

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. EMP-107, SUB 0

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of	
Application of Halifax County Solar LLC for) MOTION OF THE
a Certificate of Public Convenience and) PUBLIC STAFF FOR
Necessity to Construct an 80-MW Solar) RECONSIDERATION
Facility in Halifax County, North Carolina)

NOW COMES THE PUBLIC STAFF – North Carolina Utilities Commission (Public Staff), by and through its Executive Director, Christopher J. Ayers, and respectfully moves the North Carolina Utilities Commission (Commission) to reconsider its June 11, 2020 Order Issuing Certificate for Merchant Generating Facility in light of new information regarding affected system costs associated with the project which came to light following of the Public Staff’s filing of its testimony and recommendation in this docket. In support of this motion, the Public Staff respectfully shows the Commission the following:

1. On August 30, 2019, Halifax County Solar LLC (Applicant) 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 an 80-MW_{AC} solar photovoltaic (PV) electric generating facility (Facility) to be operated as a merchant generating facility and to be located in Halifax County, North Carolina. The Facility will interconnect with the electric transmission system owned by Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina

(Dominion), affording it access to the PJM regional transmission organization. With the application, the Applicant filed the direct testimony of Christopher Killenberg.

2. On September 16, 2019, the Public Staff filed a Notice of Completeness pursuant to Commissioner Rule R8-63(d). The Public Staff stated that it had reviewed the application and considered it to be complete, and requested that the Commission issue a procedural order setting the application for hearing, requiring public notice pursuant to N.C.G.S. § 62-82, and addressing other procedural matters.

3. On September 25, 2019, the Commission issued an Order Scheduling Hearing, Requiring Filing of Testimony, Establishing Procedural Guidelines and Requiring Public Notice (Scheduling Order). Among other things, the Scheduling Order established guidelines for discovery, scheduled a hearing for the purpose of receiving public and expert witness testimony on November 7, 2019, in Halifax, North Carolina, and requiring 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.”

4. On October 18, 2019, the Applicant filed the supplemental direct testimony of Mr. Killenberg stating that the initial System Impact Study for the Facility showed it would require network upgrades at a cost of \$32,778,412, but that several prior-queued projects subsequently withdrew from the PJM queue, with the result that the Facility would either not require the network upgrades or

would not be the first facility to cause the need for the upgrades. Mr. Killenberg's supplemental direct testimony further stated that the Applicant did not expect to incur any cost responsibility for network upgrades because a major reconductoring project for which the Applicant was initially allocated a portion of the cost had been approved by PJM as a baseline project that would be funded by PJM. Mr. Killenberg stated in addition that network upgrade costs allocated by PJM and paid to PJM by the Applicant would not be eligible for reimbursement in keeping with the terms of the PJM Open Access Transmission Tariff. Finally, in a footnote, Mr. Killenberg stated, "It is unclear at present whether the [Facility] 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."

5. On October 25, 2019, the Public Staff filed the testimony of Jay B. Lucas, an engineer in the Public Staff's Electric Division. Based on the supplemental direct testimony of Mr. Killenberg, Mr. Lucas stated in his testimony that he did not have any concerns regarding the Applicant's testimony on network upgrades at that time. However, Mr. Lucas noted that, if the potential for significant network upgrades that could be borne by the using and consuming public arose in the future, "the Public Staff would re-evaluate its position on this issue."

6. On October 28, 2019, the Applicant filed an affidavit of publication from The Daily Herald, a newspaper published in Roanoke Rapids, stating that publication of notice of the public witness hearing was completed October 22, 2019. The Commission did not receive any complaints regarding the Facility.

7. On November 6, 2019, the Commission issued an order cancelling the November 7, 2019 hearing, and admitting into the record the pre-filed testimonies of Mr. Killenberg and Mr. Lucas.

8. Also on November 6, 2019, the State Clearinghouse filed comments from the Department of Natural and Cultural Resources recommending that the Applicant conduct a comprehensive archaeological survey of the project area.

9. On March 13, 2020, the State Clearinghouse filed comments from the Department of Natural and Cultural Resources indicating that the project, as designed, would not impact a nearby cemetery or any historic properties eligible for listing in the National Register of Historic Places. The cover letter from the State Clearinghouse indicated that, because of the nature of the comments, no further State Clearinghouse review action by the Commission was required for compliance with the North Carolina Environmental Policy Act.

