

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. EMP-115, SUB 0

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of	
Application of Cherry Solar, LLC, for a)
Certificate of Public Convenience and)
Necessity to Construct a 180 MW Solar)
Facility in Northampton County, North)
Carolina)
	PROPOSED ORDER ISSUING CERTIFICATE FOR MERCHANT GENERATING FACILITY

BY THE COMMISSION:

PROCEDURAL HISTORY

On November 13, 2020, Cherry Solar LLC (Cherry or Applicant) filed an application (the Application) for a certificate of public convenience and necessity (CPCN) to construct a 180 MW_{AC} solar photovoltaic electric generating facility on approximately 1,425 acres of land in Northampton County, North Carolina, for operation as a merchant plant (Facility or Plant). Cherry pre-filed the direct testimony of its witness Linda Nwadike (Nwadike) along with the Application.

On November 24, 2020, the Public Staff – North Carolina Utilities Commission (Public Staff) filed a Notice of Completeness stating that the Public Staff reviewed the application as required by Commission Rule R8-63(d) and that the Public Staff considers the application to be complete. In addition, the Public Staff requested that the Commission issue a procedural order setting the application for hearing, requiring public notice pursuant to N.C. Gen. Stat. § 62-82, and addressing any other procedural matters.

On December 18, 2020, the Commission issued an Order Scheduling Hearings, Requiring Filing of Testimony, Establishing Procedural Guidelines, and Requiring Public Notice (Scheduling Order). In addition to setting a schedule for the pre-filing of testimony, the Scheduling Order required Cherry to address various matters including construction costs, interconnection studies, and offtake agreements.

Also on December 18, 2020, Commission Staff sent a copy of the Scheduling Order to the State Clearinghouse of the North Carolina Department of Administration (State Clearinghouse).

On January 13, 2021, both Cherry and the Public Staff confirmed their consent to a remote public witness hearing.

On January 21, 2021, Cherry filed its Affidavit of Publication of the Notice of Public Witness Hearing.

On January 25, 2021, the State Clearinghouse filed comments in the docket noting that the various state agencies responsible for compliance with the North Carolina Environmental Policy Act (NCEPA) requested additional information before State Clearinghouse's concurrence with the Application. Among other things, the North Carolina State Historic Preservation Office (NCSHPO) requested that Cherry conduct a comprehensive archaeological survey to identify and evaluate the significance of archaeological sites and cemeteries that the project could damage or destroy.

On January 26, 2021, the Commission issued an Order Canceling Public Witness Hearing, canceling the hearing scheduled on January 27, 2021, for the purpose of receiving public witness testimony.

On March 11, 2021, Cherry prefiled supplemental testimony of Nwadike. Nwadike's testimony discussed construction costs, including Network Upgrades and Affected Systems Upgrade costs, levelized cost of transmission (LCOT), interconnection, and the Plant's various study reports issued by PJM Interconnection, LLC (PJM) and Duke Energy Progress, LLC (DEP).

On March 31, 2021, because of a conflict on the Commission calendar, the Presiding Commissioner issued an Order rescheduling the hearing for the purpose of receiving expert witness testimony to Wednesday, May 26, 2021, at 10:00 a.m., and stating that the hearing would be held remotely via Webex.

On April 14, 2021, the Public Staff filed the testimony and exhibits of Jay B. Lucas (Lucas). In his testimony witness Lucas recommended that the Commission grant Cherry's CPCN subject to certain conditions.

On April 28, 2021, Cherry filed a letter in the docket indicating it would not object to the issuance of the requested CPCN subject to the conditions recommended in witness Lucas' testimony. In the letter, Cherry also confirmed it engaged consultants to perform the archaeological study NCSHPO requested, and it stated it would file the study relating to the proposed site in the docket once it was complete.

