)

As the Commission is aware, CPRE is the primary option for third-party owned renewable energy facilities in North Carolina to sell their output to Duke. House Bill 589 requires that the initial CPRE capacity shall be allocated over a 45-month period after Commission approval of the program. NCCEBA and NCSEA members have developed projects in the state with the reasonable expectation that applicable CPRE tranches will take place within that 45-month period and consistent with the schedule the Commission has applied for Tranches 1 and 2. The Commission has previously emphasized the importance of maintaining CPRE solicitation schedules,²² and ensuring the timely initiation and completion of the CPRE Tranche 3 solicitation remains a key priority for NCCEBA, NCSEA, and their members.²³ As discussed below, however, NCCEBA and NCSEA are concerned that Duke's Queue Reform Proposal will result in significant and unacceptable delays in Tranche 3 awards.²⁴

²² See *Notice of Decision*, Docket No. E-100, Sub 158, p. 7 (issued on October 7, 2019) (“As indicated in its July 2, 2019 Order Modifying and Accepting CPRE Program Plan in Docket Nos. E-2, Sub 1159, and E-7, Sub 1156, the Commission is issuing this Notice of Decision to announce its decisions in this docket so that the CPRE Program may proceed on the timeline set forth in the July 2 Order.”).

²³ This assumes that the statutorily required volume of CPRE procurement is not exhausted by Tranche 2. See G.S. § 62-110.8(a) and (b)(1). Duke recently reported to the Commission that it projects that the required Tranche 3 capacity for DEC and DEP combined could be anywhere between 0 and 650 megawatts. See Direct Testimony of Phillip H. Cathcart, Docket No. E-2, Sub 1254, p. 6 (June 9, 2020).

²⁴ NCCEBA has communicated these concerns to Duke and understand that Duke is still evaluating the interplay between Queue Reform and Tranche 3.

The NC Procedures currently authorize Duke to conduct a System Impact Grouping Study for projects that are being evaluated as part of a Competitive Resource Solicitation (*i.e.*, CPRE).²⁵ This process was utilized and worked well for CPRE Tranche 1 and is currently being utilized in connection with Tranche 2. However, in its Queue Reform Proposal, Duke proposes to delete this process and replace it with a new one. Section 4.4.2 of Duke’s Queue Reform Proposal authorizes, but does not require, Duke to conduct a separate “Resource Solicitation Cluster” for the purpose of studying projects that are short-listed in a competitive solicitation.²⁶ That section also authorizes Duke to administer a Resource Solicitation Cluster as part of DISIS. Since neither of those options is mandatory, presumably Duke could also choose to include projects short-listed in a competitive solicitation in the DISIS cluster and not create a Resource Solicitation Cluster at all. Unfortunately, this would do significantly more harm than good in the case of Tranche 3.²⁷

If CPRE Tranche 3 projects are studied as a Resource Solicitation Cluster that follows the DISIS procedures or as part of the first DISIS Cluster (whether or not as a Resource Solicitation Cluster), the process would be as follows: Duke would publicize the scope of the cluster study and the applicable part of the Competitive Resource Solicitation, including the applicable closing of the Customer Engagement Window for

²⁵ NC Procedures § 4.3.4.

²⁶ CPRE Tranche 3 is the only competitive solicitation currently authorized, but the Commission has the authority to require additional competitive solicitations in the future.

²⁷ Duke’s Queue Reform Proposal does not contemplate Tranche 3 projects being studied as part of the Transition Cluster Study under Section 1.10.2. It is unclear whether that is a workable alternative that could resolve the concerns expressed herein.

the cluster.²⁸ The initial window may well not open before January 1, 2021, in which case it would not close until June 30, 2021.²⁹ At that point, the cluster would follow the same timelines associated with the general DISIS Cluster study process. That process includes Phase 1 (90 days), Phase 2 (150 days), any necessary Restudy (150 days), and Individual Facilities Study (150 days). Without restudy, the estimated duration of the DISIS Cluster (not including the Request Window and Customer Engagement period) is 390 days, and with Restudy it is 540 days. Thus, projects in the first DISIS Cluster may not be able to execute Interconnection Agreements until mid- or late 2022.

In contrast, under the existing CPRE grouping study process, the timelines for the CPRE grouping study process are considerably shorter than the timelines for the DISIS Cluster study process. In CPRE, Duke conducts a grouping study of the projects that bid into CPRE, and determines the optimal mix of projects that would minimize necessary System Upgrades and meet the applicable procurement amounts. Projects that are selected in the Step 1 evaluation process will then move onto the Step 2 evaluation process. For Tranche 2 of CPRE, the Request for Proposals for the Competitive Procurement of Renewable Energy Program Tranche 2 posted on the Independent Administrator's website (<https://decprerfp2019.accionpower.com>) provides the following periods for the grouping study evaluation process:

Deadline for submission of proposals	03/09/2020
Projected conclusion of Step 1 of the evaluation process	04/17/2020

²⁸ Proposed Section 4.4.2.

²⁹ Duke has stated that in the coming months, it plans to seek approval of the Queue Reform Proposal from the South Carolina Public Service Commission, and also plans to seek approval of revisions to the Federal Energy Regulatory Commission ("FERC") OATT in order to make the DISIS process applicable to FERC-jurisdictional interconnection customers. *Id.* at 73. NCCEBA and NCSEA are concerned that obtaining approval for revisions from the South Carolina Public Service Commission and the FERC might not be able to be accomplished within the time frame necessary to prevent delay of CPRE Tranche 3 if it was required to be part of a Resource Solicitation Cluster or the DISIS study process.

Projected conclusion of Step 2 and winning bids notified	06/30/2020
Projected conclusion of contracting period	09/30/2020

For Tranche 2 of CPRE, then, the Step 1 evaluation process takes about 37 days, and the Step 2 evaluation process takes about 75 days.