10. On April 1, 2020, the Public Staff filed a letter stating that it believed the Applicant had satisfied all the requirements necessary for the Commission to grant the CPCN. The Public Staff further stated that it had not received any protests or other comments regarding the application. Based on the information available at the time, the Public Staff recommended that the Commission approve the application and grant the CPCN.

11. After it filed its letter recommending that the Commission grant the CPCN for the Facility, but before the Commission issued its order described below on June 11, 2020, the Public Staff learned that Duke Energy Progress, LLC (DEP),

had conducted an affected system interconnection study for PJM Interconnection Cluster AC1 (AC1 Cluster), which the Facility is a part of. The May 6, 2020 study, a copy of which is included with this motion as Attachment A, has not previously been filed in the docket. Through the study, DEP 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. The study estimated the cost to DEP of these improvements to be approximately \$23 million.

12. Following its receipt of the affected system interconnection study, the Public Staff sought additional information from DEP and the Applicant regarding the study. On June 11, 2020, while the Public Staff was still gathering additional information and analyzing the cost implications of the study for the Facility, the Commission issued an order granting the Applicant a CPCN for the construction of the Facility (June 11 Order). In its June 11, 2020 Order, the Commission found that:

Finally, based on the testimony of Applicant witness Killenberg and Public Staff witness Lucas, the Commission finds that 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. The evidence indicates that the possibility the Facility will require any transmission network upgrades is remote because the Applicant will be constructing a new substation on the 115-kV transmission line to which it will be connected, and that substation will be for the sole use of the Facility.

13. The new information described in the AC1 Cluster study regarding the transmission upgrade costs associated with the Facility is not consistent with the information available to the Public Staff when witness Lucas filed his testimony in this docket or when the Public Staff recommended the Commission grant the Applicant the applied for CPCN. Furthermore, the information was not available to the Commission when it issued its June 11 Order granting the CPCN for the Facility. The new information raises questions as to whether public convenience and necessity requires that the CPCN be granted.

14. N.C.G.S. § 62-80 provides:

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. Any order rescinding, altering or amending a prior order or decision shall, when served upon the public utility affected, have the same effect as herein provided for original orders or decisions.

While the Commission's decision to rescind, alter or amend its prior order pursuant to N.C.G.S. § 62-80 is within the Commission's discretion, the Commission's decision to do so must be based upon some change in circumstances or a misapprehension or disregard of a fact. State ex re. Utilities Comm'n v. North Carolina Gas Service, 128 N.C. App. 288, 293-94, 494 S.E.2d 621, 625, rev. denied, 348 N.C. 78, 505 S.E.2d 886 (1998).

The information contained in the DEP Generator Interconnection Affected System Study Report for PJM Interconnection Cluster AC1 was not available to

the Commission or part of the record in this proceeding at the time it granted the CPCN for the Facility. The Public Staff contends that this new information serves as an appropriate basis for the Commission to reconsider its decision granting the Applicant a CPCN and, further, that it is in the public interest that the Commission's decision whether to grant the CPCN for the Facility take into account the most current and accurate information regarding affected system costs. For these reasons, the Public Staff respectfully requests that the Commission exercise its authority pursuant to N.C.G.S. § 62-80 to reopen the record in this docket for the receipt of additional evidence on affected system costs and, if the Commission deems it necessary, reconsider its June 11 Order granting the CPCN for the Facility.

WHEREFORE, the Public Staff moves:

1. That the Commission reopen the record in this docket for the receipt of additional evidence on affected system costs related to the Facility.
2. That the Commission order the Applicant to file supplemental testimony addressing the affected system costs detailed in DEP's Generator Interconnection Affected System Study Report for PJM Interconnection Cluster AC1 submitted with this motion as Attachment A. The supplemental testimony should include (1) the levelized cost of transmission (LCOT) analysis for the study consistent with the Commission's Order Denying Certificate of Public Convenience and Necessity for Merchant Generating Facility issued in Docket No. EMP-105, Sub 0, on June 11, 2020, and (2) a discussion of the other projects included in the AC1 Cluster discussed in the study and the Applicant's LCOT analysis, (3) updated

testimony concerning the continued need for the Facility in light of the additional transmission costs discussed in the affected system interconnection study.

3. That the Commission afford the Public Staff and any other interested parties the opportunity to file additional testimony in response to the supplemental testimony filed by the Applicant.

4. That the Commission amend its Findings of Fact and Conclusions from its June 11, 2020 Order granting Applicant a CPCN as necessary and issue a new order based on the new information presented in the parties' supplemental testimony.

This the 13th day of July, 2020.

