

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. EMP-107, SUB 0
BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

<p>In the Matter of the Application of Halifax County Solar LLC for a Certificate of Public Convenience and Necessity</p>	<p>))))))</p>	<p>HALIFAX COUNTY SOLAR LLC’S BRIEF IN OPPOSITION TO MOTION FOR RECONSIDERATION</p>
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COMES NOW Halifax County Solar LLC (“Halifax” or “the Applicant”), by and through counsel, and files this Opposition to the *Motion of the Public Staff for Reconsideration* (“Motion for Reconsideration”) filed in this docket on July 13, 2020.

The Motion asks the Commission to reopen the record for the receipt of additional evidence on affected system costs related to the Applicant’s proposed Facility (the “Project”); order the filing of supplemental testimony from the Applicant and other parties regarding a potential Upgrade to Duke Energy Progress (“DEP’s”) transmission system (“the DEP Upgrade”) detailed in the Generator Interconnection Affected System Study Report for PJM Interconnection Cluster AC1 (the “Affected System Study”); and amend its June 11, 2020 Order granting Applicant a CPCN (the “CPCN Order”) as necessary based on the new information presented in the parties’ supplemental testimony.

The Applicant understands the Commission’s interest in the issue of Affected System Upgrades and their potential to impact ratepayers, as evidenced by orders entered in other CPCN dockets after the CPCN Order was entered in this case.¹ However, there are no changed

¹ See Docket No. EMP-108 Sub 0, *Order Requiring Additional Testimony*, June 22, 2020; Docket No. EMP-110 Sub 0, *Order Cancelling Expert Witness Hearing and Requiring Additional Testimony* (June

circumstances or “misapprehension or disregard of a fact” that contradict the Public Staff’s initial assessment, and the Commission’s conclusion in granting the CPCN, that the Project meets a public need and is consistent with the public interest.

As discussed further below, Halifax has not been “assigned” the cost of the DEP Upgrade and is not obligated to construct it. And any additional testimony would show that the costs of the DEP Upgrade, if it is constructed, would not be unreasonable or not inconsistent with the public interest in relation to the generation that would rely on the Upgrade. It is very likely that the Public Staff would agree with this assessment, as they have, since filing their Motion for Reconsideration, offered testimony in another CPCN docket concluding that the cost of the DEP Upgrade is not unreasonable.²

The granting of a rehearing would burden the Applicant with delays, expenses, and uncertainty, all of which are materially detrimental to the Applicant’s Project. The Applicant submits that it would be inappropriate and unreasonable for the Commission to re-open the record in this case and extend the proceeding by requiring the submittal of additional testimony on an issue that Applicant had no reason to provide testimony on, as the Commission has never before considered it in a CPCN proceeding and it was not within the scope of issues the Commission directed the Applicant to address in supplemental testimony.

For these reasons the Public Staff’s Motion should be denied.

I. BACKGROUND

22, 2020); Docket No. EMP-110 Sub 0, *Order Requiring Filing of Testimony, Establishing Procedural Guidelines, and Requiring Public Notice* (July 8 2020).

² In the Matter of Application of American Beech Solar, LLC, for a Certificate of Public Convenience and Necessity to Construct a 110-MW Solar Facility in Halifax County, North Carolina, Docket No. EMP-108 Sub 0, *Supplemental Testimony of Jay B. Lucas Public Staff – North Carolina Utilities Commission* (July 22, 2020). As discussed below, the project that seeks a CPCN in that docket is identically to Halifax with respect to the DEP Upgrade.

A. Affected System Upgrades in the PJM Interconnection Process

The proposed Project is located in Dominion Energy's North Carolina service territory and its interconnection is subject to PJM's tariff and interconnection procedures. There are two significant differences between PJM's interconnection procedures and those of North Carolina's regulated utilities that are relevant here.

First, PJM utilizes a "cluster study," rather than a serial interconnection process, to determine the network impacts of potential generators on the transmission systems of the PJM member utilities.³ When a cluster study identifies the need for a network upgrade to accommodate new generation, the study allocates responsibility for the upgrade (both physical and financial) among the generators that contribute to the need, rather than assigning all responsibility to the first generator to "trigger" the need for the upgrade, via project specific allocations.⁴ This interdependency between projects in the queue makes the cluster study interconnection process significantly more complex than the serial interconnection process.

The second important difference is that under PJM's tariff, the cost of network upgrades assigned to specific generators is not reimbursable and is not allocated to ratepayers. Transmission

³ PJM conducts two cluster studies per year, as indicated by the nomenclature PJM uses to designate clusters. Clusters are studied in order. AB1 is conducted first and then AB2. AC1 and AC2 follow accordingly. Historically, clusters make up the projects that filed in a prior six-month period. As the interconnection queues have grown and over time, the study process has become more complex and multiple clusters may be pending in the interconnection process at the same time. PJM may update or "retool" its System Impact Studies as projects withdraw from the queue and system conditions change. Halifax County Solar was assigned queue position AC1-208 and studied in the AC1 cluster. Halifax received its first System Impact Study in December 2017 and an updated study in April 2020.