Studying Tranche 3 projects as part of the DISIS Cluster, or as a Resource Solicitation Cluster that follows the DISIS procedures, would thus result in an unacceptable delay in the state’s primary pathway for renewable energy project development and could potentially inhibit the ability to meet the 45-month allocation timeline provided by House Bill 589. Moreover, the federal Investment Tax Credit (“ITC”) steps down over the coming years.³⁰ As a result, a delay in CPRE Tranche 3 procurement would also likely result in an increase in CPRE bid prices, the costs of which are ultimately borne by ratepayers. Furthermore, given that average pricing for CPRE bids (approximately \$38.00 per MWh) is within 10% of Duke’s current 20-year avoided cost rate for utility-scale solar projects (approximately \$42.50 per MWh), it is possible that a material delay in CPRE Tranche 3 which prevents utilization of higher ITC values could wholly obstruct the achievement of the renewable procurement target established in House Bill 589, which caps CPRE power purchase agreement (“PPA”) prices at the avoided cost rate. In light of the foregoing, NCCEBA and NCSEA request (1) that the Commission either preserve existing Section 4.3.4 of the NC Procedures and require that Tranche 3 projects be studied thereunder, and (2) that the Commission require that CPRE Tranche 3 proceed in general accord with the schedules that have been

³⁰ The ITC stepped down from 30% to 26% in 2020, and will step down to 22% in 2021, and to 10% in 2022.

implemented for Tranches 1 and 2 and that the CPRE Independent Administrator be required to receive Tranche 3 proposals no later than March 2021.

H. Readiness Milestones (Section 4.4.10)

Duke states that “it is necessary to require Interconnection Customers to demonstrate increasing project readiness as part of the interconnection process to show that they are making sufficient progress toward achieving commercial operation.”³¹

Section 4.4.10 provides the proposed Readiness Milestones for participation in the DISIS Cluster. Readiness Milestones 1 and 2 (“M1” and “M2”) both require the following:

- a) Executed term sheet (or comparable evidence of a legally enforceable obligation) related to a contract, binding upon the parties to the contract, for sale of the Generating Facility’s energy, where the term of sale is not less than five (5) years, or
- b) Reasonable evidence that the project has been selected by the Utility in a Resource Plan or is offering to sell its output through Resource Solicitation Process.

Readiness Milestone 3 (“M3”) requires:

- a) Executed contract, binding upon the parties to the contract, for sale of the Generating Facility’s energy, where the term of sale is not less than five (5) years, or, where Interconnection Customer has initiated dispute resolution regarding the Utility’s failure to provide an executable contract or to execute the contract tendered by the Interconnection Customer and, in such circumstances, the Interconnection Customer shall have twenty (20) calendar days to execute a mutually-agreeable PPA or to file a formal Complaint with the Commission; or
- b) Reasonable evidence that the project has been selected by the Utility in a Resource Plan or has received a contract award in a Resource Solicitation Process.

Readiness Milestone 4 (“M4”) requires:

- a) Executed contract, binding upon the parties to the contract, for sale of the Generating Facility’s energy, where the term of sale is not less than five (5) years; or

³¹ Duke’s Queue Reform Proposal at 47.

- b) Reasonable evidence that the project has been selected by the Utility in a Resource Plan or has received a contract award in a Resource Solicitation Process.

NCCEBA and NCSEA object to Milestones 3 and 4 being satisfied by “reasonable evidence that the project has been selected by the Utility in a Resource Plan”. This standard creates an unnecessary advantage for utility-owned projects that are progressing through the queue. Utility-owned projects are typically the only specific projects that are included in the utility’s Integrated Resource Plan (“IRP”). Although the utility may include references to planned purchases from merchant generating units, such units are not specifically delineated in the IRP. Similarly, PURPA QFs, including standard offer QFs and projects participating in CPRE or the Green Source Advantage Program (“GSA”), are not specifically listed in the IRP. Moreover, as the Commission is aware, a utility’s inclusion of an asset in the IRP does not guarantee that the asset will receive a Certificate of Convenience and Necessity (“CPCN”) and be constructed by the utility.

To satisfy Milestones 3 and 4, a non-utility Interconnection Customer must demonstrate that it has an executed PPA for a term of no less than 5 years. In other words, in order to move forward in the DISIS Cluster without paying substantially increased financial security, a non-utility-owned project must have secured off-take. In contrast, a utility-owned project must only have been included in the utility’s IRP.

NCCEBA and NCSEA request that Readiness Milestones 3 and 4 requirements be amended as follows:

- a) Executed contract, binding upon the parties to the contract, for sale of the Generating Facility’s energy, where the term of sale is not less than five (5) years; or

b) Reasonable evidence that the project has been selected by the Utility in a Resource Plan and has received a Certificate of Public Convenience and Necessity from the Commission or has received a contract award in a Resource Solicitation Process.

More broadly, NCCEBA and NCSEA believe that all future utility capacity needs should be fulfilled through fair and transparent competitive solicitations. However, under the existing model, NCCEBA and NCSEA recommend that utility-owned Interconnection Customers must have obtained a CPCN in order to satisfy Readiness Milestones 3 and 4. Duke attempts to address their inequitable proposal (that a utility-owned project can satisfy Milestones 3 and 4 through inclusion in the utility's IRP) by noting that the Public Service Company of Colorado's ("PSCo") queue reform structure also contains an IRP-based readiness option.³² However, the PSCo generation expansion structure is fundamentally dissimilar from the regime in North Carolina where only utility-owned assets are included in the utility's IRP. Unlike North Carolina, PSCo's IRP process includes projects that have been selected through the competitive procurement program, which is an all-source procurement for all new capacity needs.³³

In addition, there are several problems with the interface between Duke's Queue Reform Proposal and its GSA program. First, the "executed term sheet" eligibility criterion for Milestones 1 and 2 relates to a contract for the sale of energy. While renewable energy suppliers may execute term sheets with prospective GSA Participating Customers with respect to their intent to collaborate on a GSA application, such a term sheet does not relate to a contract for the sale of energy. Under GSA, the supplier sells its

³² *Id.* at 49 (footnote 78).

³³ See <https://cleanenergy.org/blog/all-source-procurement-allowing-renewables-to-compete-in-utility-planning>; see also, https://cleanenergy.org/wp-content/uploads/All-Source-Utility-Electricity-Generation-Procurement-Best-Practices_EI_SACE.pdf.

energy to Duke pursuant to a PPA and term sheets are not available or executed in connection with those contracts. Moreover, projects are not currently eligible to participate in GSA unless they have received a System Impact Study (“SIS”) report. Thus, an Interconnection Customer seeking to participate in GSA could not obtain a GSA PPA by Milestone 1 or 2. Nor is it likely that such a customer could obtain a GSA PPA between the conclusion of Phase 2 (and if necessary Phase 3) study and the deadline for meeting Milestone 3 readiness requirements.