On May 10, 2021, Cherry filed a Consent Motion to Excuse Witnesses, Admit Testimony and Exhibits, and Cancel Hearing. In its Motion, Cherry reiterated its willingness to accept a CPCN issued by the Commission, subject to the conditions as set out in Mr. Lucas's testimony. Cherry further stated there are no disputed issues between the parties, and the parties have agreed to waive cross-examination of all witnesses. Cherry requested that the Commission cancel any further hearings in this docket. Cherry further stated that the Public Staff consents to its motion.

On May 12, 2021, Public Staff and Cherry filed their respective consents to a remote hearing.

On May 19, 2021, the Presiding Commissioner issued an Order Canceling Expert Witness Hearing consistent with the May 10, 2021 Consent Motion to Excuse Witnesses, Admit Testimony and Exhibits, and Cancel Hearing.

On November 4, 2021, the Public Staff filed a Motion for Leave to File Supplemental Testimony. In support of its motion, the Public Staff stated, on October 1, 2021, the Federal Energy Regulatory Commission (FERC) rejected an Affected System Operator Agreement (ASOA) between DEP and another interconnection customer and that FERC's rejection of the ASOA between DEP and American Beech may impact future ASOAs and reimbursements between DEP and other generators, including Cherry. Therefore, the Public Staff sought to file supplemental testimony after it reviewed and evaluated FERC's response to the Request for Rehearing. The Public Staff requested it be allowed to file supplemental testimony on or before December 17, 2021 and that Cherry be allowed to file reply testimony on or before January 13, 2022.

On November 5, 2021, the Commission issued its Order Granting Public Staff's Motion to File Supplemental Testimony.

On December 17, 2021, the Public Staff filed the supplemental testimony of witness Lucas recommending that the Commission deny Cherry's CPCN application and, in the event the Commission disagreed, imposing certain conditions.

On January 13, 2022, Cherry filed the reply supplemental testimony of witness Nwadike. In summary, witness Nwadike testified¹ that Cherry disagreed with the concerns raised by Public Staff witness Lucas and that Cherry would agree to the conditions identified in witness Lucas's testimony for granting the CPCN.

On August 1, 2022, Cherry filed its Notice of Change of Address.

On May 5, 2023, Cherry filed a Motion for Order to Take Judicial Notice and Require Duplicate Filing and to Submit Proposed Orders (Motion for Judicial Notice, Duplicate Filing, and for Proposed Orders). In its motion, Cherry requested the Commission take judicial notice of the State Clearinghouse letter dated March 27, 2023 that was filed in Docket No. EMP-112, Sub 0 on April 11, 2023. Cherry further requested that the Commission direct that a duplicate copy of the April 11, 2023 letter be filed in the instant docket. Finally, Cherry requested that the Commission require the parties to this proceeding to submit proposed orders on the Application.

¹ On May 19, 2021, the Commission issued its Order Canceling Expert Witness Hearing. The order does not formally admit the parties' pre-filed testimony.

On October 3, 2023, the State Clearinghouse filed a letter in this docket stating it determined that no further State Clearinghouse review action on the Commission's part is needed for compliance with NCEPA.

On October 6, 2023, the Commission issued its Order Requiring Proposed Orders, finding that the State Clearinghouse's October 3, 2023 filing renders Cherry's first two requests in its Motion for Judicial Notice, Duplicate Filing, and for Proposed Orders moot and, further, that although the record indicates that the State Clearinghouse has determined that no further review is required for compliance with NCEPA, and it appears that NCSHPO's concerns have been addressed, Cherry has not filed the archaeological study in the instant docket as it committed to do during April 2023. Thus, the order required Cherry to submit the archaeological study pertaining to the proposed premises of the Plant and file proposed orders and briefs on or before October 27, 2023.

On October 10, 2023, Cherry filed the Phase I archaeological survey and GPR survey report that Cherry caused to be issued for the Plant.