⁴ The PJM process does not make network upgrades the responsibility of a "first to cause," but rather a shared responsibility of all projects within the cluster that contribute to the network impact. Later-queued projects that contribute to the need for the upgrade are assigned a portion of the cost based on their impact to the overload. As those projects move forward, the financial security required for the "first-to-cause" project is reduced. This process does not apply to Affected System Upgrades. To the Applicant's knowledge DEP has no set method for allocating cost responsibility for such upgrades.

Owners (and by extension their customers) do pay for “baseline upgrades,” which are those that PJM and the Transmission Owner conclude are necessary to resolve system reliability concerns that are *not* attributable to specific generators.

Like North Carolina’s state-jurisdictional interconnection procedures or the standard FERC-jurisdictional interconnection procedures, PJM’s interconnection process also identifies potential impacts to neighboring systems (“Affected Systems”) as a result of the interconnection of new generators. While PJM does not have a clear process for coordinating the study of these impacts where the Affected System Owner is DEP, the Applicant’s understanding is that when a PJM study identifies a potential impact to another system, PJM notifies the owner of the Affected System, which conducts its own assessment (though not necessarily a formal study) of whether the cluster will have an impact, and if so what upgrades may be needed to mitigate that impact.

Although PJM’s tariff provides clear procedures for the study of impacts and upgrades to Transmission Systems in PJM, its processes and timelines for coordination of Affected System Studies with DEP are not clear or transparent.⁵ Nor are there clear criteria for allocating physical or financial responsibility for Affected System Upgrades on neighboring systems. Nor does DEP

⁵ In fact, in an Order issued last year, FERC required PJM, MISO, and SPP to revise their tariffs and Joint Operating Agreements (“JOAs”) to clarify their procedures for coordinating Affected System Studies with other RTO/ISOs, finding that the lack of clarity regarding those procedures rendered the tariffs and JOAs unjust and unreasonable. EDF Renewable Energy, Inc. v. Midcontinent Independent System Operator, Inc., Southwest Power Pool, Inc., and PJM Interconnection, L.L.C., *Order on Complaint and Technical Conference*, 168 FERC ¶ 61,173 (Sept. 19, 2019). As required by FERC, PJM has since published specific procedures for coordinating Affected System Studies with MISO. However, FERC’s Order did not address coordination with traditionally regulated utilities such as DEP, and Halifax is unaware of any published procedures for coordination between DEP and PJM. The only provision of the JOA between PJM and DEP that relates to affected system coordination is Section 9.1.2, which simply requires each party to “Notify the other Party concerning transmission service and generator interconnection activity on its system that it recognizes as potentially impacting to the other Party’s system.” Amended and Restated Joint Operating Agreement Among and Between PJM Interconnection, LLC, and Duke Energy Progress, LLC (July 22, 2019), available at <https://www.pjm.com/directory/merged-tariffs/progress-joa.pdf>.

have published procedures, timelines, or methodologies for conducting Affected System Studies. In short, Affected System Upgrades are studied through a separate and distinct process in which Interconnection Customers enjoy far less transparency and predictability than the normal interconnection process.

B. Procedural Background

On August 30, 2019, Halifax filed an application pursuant to N.C. Gen. Stat. § 62-110.1 and Commission Rule R8-63 for a certificate of public convenience and necessity (CPCN) to construct a 80-MWAC solar photovoltaic (PV) electric generating facility (Facility) to be located in Halifax County, North Carolina, and to be operated as a merchant generating facility.

On September 25, 2019, the Commission issued an *Order Scheduling Hearings, Requiring Filing of Testimony, Establishing Procedural Guidelines, and Requiring Public Notice* (“Scheduling Order”). The Scheduling Order noted that “neither the Applicant’s application nor the direct testimony of the Applicant’s witness Killenburg[sic] addresses the extent to which network upgrades might be required on the Dominion transmission system to accommodate the operation of the proposed facility,” and directed the Applicant to file additional testimony “addressing the amount of network upgrades on Dominion’s transmission system, if any, required to accommodate the operation of the Applicant’s proposed facility.”

Halifax County Solar filed the *Supplemental Direct Testimony of Christopher Killenberg* (“Killenberg Suppl. Test.”) on October 18, 2019. Mr. Killenberg’s supplemental testimony discussed the results of the then operative System Impact Study Report received by the Project in December 2017, which detailed the network upgrades that might be needed on Dominion’s system to accommodate the proposed interconnection. Mr. Killenberg further testified that any New System Upgrade costs allocated by and paid to PJM by Halifax County Solar LLC would not be

eligible for reimbursement, consistent with the term of the PJM Open Access Transmission Tariff. Although the *Scheduling Order* did not direct the Applicant to address the possibility of upgrades on systems other than Dominion's, in the interest of providing a more complete response Mr. Killenberg noted that "It is unclear at present whether the Project will trigger Upgrades on Affected Systems, the cost of which may be eligible for reimbursement. No Affected Systems Study has been conducted at this time." Killenberg Suppl. Test. at 2 n.1.