NCCEBA and NCSEA suggest that these issues be addressed as follows: (1) An executed term sheet between an Interconnection Customer and a prospective GSA Market Participant should be sufficient to demonstrate Milestones 1 and 2 readiness. The parties to the term sheet should be able to redact confidential information and the existence and terms of the term should not be disclosed to Duke affiliates who are eligible suppliers under the GSA program. (2) An application to the GSA program that includes the Interconnection Customer’s project should be sufficient to demonstrate Milestone 3 readiness, provided that there is available program capacity and that the application has not been denied. (3) An executed GSA PPA should be required to demonstrate Milestone 4 readiness.

Finally, while NCCEBA and NCSEA support the inclusion of an established legally enforceable obligation (“LEO”) under PURPA as an indication of readiness at Milestones 1 and 2, under the Commission’s current requirements for LEO formation no new Interconnection Customer could ever establish a LEO by those milestones. That is because in order to establish a LEO such parties must have either executed a System Impact Study Agreement or at least 105 days must have passed since the Interconnection

Customer submitted an Interconnection Request. NCCEBA and NCSEA therefore request that QFs be allowed to establish LEOs simultaneously with applying for participation in a DISIS Cluster.

I. Security Requirements in Lieu of Readiness (Section 4.4.11)

Projects that satisfy the Readiness Milestones are required to provide financial security equal to the Study Deposit made prior to Phase 1. A “ready” project is not required to pay additional financial security until M4, at which point the Interconnection Customer is required under Section 4.4.10 to provide a non-refundable deposit equal to the greater of the System Upgrade costs identified in the Facilities Study Report or a minimum deposit based on project size.³⁴ These proposed requirements for “ready” projects are the result of negotiations between Duke and NCCEBA and are supported by NCCEBA and NCSEA.

However, Duke is proposing to require much greater financial security from non-ready projects. Specifically, the proposed security required for non-ready projects is:

M1 = 2 times the study deposit amount

M2 = 3 times the study deposit amount

M3 = 5 times the study deposit amount

M4 = Greater of System Upgrades identified in the Interconnection Customer’s Facilities Study Report or a minimum deposit amount equal to the minimum deposit amount required for ready projects in Section 4.10.4.

³⁴ Duke’s proposed minimum deposit amounts are \$100,000 for projects up to 5 MW in size; \$150,000 for projects greater than 5 MW up to 10 MW; \$200,000 for projects greater than 10 MW up to 20 MW; \$500,000 for projects greater than 20 MW up to 50 MW; and \$800,000 for projects greater than 50 MW.

NCCEBA and NCSEA understand the need to impose meaningful penalties on withdrawing Interconnection Customers and to require security to guarantee payment of those penalties, as well as the logic of making such penalties and associated security higher for Interconnection Customers who do not meet defined readiness criteria. But NCCEBA and NCSEA believe that Duke’s proposed security requirements for non-ready Interconnection Customers at M2 and M3 are excessively high and unreasonable, particular given how few Interconnection Customers are likely to be able to satisfy the readiness criteria. NCCEBA and NCSEA request that those deposit amounts be reduced to 2 times and 3 times the study deposit amount, respectively.

J. Form of Pre-payment and Security (Sections 4.4.10 and 4.4.11)

Duke proposes that the Milestone 4 (“M4”) pre-payment amount for ready projects be provided in cash and that the Financial Security for non-ready projects be in the form of cash or an irrevocable letter of credit upon which Duke may draw cash.³⁵ The M4 payment or posting is required within ten (10) Business Days of the Utility’s issuance of the Facilities Study Report. NCCEBA and NCSEA believe that a surety bond with commercially reasonable terms should be an acceptable form of M4 pre-payment by ready projects and Financial Security for non-ready projects at M4.

In the Commission’s *June 14, 2019 Interconnection Order*, the Commission considered NCCEBA’s request that Duke accept a surety bond as an acceptable form of Financial Security for Interconnection Facilities.³⁶ The Commission noted that Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina (“Dominion”)

³⁵ Duke’s Queue Reform Proposal, p. 52.

³⁶ *June 14, 2019 Interconnection Order*, pp. 42-45.

accepts surety bonds from Interconnection Customers as Financial Security, and found that Duke had “failed to present any compelling reasons as to why they cannot accept surety bonds as a form of financial security for Interconnection Facilities, as is done by DENC.”³⁷ The Commission required Duke to develop a standard form surety bond with terms that are acceptable to Duke and make it available to Interconnection Customers.³⁸ Duke has in fact developed a standard surety bond form, but the form contains commercially unreasonable terms that have prevented sureties from being able to utilize the bond form. For that reason, it is NCCEBA’s understanding that no solar developer has been able to utilize Duke’s surety bond form to date. NCCEBA and NCSEA request that the Commission require Duke to accept the form surety bond attached hereto as Exhibit A, which includes revisions to Duke’s current form that NCCEBA members have verified are deemed necessary and commercially reasonable by surety bond providers.

K. Withdrawal Penalty (Section 6.3.5)

In Section 6.3.5, Duke describes the Withdrawal Penalty that would apply to an Interconnection Customer participating in the DISIS Cluster that withdrew from the queue or otherwise did not reach commercial operation. Duke proposes that a Withdrawal Penalty would apply if the Interconnection Customer withdraws its request from the queue or the Generating Facility does not meet Commercial Operation unless the Utility determines that:

- (1) the withdrawal does not negatively affect the timing or cost of equal or lower queued projects;
- (2) the cost responsibility identified for that Interconnection Customer in the current Phase 2, or Phase 3 study report associated with System

³⁷ *Id.* at 45.

³⁸ *Id.*

Upgrades increased by more than twenty-five (25%) percent compared to the costs identified in the prior DISIS report; or

(3) if the Interconnection Customer withdraws after the Utility issues a Facilities Study report and the cost responsibility for that Interconnection Customer identified in the Facilities Study report increases by more than one hundred percent (100%) compared to the cost responsibility assigned to the Interconnection Customer in the Phase 2 report.