On October 27, 2023, Cherry filed an updated site plan for the facility. In its transmittal, Cherry stated that the revised site plan would reallocate to Cherry a parcel of land to the facility that was formerly part of the Oak Solar LLC (Oak) facility (the Oak Plant), which received a CPCN in Docket No. EMP-112, sub 0 on November 19, 2021. Cherry noted that Oak is Cherry's affiliate and that the Oak Solar and Cherry Solar projects were originally part of a single 300 MW project, for which a CPCN application was filed in docket no. EMP-112, sub 0 on July 15, 2020. Clearinghouse review was conducted for the entire 300 MW project. On November 20, 2020 the applicant in that docket sought leave to amend its application to split the proposed project into two facilities: the Oak Plant, with a capacity of 120 MW and the Cherry Plant, with a capacity of 180 MW. Construction of a solar facility on the parcel of land reallocated from Oak Solar to Cherry Solar has already been reviewed by the State Clearinghouse and relevant state agencies, and had also been subject to public notice and an opportunity to comment and/or intervene (with no objections) in docket no. EMP-112, sub 0. Accordingly, the Applicant maintains, the proposed revision to the site plan should not require further public notice or Clearinghouse review.

On October 27, 2023, Public Staff filed a letter providing LCOT calculations for the PJM Network Upgrades allocated to Cherry, and recommending that the CPCN be granted, with conditions.

On October 27, 2023, the parties filed proposed orders.

FINDINGS OF FACT

1. Cherry is a limited liability company organized under the laws of North Carolina. The company maintains a regional office at address 212 South Tryon Street Suite 1000, Charlotte, North Carolina 28281, and its principal place

of business is located at address 595 Summer Street 4th Floor, Stamford, Connecticut 06901. Cherry plans to continue participating in the development of the Plant until it achieves commercial operation.

2. Cherry complied with N.C. Gen. Stat. § 62-111.1 and Commission Rule R8-63 by filing the Application for construction of a single-axis tracking solar photovoltaic generating facility, totaling approximately 180 MW_{AC} of capacity, on portions of approximately 1,425 acres of land in Northampton County, North Carolina, for operation as a merchant plant.

3. The Application met all requirements for publication of notice and the Commission's orders in this docket.

4. Cherry is financially and operationally able to undertake the construction and operation of the Facility.

5. The State Clearinghouse concluded that no further action by Cherry is necessary to comply with NCEPA.

6. The Facility will interconnect to the transmission grid owned by Virginia Electric and Power Company d/b/a Dominion Energy North Carolina, Inc. (DENC) via a tap line that will be constructed by Oak, an affiliate of Cherry, adjacent to an existing DENC transmission easement. The tap line will span approximately 4,350 feet, connecting a newly constructed substation at the generation site with the existing 230 kV Thelma substation owned and operated by DENC.

7. The Facility was studied in PJM's AC1-086 queue position in the PJM interconnection queue, and it maintains that position at the time of issuance of this order. The estimated Network Upgrade costs allocated to the Facility by PJM's interconnection process are \$2,676,883 (PJM Network Upgrade). Cherry will pay these costs fully without reimbursement from ratepayers.

8. DEP found the Plant contributes to an overload previously identified on DEP's Battleboro — Rocky Mount 115kV tie line (Overload). However, DEP did not allocate to Cherry any of the estimated \$31,285,275 in costs to mitigate the Overload (or any other facility studied in PJM Cluster AC1) (DEP Affected Systems Upgrade). Those costs have been allocated to other projects that have committed to fund construction of those upgrades. It is not likely that those costs will be borne by Cherry.

9. Confidential construction costs and LCOT for the Plant are reasonable.

10. There is a need for the Plant as demonstrated by Cherry's corporate PPA and PJM's projected load growth in the Dominion Zone of PJM.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 1-3

These findings of fact are essentially informational, procedural, and jurisdictional in nature and are not in dispute. The Application itself, including the testimony of Cherry witnesses Nwadike and the Affidavit of Publication support these findings.