On October 25, 2019, the Public Staff filed the *Testimony of Jay B. Lucas*, which discussed the Public Staff's view of the Application and recommended that it be approved. In his testimony, Mr. Lucas specifically addressed Mr. Killenberg's testimony on the potential for an affected system upgrade, testifying that "the Public Staff believes that the possibility of the Facility triggering upgrades on affected systems is very remote because the Applicant is constructing a new substation on the 115 kV transmission line that is solely for use by the Facility." Lucas Test. at 6:6-15.

On April 1, 2020, the Public Staff filed a letter with the Commission, noting that the Applicant had satisfied all requirements necessary for the Commission to grant the CPCN, and recommending that the Commission approve the application and grant the CPCN be granted.

On May 8, 2020, the Public Staff contacted Halifax County Solar regarding an Affected System Study (Attachment A to the Motion for Reconsideration) conducted by DEP, which estimated costs for the DEP Upgrade (a reconductoring of DEP's Rocky Mount-Battleboro 115 kV transmission line, which connects DEP's transmission system to Dominion's). The Public Staff explained that it had been "informed by Duke that it had assigned EMP-107, Sub 0, an upgrade, the cost of which will ultimately be allocated to customers." But when it was contacted by the Public Staff, Halifax County Solar had not even *seen* a copy of the Affected System Study,

nor had it been “assigned” the cost of any Affected System Upgrade⁶ -- and in fact, DEP does not even *have* the right to assign the costs of such an Upgrade to a PJM interconnection customer.⁷

Based on this communication, it appeared that the Public Staff was under the mistaken impression that Halifax was responsible for triggering an Affected System Upgrade on DEP’s system, and that Halifax was responsible for funding the Affected System Upgrade and would receive reimbursement for those costs. Consequently, the Applicant engaged in extensive communications with the Public Staff to clarify the following points, discussed further below:

- 1) Halifax was not the “first to cause” the DEP Upgrade and had not been “assigned” the Upgrade by DEP (and in fact no project had committed to construct the DEP Upgrade);
- 2) Rather, within the AC1 cluster, PJM’s study and DEP’s Affected System Study identified five projects, with a total capacity of 495 MW, that contributed to impacts to DEP’s system on the Rocky Mount-Battleboro 115 kV line; and
- 3) Additional projects in PJM’s interconnection queue behind the AC1 cluster would contribute to the same impact on DEP’s system, and would also rely on the proposed Upgrade.

Halifax also engaged in extensive communications with the Public Staff regarding the Levelized Cost of Transmission (“LCOT”) analysis for the Affected System Upgrade. The Applicant and the Public Staff were in active discussions when, on June 11, the Commission issued an *Order*

⁶ The Affected System Study is dated May 6, 2020, but was not provided to the Applicant until May 11.

⁷ An Interconnection Customer (like Halifax and the other projects in the AC1 and later clusters) that contributes to impacts on an Affected System can interconnect to PJM prior to an Affected System Upgrade being completed, but may not be able to deliver its full requested capacity at all times prior to the construction of the Upgrade.

Issuing Certificate for Merchant Generating Facility, which approved the Application and issued a CPCN for the Facility.

The Commission’s Order found that: (1) there is a need for the Halifax Solar Facility in the region, in accord with the provisions of Commission Rule R8-63(b)(3); (2) the Halifax Solar Facility will not have any material impact on the long-range balance of demand for electricity and the generation resources available to meet that demand in North Carolina, nor will it affect the projections of load or the identification of needed generating resources set forth in the integrated resource plans for any public utility subject to the Commission’s jurisdiction; and (3) the Applicant does not expect to fund any costs for transmission network upgrades and that any potentially necessary network upgrade costs paid by the Applicant to PJM would not be eligible for reimbursement.

On July 13, 2020, the Public Staff filed a Motion for Reconsideration requesting that the Commission reopen the record in this docket for the receipt of additional evidence on affected system costs related to the Halifax Solar Facility, and direct the Applicant to file additional testimony including an LCOT analysis for the Affected System Upgrade, discussing other projects included in the AC1 cluster, and addressing “the continued need for the Facility in light of the additional transmission costs discussed in the affected system interconnection study.”