In other words, a Withdrawal Penalty would not apply if withdrawal does not negatively affect the timing or cost of equal or lower queued projects, if identified System Upgrade estimates increase by more than 25% between DISIS study report phases, or if the identified System Upgrades increase by more than 100% between the Phase 2 DISIS report and the Facilities Study report.

As an initial matter, NCCEBA and NCSEA believe that an Interconnection Customer should be able to withdraw without penalty where there is an increase in the interconnection cost estimate of more than 25% between the Phase 2 report and the Facilities Study report – rather than the 100% increase proposed by Duke. Subjecting an Interconnection Customer to a massive penalty because it cannot proceed in the face of a large and unexpected increase in its project costs is both unreasonable and unfair, and is unjustified by any potential benefits in queue administration.

In addition, as proposed by Duke, the 25% increase between studies, and the 100% increase between Phase 2 and the Facilities Study report, would only apply to “System Upgrades identified for the withdrawing Interconnection Customer.”³⁹ There is

³⁹ NCCEBA and NCSEA note that the draft language of proposed Section 6.3.5 does not expressly limit the 100% increase to System Upgrades as it does for the 25% increase; however, Duke’s Queue Reform Proposal describes both the 25% increase and the 100% increase as applicable only to System Upgrades, and therefore, for the avoidance of doubt, NCCEBA and NCSEA provide these comments under the assumption that the limitation to System Upgrades would apply to both categories.

no logical basis for this limitation. Collectively, System Upgrades and Interconnection Facilities represent the costs that Interconnection Customers must incur in order to interconnect a facility to the grid.⁴⁰ A project deciding whether or not to move forward with a project must consider both categories of cost, and an increase in cost in either category may result in an Interconnection Customer deciding not to proceed with a project given the cost associated with the interconnection. NCCEBA and NCSEA request that the proposed language in Section 6.3.5 be revised to include increases to both System Upgrades and Interconnection Facilities in the exceptions to the application of the Withdrawal Penalty.

Additionally, NCCEBA and NCSEA request that any applicable Withdrawal Penalty not apply to a prospective CPRE project that was not selected as part of the applicable procurement. A project that bids into a CPRE solicitation hopes to be selected to receive a procurement award; but if a project is not selected to receive an award, it should not be penalized in the same manner as a project in the general DISIS Cluster that withdraws from the cluster voluntarily. Because the unsuccessful CPRE project would be withdrawing from the queue because it was not selected for CPRE, the project should not be subject to the Withdrawal Penalty and should instead receive a refund of its security payment and any unused study deposit.

Therefore, NCCEBA and NCSEA request that the proposed language in Section 6.3.5 be revised as follows to (1) apply the 25% test to increased estimates between the Phase 2 report and the Facilities Study report, (2) include increases to both System

⁴⁰ Interconnection Customers are also responsible for administrative overhead costs, study costs, and commissioning costs, but the Interconnection Facilities and System Upgrade costs usually represent the most significant portion of the total cost.

Upgrades and Interconnection Facilities in the exceptions to the application of the Withdrawal Penalty, and (2) exclude unsuccessful CPRE bids from the application of the Withdrawal Penalty within the respective Resource Solicitation Cluster. Specifically, Section 6.3.5 should be revised as follows:

An Interconnection Customers shall be subject to a Withdrawal Penalty if it withdraws its request from the Queue or the Generating Facility does not otherwise reach Commercial Operation unless the Utility determines consistent with Good Utility Practice that (1) the withdrawal does not negatively affect the timing or cost of equal or lower queued projects; (2) the cost responsibility identified for that Interconnection Customer in the current Phase 2, or Phase 3 study report associated with System Upgrades and Interconnection Facilities increased by more than twenty-five percent (25%) compared to the costs identified in the previous DISIS report; ~~or~~ (3) if the Interconnection Customer withdraws after the Utility issues a Facilities Study report and the cost responsibility for that Interconnection Customer identified in the Facilities Study report associated with System Upgrades and Interconnection Facilities increases by more than twenty-five percent (25%) compared to the cost responsibility assigned to the Interconnection Customer in the Phase 2 report; or (4) if an Interconnection Customer with a prospective CPRE project withdraws from a the queue after receiving notification that the project did not receive a CPRE award.

NCCEBA and NCSEA also request that the withdrawal penalties for non-ready projects be modified in two ways. First, the multipliers applied to Interconnection Customer's actual allocated cost of the DISIS process should conform to those recommended by NCCEBA and NCSEA with respect to the required financial security (*i.e.*, 2x for M1 and M2 and 3x for M3). Also, the Withdrawal Penalty after M4 should

be equal to the greater of the estimated cost of the System Upgrades identified in Facilities Study Report or the minimum deposit amount.⁴¹

IV. INTERCONNECTION COST ESTIMATING AND COST CONTROLS

In recent years, Duke has presented many of its Interconnection Customers with huge bills for cost overruns relating to the construction of Interconnection Facilities and Network Upgrades. In addition, Interconnection Customers have seen dramatic increases in cost estimates between the System Impact Study Report and the Facilities Study Report and/or Interconnection Agreement, as well as during construction following Interconnection Agreement execution. While in some cases there may be good explanations for these increases, NCCEBA and NCSEA believe that Duke, which has essentially had a blank check to spend other parties' money, has not adequately estimated or controlled costs. As the Commission is aware, numerous Complaints against Duke have been filed with the Commission, and even more Notices of Dispute submitted to Duke, as a result of this tremendous problem for the solar industry.

Compounding the problem that Duke is not adequately estimating and controlling interconnection costs is the fact that the current NC Procedures do not provide clear guidance or standards regarding the development of interconnection cost estimates (that are included in System Impact Study reports, Facilities Study reports, and Interconnection Agreements). Similarly, the NC Procedures do not have cost control requirements that Duke should be required to follow during the construction process or caps on total costs that may be incurred and recovered from Interconnection Customers

⁴¹ At the M4 stage there is no reason that an interconnection customer should have greater liability than its System Upgrade costs. (Other customers are not affected by a withdrawing customer's failure to pay for construction of its Interconnection Facilities.) However, NCCEBA and NCSEA are agreeing to a minimum Withdrawal Penalty after M4 to discourage withdrawals and fund future studies.

during construction. While this issue is not directly germane to Queue Reform, since revisions to the NC Procedures is an infrequent and cumbersome process, the Commission should address this critically important issue now in this docket. As discussed below, NCCEBA and NCSEA request that the Commission adopt more robust and particularized standards applicable to the development of interconnection cost estimates and obligations that Duke must abide with to ensure that its construction costs are incurred as cost effectively as practicable. NCCEBA and NCSEA note that Duke has demonstrated a willingness to discuss these issues with NCCEBA and other interested stakeholders in an effort to reach agreement on such cost control measures. NCCEBA and NCSEA appreciate Duke's willingness to do so and look forward to continuing those conversations so that these issues can be addressed in the modifications to the NC Procedures adopted by the Commission in this docket. As these discussions continue to take place, NCCEBA and NCSEA provide the below comments.