On November 13, 2020, Applicant filed as an exhibit to the Application a copy of Cherry's Articles of Organization, filed with the North Carolina Secretary of State on September 24, 2020. On August 1, 2022, Applicant filed its Notice of Change of Address, noting that its parent company, SunEnergy1, LLC (SunEnergy1), moved its corporate headquarters from Mooresville, North Carolina to Stamford, Connecticut.

An examination of the Application and testimony and exhibits of Cherry's witness Nwadike confirms Applicant complied with all filing requirements of the law and Commission rules associated with applying for a certificate to construct a merchant plant in North Carolina.

On January 21, 2021, Cherry its Affidavit of Publication showing the public notice was published in the Roanoke-Chowan News-Herald—a newspaper having general circulation in Northampton County—once a week for four successive weeks: on December 23 and 30, 2020 and on January 6 and 13, 2021.

The Commission takes judicial notice of its Order Issuing Certificate for Merchant Generating Facility issued to Oak in Docket No. EMP-112, Sub 0 (the Oak CPCN Order); and of the Affidavits of Publication filed in that docket on October 30, 2020, November 3, 2020, and January 21, 2021. Those Affidavits and Order demonstrate that adequate public notice was provided with respect to the construction of a solar facility on the parcel of land reallocated from the Oak Solar project to Cherry Solar.

The Commission concludes that the Applicant timely and adequately published the Public Notice and consistent with the Commission's Scheduling Order requiring publication.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 4

The evidence supporting this finding of fact is in the Application and the testimony of Cherry witness Nwadike. No party disputes this finding.

In support of its Application, Cherry contemporaneously prefled the direct testimony of witness Nwadike. Witness Nwadike testified that SunEnergy1 is Cherry's parent and affiliate and that SunEnergy1 is a top U.S. solar developer, owner, and operator of utility-scale solar projects, with over 1 GW of installed solar power. Nwadike stated that SunEnergy1's management team has a wealth of experience in solar photovoltaic construction, project development, and permitting. The Application further demonstrates that SunEnergy1 has an ownership interest

in over thirty-five (35) completed solar photovoltaic plants, and all, except three, are larger than 5 MW capacity.

Based on the foregoing, the Commission concludes that SunEnergy1's experience in the construction and operational control of solar energy facilities demonstrates Cherry has the financial and operational capabilities necessary to successfully construct the Facility.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 5

The evidence supporting this finding of fact is found in the State Clearinghouse filed comments in the docket. No party disputes this finding.

On January 25, 2021, the State Clearinghouse filed comments in the docket and requested additional information before its concurrence with the Application. In summary, NCSHPO stated some portions of the Plant site were adjacent to lands known to have a high probability for containing archaeological sites and that two cemeteries were located within the Plant site. Accordingly, NCSHPO recommended, before any ground disturbing activities occurred, that a comprehensive archaeological survey be conducted to identify and evaluate the significance of archaeological sites and cemeteries that may be damaged or destroyed by the Plant.

The North Carolina Wildlife Resources Commission requested that certain conditions be observed by Cherry, including establishing a minimum 100-foot undisturbed, native forested buffer along each side of perennial streams and 50-foot undisturbed, native forested buffer along each side of intermittent streams and wetlands; establishing sediment and erosion control measures prior to any land clearing or construction; and developing a decommissioning plan, among other things.

Finally, with respect to environmental permitting, the North Carolina Department of Environmental Quality identified that the Plant site would be required to permit: (i) open burning, if any, (ii) demolition or renovations of structures containing asbestos, if any, (iii) an erosion and sedimentation control plan, and (iv) compliance with Catawba, Goose Creek, Jordan Lake, Randleman, Tar Pamlico or Neuse riparian buffer rules, among other things.

On October 3, 2023, the State Clearinghouse filed a letter in this docket attaching comments from North Carolina Department of Natural and Cultural Resources (NCDNCR). NCDNCR largely concurred and agreed with the Phase I archaeological survey and GPR survey report (Report) that Cherry caused to be issued for the Plant, and NCDNCR recommended various edits to the report. Due to the nature of the comments, the State Clearinghouse determined no further State Clearinghouse review action on the Commission's part is needed for compliance with NCEPA.