C. The Public Staff’s Testimony and Recommendation in the American Beech CPCN Proceeding

American Beech Solar LLC (“American Beech”) is another proposed merchant plant that is also being studied in PJM’s AC1 cluster, and which is identified in the DEP Affected System Study as contributing to the same impacts on DEP’s system as Halifax County Solar.⁸ In all

⁸ American Beech’s CPCN Application is pending in Docket No. EMP-108 Sub 0.

relevant respects, American Beech and Halifax County Solar are identically situated with regard to the DEP Upgrade.

On June 22, 2020, the Commission issued an Order requiring American Beech to provide supplemental testimony addressing a number of issues, including potential impacts on systems other than PJM's that might be affected by the interconnection of that project. American Beech provided supplemental testimony on July 9, in which it discussed the Affected System Study and the DEP Upgrade.

On July 22, the Public Staff provided supplemental responsive testimony. In its testimony, the Public Staff provided an LCOT calculation for the DEP Upgrade based on the Affected System Study.⁹ The Public Staff calculated an LCOT of \$.90 / MWh for the combined five projects in the original AC1 cluster, including American Beech and Halifax County Solar. The Public Staff compared this figure to benchmark LCOT figures provided in a 2019 Lawrence Berkeley National Laboratory interconnection cost study. The Staff concluded that if the costs of the Upgrade were allocated among the projects in the original AC1 Cluster, the LCOT would be below the average for those projects reviewed in the LBNL Study. Even considering the possibility that not all of the projects in the AC1 cluster will be constructed, the Public Staff concluded that "Overall, the estimated costs currently known for the Facility are close to the range of costs presented in the LBNL Study, especially if at least one other project is constructed." The Public Staff went on to recommend that the Commission grant American Beech's certificate.

Thus, the Public Staff has already recommended approval of a CPCN for another merchant plant that is identically situated to Halifax with respect to the DEP Upgrade that is the subject of

⁹ Docket No. EMP-108 Sub 0, *Supplemental Testimony of Jay B. Lucas Public Staff – North Carolina Utilities Commission* at 9-11.

its Reconsideration motion. Given that the relevant circumstances are nearly identical, there is no reason to anticipate that the Public Staff would provide a different recommendation if reconsideration were granted here.

II. ARGUMENT

A. Standard for Reconsideration

Pursuant to N.C.G.S. § 62-80, “The Commission may at any time upon notice to the public utility and to the other parties of record affected, and after opportunity to be heard as provided in the case of complaints, rescind, alter or amend any order or decision made by it.” The Commission's decision to rescind, alter, or amend an order upon reconsideration is within the Commission's discretion. *State ex rel. Utilities Comm’n v. MCI Telecommunications Corp.*, 132 N.C. App. 625, 630, 514 S.E.2d 276, 280 (1999). However, the Commission cannot arbitrarily or capriciously rescind, alter, or amend a prior order. Rather, there must be some change in circumstances or a misapprehension or disregard of a fact that provides a basis for the Commission to rescind, alter, or amend a prior order. *State ex rel. Utilities Comm’n v. North Carolina Gas Service*, 128 N.C. App. 288, 293-294, 494 S.E.2d 621, 626, *rev. denied*, 348 N.C. 78, 505 S.E.2d 886 (1998). The decision to rescind a previous order “must be made only due to a change of circumstances requiring it for the public interest. In the absence of any additional evidence or a change in conditions, the Commission has no power to reopen a proceeding and modify or set aside an order made by it.” *Id.*

B. There are no changed circumstances that might justify reconsidering the Commission’s findings related to the need for the project.

Although the Public Staff requests rehearing on “the continued need for the Facility in light of the additional transmission costs discussed in the affected system interconnection study,” it has pointed to no changed circumstances to justify revisiting the Commission’s conclusions, in the

CPCN order, that (1) there is a need for the Facility in the region, in accord with the provisions of Commission Rule R8-63(b)(3); or (2) the Facility will not have any material impact on the long-range balance of demand for electricity and the generation resources available to meet that demand in North Carolina, nor will it affect the projections of load or the identification of needed generating resources set forth in the integrated resource plans for any public utility subject to the Commission's jurisdiction. The Affected System Study is irrelevant to these findings and the Public Staff points to no changed circumstances that might justify rehearing or reconsideration on these points. There is no basis whatsoever for reconsidering the Commission's finding of need.

C. There is no change in circumstances that might justify reconsidering the Commission's findings related to the public interest.

As explained by the Public Staff in its Motion, Halifax is not the "first to cause" the DEP Upgrade. Rather, the Affected System Study "determined that the Facility, together with the other projects included in the AC1 Cluster, would cause an overloading issue that would require a full reconductor/rebuild of DEP's Rocky Mount-Battleboro 115 kV Line." Motion for Reconsideration at 5. The five projects in the AC1 Cluster total approximately 495 MW of capacity. In addition to the projects in the AC1 cluster, PJM has also concluded that projects in the AD1, AD2, and later clusters also contributed to this same overload on Duke's system.¹⁰ Thus, there are specific additional projects that PJM has determined will rely on the proposed Upgrade.¹¹

¹⁰ Under PJM's cost allocation procedures, those projects would likely bear some of the cost of the Upgrade if it were on PJM's system. The Applicant has no information concerning DEP's allocation of costs for Affected System Upgrades, though it understands them to be reimbursable if an interconnection customer funds the upgrade.