NCCEBA and NCSEA members rely on the initial cost estimates in the System Impact Study report and the Facilities Study reports and the best cost estimate in Interconnection Agreement when making business decisions about a project. They rely upon Duke's cost estimates in determining whether to proceed with a particular project and incur substantial additional costs for further development, engineering, procurement, and construction of the facility, or whether, if the estimated interconnection costs exceed the level at which a project remains economical, to remove the project from the queue and terminate the project. The NC Procedures require that cost estimates included in System Impact Study report, Facilities Study report, and Interconnection Agreement be made in good faith, and the utility must carry out its obligations consistent with Good

Utility Practice. However, the cost estimates are in no way binding on the utility. In practice, NCCEBA and NCSEA members have recently seen that these non-binding estimates do not reflect the actual costs to construct Interconnection Facilities and System Upgrades that are charged to Interconnection Customers. In fact, NCCEBA and NCSEA members have seen that Duke has substantially increased the costs in its final accounting reports from the previous best estimates – in some instances more than 200% or 300% from the previous best estimate of costs.

Similarly, the NC Procedures do not establish specific requirements that the utility must follow when completing interconnection construction. For example, the NC Procedures do not prescribe standards for selecting contractors, managing labor costs, controlling costs, providing notification of cost increases, or other similar project management requirements. While the utility must act in accordance with Good Utility Practice, the definition of this term does not provide definitive guidance or parameters for the utility or assurances for the Interconnecting Customer.

The NC Procedures also do not establish any cost caps for the final cost of interconnection construction. Under the Interconnection Agreement, the Interconnection Customer is responsible for its share of “all reasonable expenses,”⁴² but the NC Procedures do not provide any specific guidance about cost caps or procedures for challenging final costs that substantially exceed the estimated costs, outside of the general dispute provisions included in Section 6 of the NC Procedures. As a result, an Interconnection Customer may receive a best estimate of cost in its Interconnection Agreement that does not accurately reflect the ultimate cost of construction of the facility.

⁴² Interconnection Agreement, § 4.1.2.

A significant divergence between the cost estimate and the actual cost could be caused by inaccuracy of the cost estimate, improper project management practices, unanticipated conditions impacting the project, or a combination of those factors. Although a cost estimate might not ultimately perfectly capture the actual cost (the final cost may be above or below the estimated cost), the lack of appropriate cost estimating and cost control measures creates an opportunity for actual construction costs to greatly exceed the best estimate included in the Interconnection Agreement upon which the Interconnection Customer reasonably relied. In such a scenario, the Interconnection Customer must either pay the substantially higher final cost assigned to the project or avail itself of the dispute provisions of the NC Procedures, which involves a highly fact-specific inquiry and the possibility of complex and lengthy litigation.

The Commission has considered this issue previously in the context of CPRE. In its July 2, 2019 *Order Modifying and Accepting CPRE Program Plan* (“CPRE Order”), the Commission acknowledged that final interconnection costs are not effectively controlled under the existing NC Procedures. The Commission stated:

In addition, the Commission recognizes that the potential for actual costs to exceed projected costs is presently without an effective regulatory limit. The Commission agrees with the Public Staff that it is appropriate to apply such a limit in the nature of a presumption that costs in excess of 25% of the estimated costs, are unreasonably incurred and not recoverable. In a general rate case where a Duke utility seeks to recover these costs, the utility may rebut this presumption by competent, material, and substantial evidence.⁴³

The Commission established that if the actual costs of interconnection construction were more than twenty-five percent (25%) above the estimated costs, the utility would not be

⁴³ *CPRE Order*, p. 18.

permitted to recover those costs without overcoming a presumption that the costs were unreasonably incurred.

Other states and utilities are increasingly requiring cost estimating standards, construction cost controls and protocols, and cost capping. These practices provide clear guidance to the utility responsible for developing cost estimates and completing construction, and it provides substantially greater certainty for Interconnection Customers who rely on cost estimates when making business decisions whether to proceed with a project and who must pay for the total cost of construction.⁴⁴

With respect to developing cost estimates, industry-standard cost estimating guidance, such as the Association for the Advancement of Cost Engineering (“AACE”), should be applied.⁴⁵ Applicable professional standards for licensed engineers conducting the cost estimates such as the Project Management Institute’s (“PMI”) Project Management Professional (“PMP”) and Professional Engineer (“PE”) certifications should also guide cost estimating practices.⁴⁶ While there are a number of different cost estimating techniques, establishing standardized and benchmarked cost tables for equipment and labor provides clear guidance and expectations for the utility, contractors, and Interconnection Customers. For example, RS Means is a well-known and widely

⁴⁴ Within CPRE, Interconnection Facilities costs are paid by Interconnecting Customers, while Network Upgrades are paid by ratepayers. Outside of the CPRE process, Interconnecting Customers pay for both Interconnection Facilities and Network Upgrades.

⁴⁵ AACE provides industry-standard guidance for cost estimating using a tiered approach that includes Classes 1-5. Class 5 includes the lowest level of project definition and the highest permissible range of expected accuracy. Class 1 includes the highest level of project definition and the lowest permissible range of expected accuracy. *See*, AACE International Recommended Practice No. 18R-97.

⁴⁶ PMI generally follows four estimating standards, including Analogous; Parametric; Three-points; and Bottom-up. These standards may be applied in different scenarios based on the necessary accuracy of the estimate, the information available to the cost estimator, and the timeline to develop the estimate.

accepted construction cost database used by contractors, subcontractors, estimators, engineers, and others for the purposes of arriving at reasonable project cost estimations. Data stored by RS Means includes materials, labor, transportation, and storage, compiled on an annual basis by RS Means researchers dedicated to providing this information for thousands of line item costs. Independent System Operators (“ISOs”) and RTOs also commonly publish cost tables that provide typical equipment prices in order to provide customers greater visibility into the expected cost of upgrades.