Cherry complied with the Commission's Order Requiring Proposed Orders, in part, by filing the Report on October 10, 2023.

The Commission takes judicial notice of the Oak CPCN Order and of the comments filed by the State Clearinghouse in that docket. Those comments and Order demonstrate that the requirements of NCEPA were met with respect to the construction of a solar facility on the parcel of land reallocated from the Oak Solar project to Cherry Solar.

Considering the foregoing, the Commission concludes Cherry has complied with the NCEPA and that nothing therein precludes issuance of the CPCN.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NO. 6

The evidence supporting these findings of fact is in the Application, the direct and supplemental testimony of Cherry witnesses Nwadike, and other evidence described in greater detail below, including judicial notice of filings in other Commission dockets.

In Cherry's prefiled direct testimony, Nwadike testified the Facility's maximum gross power production capacity is 180 MW_{AC}, and it will utilize single-axis tracking. The Facility will be constructed on several parcels of land located in Northampton County, North Carolina, and Cherry was provided, by each respective parcel owner,² the right to construct, maintain and operate the Plant.

The Facility will interconnect with the transmission system owned and operated by DENC via a newly constructed 230 kV transmission line or "tap line" (Tap Line) that will be constructed by Cherry's affiliate, Oak, adjacent to an existing DENC transmission easement. The Tap Line will span approximately 4,350 feet, and it will connect a newly constructed, generation-site substation with the existing 230 kV Thelma substation owned and operated by DENC.³

The Commission takes judicial notice of the CPCN and the Certificate of Environmental Compatibility and Public Necessity and Convenience (CECPCN) issued by the Commission to Cherry's affiliate, Oak, along with other filings in those dockets. *To wit*, on or about July 15, 2020, the Commission opened Docket EMP-

² The various owners—seven total: two corporate owners, two individual owners, and three joint-spouse owners—were identified with specificity in Nwadike's testimony. (See p. 5, l. 14-17.)

³ See *infra* discussion on Oak Solar, LLC and the Commission's Order Waiving Notice and Hearing Requirement and Issuing Certificate, granting Oak Solar, LLC a certificate of environmental compatibility and public need and necessity.

112 Sub 0 to adjudicate the CPCN application filed by Oak⁴ to construct a 300 MW solar photovoltaic electric generating facility in Northampton County, North Carolina (the Oak Plant). On November 12, 2020, Oak filed a motion to amend its CPCN application, advising that Oak secured a PPA and that its counterparty requested it bifurcate the 300 MW of capacity into two separate facilities—a 120 MW_{AC} plant and a 180 MW_{AC} plant. The latter 180 MW of capacity represents the Plant that is the subject of the instant Application by Cherry. This is evidenced by (i) Oak's prefiled supplemental testimony of Nwadike,⁵ (ii) Cherry's site plan filed with the Application (which is the same site plan filed by Oak), and (iii) Cherry's May 5, 2023 Motion for Judicial Notice, Duplicate Filing, and for Proposed Orders, explaining the history of these two facilities in detail. On November 21, 2021, the Commission issued its Order Issuing Certificate for Merchant Generating Facility, granting a CPCN to Oak to construct the 120 MW Oak Plant.

Further, on or about October 7, 2021, the Commission opened Docket EMP-112 Sub 1 to adjudicate Oak's application for a CECPCN for the Tap Line. On February 2, 2022, the Commission issued its Order Waiving Notice and Hearing Requirement and Issuing Certificate, granting Oak a CECPCN for the Tap Line, among other things. Cherry's prefiled direct testimony of Nwadike stated that Cherry entered a shared facility agreement with Oak, permitting Cherry's use of the same interconnection facilities that will permit the Oak Plant to interconnect with DENC, including the Commission approved Tap Line.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 7-10

The evidence supporting these findings of fact is in the prefiled supplemental testimony of Cherry witnesses Nwadike, the interconnection studies filed by Cherry, and the prefiled direct and supplemental testimony of Public Staff witness Lucas.