¹¹ This includes Phase II of the American Beech project (discussed above), which is being studied in the AC2 cluster; Sumac Solar LLC, a proposed 120 MW project in the AD1 cluster that is seeking a CPCN in Docket No. EMP-110 Sub 0; and Sweetleaf Solar LLC, a proposed 94 MW project in the AD1 cluster that is seeking a CPCN in Docket No. EMP-111 Sub 0.

Halifax has no obligation to fund construction of the DEP Upgrades, and has not entered into any agreement with DEP to do so. To the best of the Applicant's knowledge, no single customer has agreed to fund the DEP Upgrades. And the Public Staff has already taken the position in the American Beech proceeding (Docket No. EMP-108 Sub 0) that the mere fact that a project will rely on the DEP Upgrade in question is not sufficient reason to deny the CPCN. Because there are no changed circumstances concerning the Applicant's cost responsibility for reimbursable upgrades, or that would otherwise justify rescinding its CPCN, reconsideration should be denied.

D. Even if the Commission were to re-open the record, the evidence would show that granting Halifax County's CPCN would not impose unreasonable costs on ratepayers.

Even if Halifax were responsible for the costs of the DEP Upgrade and the Commission were to grant rehearing, the evidence would show that the costs of the DEP Upgrade are not unreasonable in relation to the generation that would rely on it. In its *Order Denying Certificate Of Public Convenience And Necessity For Merchant Generating Facility*, in Docket No. EMP-105 Sub 0 (the "Friesian" application), the Commission found that the use of the LCOT "provides a benchmark as to the reasonableness of the transmission network upgrade cost associated with interconnecting a proposed new generating facility." In denying a CPCN for the proposed facility, the Commission cited an LCOT value of \$62.94/MWh for the Network Upgrades required by the Friesian project, as calculated by the Public Staff.

By contrast, the Public Staff, in its recent testimony on the American Beech CPCN, calculated an LCOT for the related potential affected system costs of \$.90/MWh for the DEP Upgrades, based on the 495 MW of AC1 projects detailed in the Affected System Study (including

Halifax Solar).¹² As indicated by the Public Staff, this is well below the benchmark values for LCOT endorsed by the Commission in the Friesian proceeding (and approximately 1/70th the calculated LCOT value for the Friesian project). The Public Staff noted that the potential costs of the DEP Upgrade (which American Beech and Halifax are in identical positions with respect to) compared favorably to its benchmark values. On this basis, the Public Staff recommended that the Commission approve the application and issue a CPCN for the American Beech project.

Halifax has also conducted its own analysis of the LCOT for the DEP Upgrade, the details of which are set forth in the attached Affidavit of Christopher Killenberg, Mr. Killenberg states in his Affidavit that:

- (1) Attempting to replicate the LCOT calculation methodology used by the Public Staff in support of its testimony in the Friesian docket, Halifax calculated LCOT of the DEP Upgrade for the projects in the AC1 cluster as \$0.97/MWh.
- (2) Because it appears uncertain whether some of the projects in the AC1 cluster will achieve commercial operation based on the status of their CPCN applications with the Commission, Halifax also performed alternative LCOT calculations assuming other sets of projects associated with the DEP Upgrade. Considering only the projects that have active merchant plant CPCN applications with the Commission (which includes queue positions in the AC1, AC2, and AD1 cluster), Halifax calculated an LCOT of

¹² Although not all of the projects in the AC1 cluster are currently pursuing a CPCN, the Applicant has no reason to believe that the others will not pursue and achieve commercial operation. Regardless, adding in the American Beech Phase II, Sumac, and Sweetleaf projects from the AD1 cluster (each of which has a CPCN application pending before the Commission) brings the total capacity of projects sharing in the upgrade to 497 MW. This is without considering additional projects that have not filed (or do not need to file) merchant plant CPCN applications with this Commission.

\$1.00 / MWh for the DEP Upgrade. To the best of Halifax's knowledge, these other projects are not speculative and are committed to achieving commercial operation.

Affidavit of Christopher Killenberg ¶¶ 7-17.

The Public Staff's LCOT calculation for American Beech is consistent with these results, and Halifax submits that the Public Staff's analysis and conclusions for American Beech should apply to the Halifax project.¹³ American Beech and Halifax are identically situated with respect to the potential DEP Upgrade and so the LCOT result for both projects would be the same. So the Public Staff's own testimony indicates that the potential DEP Upgrade would not impose unreasonable costs on ratepayers if it were constructed.