With respect to creating cost certainty, cost envelopes can be used to limit the utility’s ability to recover interconnection costs outside of a specific range relative to the applicable cost estimate. Minnesota, Utah, California, Massachusetts, Oregon, and New York have all implemented a version of a cost envelope. In Massachusetts, for example, utilities must comply with a twenty-five percent (25%) cost envelope following System Impact Study and a ten percent (10%) cost envelope after the Interconnection Agreement. Costs in excess of the cost envelope are borne by utility shareholders. In Minnesota, the Public Utilities Commission requires public accounting for projects that exceed twenty percent (20%) of estimated costs. FERC similarly offers a cost envelope in its Large Generator Interconnection Procedures, and at the Facilities Study phase, Interconnection Customers may choose one of two options for the cost estimate: (1) a 90-day Facilities Study and a $\pm 20\%$ cost estimate, or (2) a 180-day Facilities Study and a $\pm 10\%$ cost estimate.

With respect to cost controls during the construction process, the establishment of accurate cost estimates and the application of cost caps should provide substantial direction and incentive for the utility to manage construction projects such that costs are

prudently incurred and overages are minimized. If costs unexpectedly increase during the course of construction, Interconnection Customers should be notified of such cost increases, provided an explanation of the increase, and given an opportunity to dispute the increase through an expedited dispute process. Mid-construction notification of cost increases is consistent with project management industry standards and provide the Interconnection Customer – who will ultimately be responsible for paying the reasonable costs of construction – necessary visibility into the expected cost and timing of construction. This will reduce unexpected cost overages for Interconnection Customers and will incentivize the utility to more effectively manage construction costs.⁴⁷

For the reasons described above, NCCEBA and NCSEA request that the Commission adopt updated interconnection cost estimating, cost control, and cost capping measures of the type described above as part of the queue reform process. NCCEBA provided to Duke a reasonable Cost Control and Cost Bounding proposal attached hereto as Exhibit B that Duke is in the process of considering. NCCEBA and NCSEA reiterate that Duke has demonstrated a willingness to work constructively with NCCEBA, NCSEA, and other interested stakeholders on this important issue, and NCCEBA and NCSEA look forward to this further collaboration.

V. CONCLUSION

WHEREFORE, NCCEBA and NCSEA respectfully request that the Commission incorporate NCCEBA's and NCSEA's suggestions and revisions into Duke's Queue Reform Proposal. NCCEBA and NCSEA also respectfully request that the Commission

⁴⁷ Under rules that have been proposed by the staff of the Michigan Public Service Commission, the interconnection customer and utility would enter into a Construction Agreement that includes estimated construction costs and the customer would not be liable for costs that exceed the estimate by more than 25%. See [DRAFT Interconnection DGLNM LEO Rules 2.28.2020.docx](#) Rule R 460.964(5).

include NCCEBA's and NCSEA's recommended Interconnection Cost Estimating and Cost Control proposal in the revisions made to the NC Procedures in this proceeding.

Respectfully submitted this the 15th day of June, 2020.

FOX ROTHSCHILD LLP

/s/ Karen M. Kemerait

Karen M. Kemerait
434 Fayetteville Street, Suite 2800
Raleigh, North Carolina 27601
Telephone: (919) 755-8764
KKemerait@foxrothschild.com
Attorneys for NCCEBA

/s/ Peter H. Ledford

Peter H. Ledford
General Counsel for NCSEA
N.C. State Bar No. 42999
4800 Six Forks Road, Suite 300
Raleigh, NC 27609
919-832-7601 Ext. 107
peter@energync.org
Attorneys for NCSEA

CERTIFICATE OF SERVICE

I hereby certify that a true and exact copy of the foregoing COMMENTS OF NORTH CAROLINA CLEAN ENERGY BUSINESS ALLIANCE AND NORTH CAROLINA SUSTAINABLE ENERGY ASSOCIATION have been duly served upon counsel of record for all parties to this docket by either depositing a true and exact copy of same in a depository of the United States Postal Service, first-class postage prepaid, and/or by electronic delivery as follows:

This 15th day of June, 2020.

/s/ Karen M. Kemerait
Karen M. Kemerait
Fox Rothschild LLP
434 Fayetteville St., Suite 2800
Raleigh, NC 27601
Telephone: (919) 755-8764
E-mail: KKemerait@foxrothschild.com

EXHIBIT A

SURETY BOND – Interconnection Agreement
COLLATERAL SECURITY PAYABLE UPON DEMAND

* * * * *

PRINCIPAL (Legal Name and Business Address)

SURETY (Legal Name and Business Address)

SURETY BOND EFFECTIVE DATE

OBLIGEE

[Duke Energy Progress, LLC][Duke Energy Carolinas, LLC]
Attn: Credit Risk Manager
550 South Tryon Street (DEC41Q)
Charlotte, NC 28202

**SURETY BOND INITIAL
EXPIRATION DATE**

SECURITY AMOUNT

PENAL SUM OF BOND

KNOW ALL PERSONS BY THESE PRESENTS THAT: Principal and Surety are jointly and severally held and firmly bound to [Duke Energy Progress, LLC][Duke Energy Carolinas, LLC] (“Duke Energy” or “Obligee”), a limited liability company organized and existing under the laws of the state of North Carolina, its successors and assigns in the amount of \$[insert Bond Amount] (“Bond Amount” or “Penal Sum of Bond”), for the payment of which the Principal and Surety, their heirs, executors, administrators, successors and assigns are hereby jointly and severally bound. Hereinafter Surety, Principal and Duke Energy may be individually referred to as a “Party” and collectively as the “Parties.”

RECITALS

WHEREAS, Principal and Duke Energy have entered into that certain Interconnection Agreement, dated as of _____, 20____, (hereinafter, the “Agreement”);

WHEREAS, Principal is proposing to develop a [describe generating facility] (the “Generating Facility”) located in _____ County, North Carolina, at ___[insert address]___, as further identified in the Agreement; and

WHEREAS, Duke Energy has required that Principal deliver this Bond to Duke Energy as a material inducement to enter into the Agreement.