PUBLIC STAFF
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Electronically submitted
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CERTIFICATE OF SERVICE

I certify that I have served a copy of the foregoing Motion on all parties of record in accordance with Commission Rule R1-39, by United States mail, postage prepaid, first class; by hand delivery; or by means of facsimile or electronic delivery upon agreement of the receiving party.

This the 13th day of July, 2020.

Electronically submitted
/s/ Megan Jost

Generator Interconnection Affected System Study Report

PJM Interconnection Cluster AC1



**May 6, 2020
Duke Energy Progress
Transmission Department**

PURPOSE

The purpose of this study was to determine under what conditions the DEP transmission system can accommodate PJM's interconnection cluster AC1. Cluster AC1 includes generation throughout the PJM interconnection, but only those with an impact on the DEP system were included in this study. The size and in-service dates of the projects vary. The following PJM queue requests are included in this analysis:

AC1-034
AC1-086
AC1-098/099
AC1-189
AC1-208

ASSUMPTIONS

The following affected system study results are from a PJM power-flow model that reflects specific conditions of the system at points in time consistent with the generator interconnection requests being evaluated. The cases include the most recent information for load, generation additions, transmission additions, interchange, and other pertinent data necessary for analysis. Future years may include transmission, generation, and interchange modifications that are not budgeted for and for which no firm commitments have been made. Further, DEP retains the right to make modifications to power-flow cases as needed if additional information is available or if specific scenarios necessitate changes. For the systems surrounding the study area, data is based on the ERAG MMWG model. The suitability of the model for use by others is the sole responsibility of the user. Prior queued generator interconnection requests were considered in this analysis.

The results of this analysis are based on the Interconnection Customer's queue requests including generation equipment data provided. If the facilities' technical data or interconnection points to the transmission system change, the results of this analysis may need to be reevaluated.

RESULTS

Power Flow Analysis Results

Facilities that may require upgrade within the first three to five years following the in-service date are identified. Based on projected load growth on the DEP transmission system, facilities of concern are those with post-contingency loadings of 95% or greater of their thermal rating and low voltage of 0.92 pu and below, for the requested in-service year. The identification of these facilities is crucial due to the construction lead times necessary for certain system upgrades. This process will ensure that appropriate focus is given to these problem areas to investigate whether construction of upgrade projects is achievable to accommodate the requested interconnection service.

Contingency analysis study results show that interconnection of these generation facilities result in the following thermal issue on the DEP system. Based on study results for 2020 summer, Table 1 shows thermal facility loadings:

Table 1: Power Flow Thermal Results

Transmission Facility	Loading %	Contingency
Rocky Mount – Battleboro (DVP) 115 kV Line	160	Rocky Mount-Hathaway (DVP) Double Circuit 230 kV Lines

Estimate of Resolutions for Power Flow Impacts

The DEP Rocky Mount-Battleboro 115 kV Line will need to be reconducted with 1590 ACSR conductor or equivalent. All ancillary equipment, including any breakers, wave traps, and CT ratios at both ends of the line will need to be updated to 2000A or greater.

Reconductor

Description: Reconductor/rebuild 8.5 miles of the DEP Rocky Mount-Battleboro 115 kV Line to 1590 ACSR conductor or equivalent
Estimated Cost: \$21,980,250 (DEP cost only)

Line Equipment upgrades

Description: Upgrade any ancillary line equipment at both the DEP and DVP ends of the line to 2000A or greater to enable the full conductor rating.
Estimated Cost: \$658,377 (DEP cost only)

NC Utility Tax(2.5%): \$565,966

Total Power-flow Cost Estimate: **\$23,204,593 (DEP cost only)**

Estimated Schedule: 12/31/2022

SUMMARY

This Generator Interconnection Affected System Study assessed the impact on the Duke Energy Progress system of new generation facilities interconnecting to the Dominion transmission system as part of the PJM AC1 cluster. Power flow analysis found an overloading issue that must be mitigated. A full reconductor/rebuild of the Rocky Mount-Battleboro 115 kV Line will be necessary. Estimates are that the Rocky Mount-Battleboro 115 kV Line can be upgraded by December 31, 2022 if a written agreement to proceed is obtained by July 4, 2020.

Power-flow	\$23,204,593
Stability	\$0
Short Circuit	\$0
<u>Interconnection</u>	<u>\$0</u>
Total Estimate	\$23,204,593

Study Completed by: William Quaintance
Bill Quaintance, PE, Duke Energy Progress

Reviewed by: Mark Byrd
Mark Byrd, PE, Duke Energy Progress