E. It would be unreasonable and unduly burdensome to Halifax Solar to grant rehearing on this issue.

Rehearing or reconsideration is not only unwarranted based on the circumstances discussed above; it would be unfair and prejudicial to require the Applicant to go through rehearing. Rehearing will further delay the project, causing material harm to the Applicant. Given the Public Staff's position on the DEP Upgrade *vis-à-vis* the identically-situated American Beech project, it is unclear what the Public Staff intends Rehearing to accomplish.

Granting rehearing or reconsideration would impose significant hardship on the Project. Once the Commission issued the CPCN Order, Halifax Solar began taking action in reliance on its regulatory approval. For example, it signed an Interconnection Services Agreement with PJM and paid \$251,515 to fund construction under that agreement. If the Commission were ultimately to rescind the Project's CPCN 60% of this deposit would be forfeit.

¹³ Halifax does believe that the actual LCOT value for the DEP Upgrades is likely even lower than \$.90/MWh, because there are additional (non-speculative) projects in later clusters that will also rely on the Upgrade.

Even if the Commission were to uphold its CPCN Order after rehearing, the significant delays caused by rehearing would have severe impacts on the Project. The Project has executed a power purchase agreement (“PPA”) with a corporate buyer in PJM for all of the 80 MW Facility’s output. This PPA obligates the Project to come online by December 31, 2022. The Applicant cannot obtain financing for construction of the Project until any uncertainty as to the status of its CPCN has been resolved, and the Project is effectively in a holding pattern (though continuing to incur real estate costs, interconnection costs, and other project related costs) while the proceedings are pending. Rehearing would involve significant delays, which could endanger the ability of the Project to meet its PPA obligations. The Project is required to further fund its PJM interconnection in an amount of \$3,418,423 in October 2020. Raising these funds takes a significant amount of time and the Applicant is unable to secure this financing while the CPCN is facing reconsideration. If the Project cannot meet these obligations, it will lose its position in the PJM interconnection queue, essentially killing the Project and creating significant financial losses for the Applicant.

It should also be noted that the Public Staff’s Motion asks the Commission to unwind a properly granted CPCN, re-open the record, and require the Applicant to submit additional evidence on an issue (Affected System Upgrades) that the Commission has never before considered in a CPCN proceeding.¹⁴ While it is within the Commission’s authority to order projects with currently pending applications to provide testimony on this issue (the Public Staff has filed a motion asking the Commission to require such testimony in the CPCN docket of another

¹⁴ The Commission only clarified how it would consider “traditional” network upgrades (i.e. those to the interconnecting utility’s system) in the *Friesian* Order, issued the same day as the Halifax CPCN Order. Docket No. EMP-105 Sub 0, *Order Denying Certificate Of Public Convenience And Necessity For Merchant Generating Facility* (June 11, 2020).

project in the AC1 cluster¹⁵), to order the same testimony after a CPCN has been granted would be unreasonable and unfair. It would be especially unfair to require reconsideration given that: (a) the Commission now has before it the critical facts relevant to the potential DEP Upgrade, and (b) the Public Staff has already concluded that, in its view, the DEP Upgrade would not impose unreasonable costs on ratepayers, and that it does not provide a basis for denying a CPCN to a project identically situated to Halifax.


III. CONCLUSION

Although the Applicant acknowledges the Public Staff's legitimate concern about the potential for Affected System Upgrades to impose unreasonable costs on Duke's retail ratepayers, in this case those concerns are simply unfounded, given that Staff has already evaluated the potential costs here and determined they are not unreasonable. To the extent that the DEP Upgrade may ultimately be constructed, the costs of that Upgrade are entirely reasonable in comparison to cost benchmarks previously endorsed by the Commission. Moreover, there has been no change of circumstance that would justify the prejudicial and damaging impact of granting rehearing or reconsideration of the Applicant's CPCN. Accordingly, the Public Staff's motion should be denied.

¹⁵ Docket No. EMP-101 Sub 0, *Motion of the Public Staff for an Order Requiring the Filing of Supplemental Testimony* (July 29, 2020).

Respectfully submitted, this the 3rd day of August 2020.

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**STATE OF NORTH CAROLINA
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BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of the Application of Halifax County Solar LLC for a Certificate of Public Convenience and Necessity)))))	AFFIDAVIT OF CHRISTOPHER KILLENBERG
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The undersigned, being duly sworn, deposes and says:

1. My name is Christopher Killenberg. I am a resident of Rhode Island. I am over 21 years of age and competent to make this affidavit.
2. I am Regional Development Director for Community Energy Solar LLC, a Delaware limited liability company (“Community Energy”), a solar energy development company based in Radnor, Pennsylvania with an office in Chapel Hill, NC. Community Energy is developing the Halifax County Solar project (“Halifax”), which has sought and been granted a CPCN in this docket.
3. The purpose of my affidavit is to provide additional information to the Commission regarding the levelized cost of transmission (“LCOT”) analysis for the proposed reconductoring of Duke Energy Progress’s (“DEP’s”) Rocky Mount-Battleboro 115 kV line (“the DEP Upgrade”), as described in the Generator Interconnection Affected System Study issued by Duke Energy Progress (“DEP”) and dated May 6, 2020 (the “Affected System Study”). I also discuss the other projects included in the AC1 Cluster discussed in the study, as well as additional projects that I believe should be considered in an LCOT analysis.