NOW THEREFORE, for good and valuable consideration, the receipt, adequacy and sufficiency of which are hereby acknowledged, the terms and conditions of this obligation are as follows,

that if Principal, shall fully and faithfully pay and perform its obligations under the Agreement according to the terms, stipulations or conditions thereof, then this Bond shall become null and void, otherwise to remain in full force and effect and be performed and enforceable in accordance with its terms. This Bond is executed by the Principal and Surety and accepted by Duke Energy on and subject to the following express terms and conditions:

1. Capitalized terms undefined herein will take the meaning or definition provided in the Agreement and the North Carolina Interconnection Procedures, Forms and Agreements approved by the North Carolina Utilities Commission (the “Commission”) in Docket [need cite] or any modifications or replacements thereto (collectively, the “NC Interconnection Standard”). In the event of any conflict between this Bond and the Agreement, the terms of this Bond will control.
2. Surety guarantees the timely payment of Principal’s payment obligations under the Agreement when due (the “Obligations”) in accordance with the terms of the Agreement and this Bond.
3. Surety shall honor Duke Energy’s request for payment under this Bond upon presentation by Duke Energy of a demand for payment in accordance with the terms of this Bond (“Demand for Payment”) which includes one or more of the following certifications by Duke Energy with appropriate blanks completed:
 - a. Duke Energy [Carolinas][Progress], LLC (“Duke Energy”) hereby certifies that the amount of US\$ _____ is due and owing and remains unpaid (beyond the time allowed for such payment, including following any related notice or grace period or both) to Duke Energy by [Principal’s name] in accordance with the terms and provisions of the Interconnection Agreement dated as of [insert date], by and between Duke Energy and [“Principal’s Name] (the “Agreement”) and Duke Energy hereby demands payment in the amount of [*insert amount up to the full Bond Amount*];

or

 - b. Duke Energy [Carolinas][Progress], LLC (“Duke Energy”) hereby certifies that an event of Default, as defined in the Interconnection Agreement dated as of [insert date], by and between Duke Energy and [“Principal’s Name] (the “Agreement”) has occurred with respect to [Principal’s Name] and such event of Default has not been cured within the applicable cure period, if any provided for in the Agreement and pursuant to the terms of the Agreement, Duke Energy is entitled to the funds requested herein. Based on the foregoing, Duke Energy hereby demands payment in the amount of [*insert amount up to the full Bond Amount*];

Or

- c. [Principle's Name] is required, pursuant to the terms of the Interconnection Agreement dated as of [insert date], by and between Duke Energy [Carolinas][Progress], LLC ("Duke Energy") and ["Principal's Name] (the "Agreement"), to maintain a financial security in favor of Duke Energy, has failed to renew or replace this Bond and the Bond has less than thirty (30) days until the expiration thereof and based on the foregoing, Duke Energy hereby demands payment in the amount of [*insert amount up to the full Bond Amount*] which shall be held by Duke Energy as financial security in accordance with the terms of the Agreement.
4. Surety will, not later than five (20) Business Days after delivery of a duly executed and delivered Demand for Payment to the Surety at the address provided below, pay the Bond Amount to Duke Energy. Surety's obligation for payment of the Bond Amount will be deemed established, regardless of the underlying causes for Principal's failure to meet the Obligations or any other circumstance whatsoever that might otherwise constitute a legal or equitable discharge or defense of the Surety, with the exception of manifest error or fraud.
5. Principal and Surety acknowledge that the Bond Amount represents a fair and reasonable pre-estimation of the amounts required to be paid to Duke Energy under the terms of the Agreement and that payment of such amount to Duke Energy is appropriate to facilitate the interconnection of the Generating Facility as contemplated under the Agreement. The Bond Amount will not be deemed a penalty, and the Principal and Surety hereby waive and forfeit any right to contest the reasonableness or validity of the liquidated Bond Amount. Duke Energy's right to recover the Bond Amount will in no way limit its entitlement to other remedies to which Duke Energy may be entitled pursuant to the terms of the Agreement, the NC Interconnection Standard, the Bond, or applicable law.
6. It is hereby agreed that this Bond is effective beginning on the Surety Bond Effective Date, above and shall remain in effect for an initial term of [one (1) year] (the "Expiration Date") The Expiration Date shall be deemed automatically extended without amendments for successive one year periods commencing on the then current Expiration Date unless at least ninety (90) days prior to the then applicable Expiration Date, Surety notifies Duke Energy in writing by certified mail return receipt requested or overnight courier that Surety has elected to not extend the Expiration Date of the Bond. During said ninety (90) day period, this Bond shall remain in full force and effect.
7. Notices. Any communication, demand or notice to be given hereunder will be duly given when delivered in writing to a Party at its address as indicated below:

If to Surety:

{Add notice info}

If to Duke Energy:

[Duke Energy Carolinas, LLC] [Duke Energy Progress, LLC]

Attn: Credit Risk Manager

550 South Tryon Street (DEC41Q)

Charlotte, NC 28202

If to Principal:

{Add notice info}

8. If Duke Energy brings suit against the Surety for enforcement of the within obligations, the Surety may be held liable for all costs in connection therewith, including interest and reasonable attorneys' fees, including costs of and fees for appeals subject to the Bond Amount limitation. All such payments will erode the Bond Amount.
9. Failure of the Surety to pay the Bond Amount within five (20) Business Days of Demand for Payment will constitute default of the Surety's obligation under the Bond and Duke Energy will be entitled to enforce against the Surety any remedy available to it.
10. Surety, for value received, hereby stipulates and agrees that no change, modification, omission, addition or change in or to the Agreement or the North Carolina Interconnection Procedures, and no action or failure to act by Duke Energy will in any way affect the Surety's obligation on this Bond; and Surety hereby waives notice of any and all such modifications, omissions, alterations, and additions to the terms of the Agreement or the North Carolina Interconnection Procedures.
11. If any part or provision of this Bond will be declared unenforceable or invalid by a court of competent jurisdiction, such determination in no way will affect the validity or enforceability of the other parts or provisions of this Bond.
12. The undersigned Surety and Principal are held and firmly bound for the payment of all legal costs, including reasonable attorney's fees, incurred in all or any actions or proceedings taken to enforce this Bond or the obligations created herein, or payment of any award of judgment rendered against the undersigned Surety. All such payments erode the Bond Amount and the total liability of the Surety is at all time limited in the aggregate to the Bond Amount. Nothing contained herein will be construed to obligate Duke Energy to pay any fees or expenses incurred in connection with the issuance of this Bond.
13. All disputes relating to the execution, interpretation, construction, performance, or enforcement of the Bond and the rights and obligations thereto will be governed by the laws of, and resolved in the State and Federal courts in North Carolina. The rights and remedies of Duke Energy herein are cumulative and in addition to any and all rights and remedies that may be provided by law or equity.