The Affected Systems Cluster Study

4. Halifax County Solar (“Halifax”) is part of cluster of five North Carolina solar projects in PJM’s AC1 queue, (the “AC1 Cluster”) all of which combined require an upgrade to DEP’s Rocky Mount – Battleboro 115 kV transmission line (“the DEP Upgrade”). Over the years, DEP has made incremental upgrades to this line. The current proposal is a comprehensive rebuild of this line at an estimated cost of \$23,204,593.

5. On May 11, 2020, Halifax received the Affected System Study from DEP. The AC1 Cluster of five projects cited in the Affected System Study represents 495 MW of new generation. While an upgrade to the Rocky Mount – Battleboro line could be required for any of these projects individually, the proposed comprehensive re-build can accommodate all of these projects as well as other projects in subsequent PJM clusters.

6. Studies for additional projects in PJM’s AC2 and AD1 queues also identify the need for this upgrade. Accordingly, the estimated upgrade cost should not be viewed as corresponding to a single project. Rather, the Affected System Upgrade is shared across a number of projects representing a substantial amount of new generation.

LCOT Analysis of the DEP Upgrade

7. Whether the costs of the proposed Affected System Upgrade are financed by a single project, a few projects, or by many, the benefits are shared across multiple projects. When the capacity of those other projects is considered, the estimated cost of the Affected System Upgrade (on a per-MW or per-kWh basis) is entirely reasonable and in line with cost benchmarks relied on by the Public Staff.

8. Considering only the AC1 Cluster Projects, the costs of the DEP Upgrade fall at the low end of the spectrum of benchmark ratios recently cited in the Public Staff’s testimony in the Friesian CPCN proceeding.

9. Attempting to follow the LCOT calculation methodology in the Friesian testimony by Public Staff, Halifax County has calculated the per-MW cost and LCOT of the DEP Upgrade for the AC1 Cluster as follows:

<u>Project</u>	<u>AC1 Cluster (5 projects)</u>
Nameplate (MW _{ac})	495
Network Upgrades (\$M)	\$ 23
Network Upgrades (\$/kW)	\$ 47
LCOT (\$/MWh)	\$ 0.97

10. In testimony filed on July 22, 2020, in the American Beech Solar CPCN proceeding (Docket No. EMP-108 Sub 0), the Public Staff provided its LCOT calculation for the same Upgrade based on the Affected System Study. The Public Staff calculated an LCOT of \$.90/MWh for the combined five projects in the original AC1 cluster, including American Beech and Halifax County Solar. (Given that Halifax’s calculations above are based on an attempt to replicate Public Staff methodology, the Applicant proposes that the Public Staff testimony should be deemed most accurate.)

11. Halifax is aware that some of the projects in the AC1 Cluster might have uncertain prospects based on the status of their CPCN applications with the Commission. Based on publicly-available filings, here is a summary of the current regulatory status of the AC1 Cluster projects identified in the Affected System Study:

PJM Queue No.	Project Name	CPCN Docket	CPCN Status	Capacity
AC1-034	Edgecombe Solar	EMP 101, Sub 0	Pending	75 MW
AC1-086	Gaston Green Acres	--	No application filed	180 MW
AC1-098/099	American Beech Solar	EMP-108, Sub 0	Pending	80 MW
AC1-189	Bethel NC 11 Solar	EMP-102, Sub 0	Closed	80 MW
AC1-208	Halifax County Solar	EMP-107, Sub 0	CPCN granted	80 MW
Total capacity				495 MW

12. If, for the purposes of the LCOT analysis, we exclude AC1-086 and AC1-189 due to their CPCN application status, the remaining three projects are Edgecombe Solar, American Beech Solar, and Halifax County Solar, with a total capacity (in the AC1 cluster) of 235 MW. However, the total requested capacity of American Beech Solar's CPCN is 110 MW, 30 MW of which is also being studied in the AC2 cluster under queue no. AC2-083/084. For purposes of an LCOT analysis, then, American Beech should be considered a 110 MW project. The total capacity of these projects is 265 MW, which would yield an LCOT of \$1.82/MWh.

13. However, the LCOT analysis should also consider two other projects that have pending CPCN applications, Sumac Solar and Sweetleaf Solar, which are being studied in the AD1 cluster, and whose PJM System Impact Studies identify impacts to the Rocky Mount-Battleboro 115 kV line, and thus the need for the DEP Upgrade:

PJM Queue No.	Project Name	CPCN Docket	CPCN Status	Capacity
AD1-056/AD1-057	Sweetleaf Solar	EMP-111 Sub 0	Pending	94 MW
AD1-022/AD1-023	Sumac Solar	EMP-110 Sub 0	Pending	120 MW

14. When Sumac and Sweetleaf are considered, the total capacity of the projects reliant on the DEP Upgrade is 479 MW, and the LCOT is approximately \$1.00/MWh.

15. For comparison, these are the benchmark LCOT figures from the Public Staff's testimony in the Friesian proceeding:

Table 1

Project	Friesian¹⁹ (a)	MISO (Solar) (b)	PJM (Solar) (c)	EIA (Solar) (d)
Nameplate (MW _{AC})	70	3,277	10,057	2,187
Network Upgrades (\$M)	\$ 223	\$ 180	\$ 1,170	\$ 220
Network Upgrades (\$/kW)	\$ 3,186	\$ 56	\$ 116	\$ 103
LCOT (\$/MWh)	\$ 62.94	\$ 1.56	\$ 3.22	\$ 2.21

Notes

- (a) For Friesian, Network Upgrades represent estimated costs from LGIA. Projected capacity factor is from the CPCN application, and 0.4% annual degradation is assumed. To ensure parity with the study results, we assume a 4.4% discount rate and a 60-year transmission asset life for the LCOT calculation.
- (b) From Table 2 of the LBNL Study, representing 33 solar projects totaling 3,277 MW.
- (c) From Table 3 of the LBNL Study, representing 134 solar projects totaling 10,057 MW.
- (d) From Table 4 of the LBNL Study, representing 304 solar projects totaling 2,187 MW.

Table 2

Project	Friesian	NTE Kings Mtn (a)	NTE Reidsville (b)	Q398 (c)	PJM (Natural Gas) (d)
Nameplate (MW _{AC})	70	480	500	1,235	38,733
Network Upgrades (\$M)	\$ 223	\$ 20	\$ 59	\$ 256	-
Network Upgrades (\$/kW)	\$ 3,186	\$ 43	\$ 118	\$ 197	\$ 37
LCOT (\$/MWh)	\$ 62.94	\$ 0.33	\$ 0.92	\$ 1.53	\$ 0.34

Notes

- (a) A 70% capacity factor is assumed, and a 4.4% discount rate is used to maintain parity with the LBNL Study results.
- (b) Includes \$3.5 M in interconnection costs. A 70% capacity factor is assumed, and a 4.4% discount rate is used to maintain parity with the LBNL Study results. Network Upgrade cost information derived from August 26, 2019, Initial Pre-Hearing Brief of DEP in Docket No. EMP-105, Sub 0, footnote 11.
- (c) Facility characteristics and upgrade size found in the System Impact Report for Q398.
- (d) From Table 3 of the LBNL Study, representing 98 natural gas projects totaling 38,733 MW.

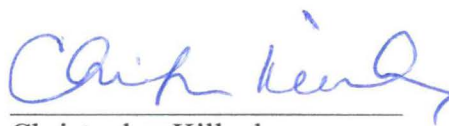
16. As indicated, the LCOT of the DEP Upgrade is well below the benchmark MISO, PJM, and EIA figures, and is not out of line with the upgrade costs associated with the previously-approved NTE projects. Even with the most conservative set of assumptions about the projects that would rely on the DEP Upgrade, the LCOT for the Upgrade compares very favorably to the PJM and EIA LCOT benchmarks. The DEP Upgrade is a fraction of the cost of the Friesian upgrades, both in absolute terms and on a per megawatt-hour basis.

17. To the best of Halifax Solar's knowledge, these other projects included in Halifax's LCOT analysis are committed to completion. Based on publicly available information, these projects all appear to be quite advanced in the development process. For example, they each have

invested and are continuing to invest significant time and money on site control, interconnection, site studies, engineering, permitting, and the CPCN application process, so we have no reason to believe that the developers of those projects are not fully committed to their development.

FURTHER THE AFFIANT SAYETH NOT.

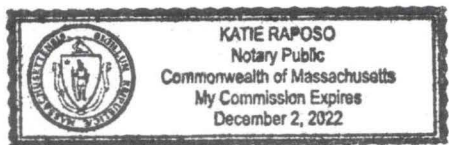
This the 02D day of August, 2020.



Christopher Killenberg
Community Energy Solar LLC

Sworn and subscribed before me

This the 3rd day of August 2020.



Notary public

My commission expires: 12-2-2022

CERTIFICATE OF SERVICE

This is to certify that the undersigned has this day served the foregoing **BRIEF IN OPPOSITION TO MOTION FOR RECONSIDERATION** upon the following by electronic mail as follows:

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This the 3rd day of August, 2020.



Benjamin L. Snowden