14. The undersigned Surety agent(s) represent that he/she is a true and lawful attorney-in-fact for the Surety and authorized to bind the Surety hereto and to affix the Surety's corporate seal hereunder, as evidenced by the attached power of attorney.

IN WITNESS WHEREOF, this instrument is SIGNED AND SEALED this ____ day
of _____, 20__.

PRINCIPAL:

Signature: _____

(SEAL)

Name and Title: _____

SURETY:

Attorney in Fact: _____

(SEAL)

Signature: _____

Name and Title: _____

AFFIDAVIT AND ACKNOWLEDGEMENT OF ATTORNEY-IN-FACT

STATE OF _____

COUNTY OF _____

I hereby certify that I am the attorney-in-fact of _____, a [*insert entity type*], which is the surety in the foregoing bond, and that I am authorized to execute on the above Surety's behalf the foregoing bond pursuant to the Power of Attorney dated _____ and attached hereto, and on behalf of the Surety, acknowledge the foregoing bond before me as the above Surety's act and deed.

Given under my hand this _____ day of _____.

ATTORNEY-IN-FACT

PRINT NAME

(NOTARY SEAL)

Cost Controls and Cost Bounding

- 1) **Cost Controls**. In coordination with interested stakeholders, Duke will develop, and submit for Commission approval as part of the NCIP, cost control and benchmarking standards (“Cost Controls”) that will be applied by utilities 1) in the development of all future System Impact Study, Facilities Study, and Interconnection Agreement cost estimates and 2) when constructing and commissioning Interconnection Facilities and Network Upgrades.
 - a) Cost Controls for use in creating System Impact Study, Facilities Study, and Interconnection Agreement cost estimates shall include, but not be limited to:
 - i. Cost tables of typical equipment used for construction of Interconnection Facilities and Network Upgrades;
 - ii. Cost tables of typical labor hours in connection with construction of Interconnection Facilities and Network Upgrades;
 - iii. Commissioning cost tables;
 - iv. Overhead cost tables; and
 - v. Study cost tables
 - b) Cost Controls for use in conducting and completing the construction of Interconnection Facilities and Network Upgrades shall include, but not be limited to:
 - i. Standard bidding practices for contractor and subcontractor hiring; and
 - ii. Contractor and subcontractor management policies.
 - c) Duke shall include the Interconnection Customer in interconnection construction invoice sign-off and inspection.
 - d) At any point following the delivery of a System Impact Study Report, the utility shall notify the Interconnection Customer as soon as reasonably possible, not to exceed 10 business days, of any anticipated increase in the estimated cost of Interconnection Facilities and Network Upgrades that exceeds 10% of the most recent applicable cost estimate. The Interconnection Customer may dispute the increased cost estimate utilizing an expedited dispute resolution process to be included in the proposal developed pursuant to this section, which shall at a minimum include increase at its expense.
 - e) After Cost Controls are finalized and approved by the Commission, an Interconnection Customer that after July 31, 2019 received an increase of more than 25% over the estimated interconnection costs contained in its System Impact Study report before the Cost Controls were approved may request that the utility recalculate the most recent cost estimate provided to the Interconnection Customer using the approved Cost Controls. The utility shall recalculate such cost estimate within 60 days of the Interconnection Customer’s request. If the recalculation results in a reduction in the interconnection costs, the Interconnection Customer shall be entitled to a refund of any costs paid in excess of the revised estimate.
- 2) **Cost Bounding**
 - a) A utility shall not incur interconnection cost in excess of 10% more than the estimate provided in the Interconnection Agreement without having first notified the interconnection customer of the increase, provided a detailed explanation therefor, and afforded the interconnection customer an opportunity to dispute the increase through the expedited dispute resolution procedure established pursuant to Subpart 1.d; provided that construction shall continue subject to resolution of the dispute. In any dispute regarding interconnection costs, the Interconnection Customer shall be entitled to a rebuttable presumption that an increase greater than 25% of the interconnection cost estimate is unreasonable and not allowed.
 - b) The Cost Bounding requirements in Subpart 2(a) shall also apply to any post-Interconnection Agreement dispute brought by an Interconnection Customer with an Interconnection Agreement

executed after July 31, 2019 regarding interconnection costs incurred prior to the finalization and Commission approval of the Cost Controls described in Subpart 1.

- 3) Any disputes about increases in interconnection-related cost estimates or incurred costs arising before the effective date of the changes to the NCIP contemplated herein are not waived and remain subject to current dispute resolution mechanisms and remedies, unless otherwise resolved by the parties.
- 4) Project Inspection Issues. The Parties agree to the following changes to the utility-mandated interconnection inspection process.
 1. Within five months of the date of this Agreement, Duke will select a minimum of four contractors from which Interconnection Customers may select to perform the medium-voltage inspection and anti-islanding test.
 2. Duke shall develop and publish a checklist and procedures for both the medium voltage inspection and anti-islanding test. Duke will direct the inspection contractors to exclusively use the checklist and testing procedures to perform the medium voltage audit and the anti-islanding test.
 3. The following fixed fees shall apply to each inspection and or test. These shall be the only cost payable by the Interconnection Customer for the inspection services.

tion	Cost
Medium Voltage Audit #1	\$4,000
Medium Voltage Audit reinspection (if necessary)	\$2,000
Anti-Islanding Test	\$4,000
Anti-Islanding Re-Test (if necessary)	\$2,000

4. In the case that a conditional PTO is issued in lieu of the inspection contractor issuing its full inspection report, the full inspection report with a detailed list of deficiencies needing remedy will be provided within 30 days of the project passing its Anti-Islanding test.