N.C.G.S. § 62-110.1(a) provides that no generating facility may be constructed without first obtaining from the Commission a certificate stating that public convenience and necessity requires, or will require, such construction. N.C.G.S. § 62-110.1(e) provides, further, that "no certificate shall be granted unless the Commission has approved the estimated construction costs and made a finding that the construction will be consistent with the Commission's plan for expansion of electric generating capacity." Commission Rule R8-63(b)(3) also requires a merchant plant application to include a description of the need for the facility in the state and/or region. This requirement is an outgrowth of the 1991 Empire Power Company case in Docket No. SP-91, Sub 0. In 2001, the

⁴ The original CPCN application was filed by an entity named Gaston Green Acres Solar, LLC (Gaston); however, on October 23, 2020, Gaston filed its Notice of Name Change and Motion to Amend Caption, informing the Commission that Gaston changed its name to Oak.

⁵ (See p. 5, l. 12-23.)

Commission initiated a generic proceeding in Docket No. E-100, Sub 85, to consider changes in the certification requirements for merchant plants. As impetus for its Order at that time, the Commission cited the Energy Policy Act of 1992, which encouraged independent power production and competition in the wholesale power market through the creation of exempt wholesale generators and the ability of FERC to issue wheeling orders requiring utilities to allow access to their transmission grids for wholesale power transactions. Order Initiating Further Proceedings, Investigation of Certification Requirements for New Generating Capacity in North Carolina, No. E-100, Sub 85, at 3 (N.C.U.C. February 7, 2001). In the E-100, Sub 85 Order, the Commission ordered the Public Staff to file a proposal for certification requirements for merchant plants. *Id.*

In its proposal, the Public Staff recommended that the Commission address in its proceeding how the public convenience and necessity for an IPP would be demonstrated “when the facility is intended in whole or in part to serve: . . . b. Load outside of North Carolina, on varying bases and for varying duration.” Public Staff’s Initial Comments, Investigation of Certification Requirements for New Generating Facilities, No. E-100, Sub 85, at 8 (January 10, 2000).

In its Order adopting the certification rule, the Commission stated “[i]t is the Commission’s intent to facilitate, and not to frustrate, merchant plant development. Given the present statutory framework, the Commission is not able to abandon any showing of need or to create a presumption of need. However, the Commission believes that a flexible standard for the showing of need is appropriate.” Order Adopting Rule, Investigation of Certification Requirements for New Generating Facilities, No. E-100, Sub 85, at 7 (N.C.U.C. May 21, 2001). Although previously emphasized in the order adopting the certification rule, the Commission emphasizes again that the analysis of whether the public convenience and necessity requires the construction of a specific merchant facility is flexible and, to this end, must focus on the facts and circumstances presented by the application and, additionally, must evolve as North Carolina’s electric system evolves. Thus, while it remains the case that it is not the Commission’s intent to frustrate merchant plant development, it also remains the Commission’s obligation to determine whether granting an application for a CPCN is in the public interest. See Order Granting Certificate, Application of Rowan Generating Company, LLC, for a Certificate of Public Convenience and Necessity to Construct a Generating Facility in Rowan County, North Carolina, No. EMP-3, Sub 0, at 8 (N.C.U.C. October 12, 2001) (stating that the Commission is “mindful that issues regarding the appropriate amount of merchant plant generation in the State remain to be decided.”).

The Commission has explained that “the very reason the CPCN statute was enacted was to stop the costly overexpansion of facilities to serve areas that did not need them.” *Id.* at 17. See also *High Rock Lake Ass’n*, 97 N.C. App. at 140-41, 245 S.E.2d at 790; *State ex rel. Utils. Comm’n v. Empire Power*, 112 N.C. App. 265, 280, 435 S.E.2d 553, 561 (1994). The Commission has noted, based on policies established explicitly in N.C.G.S. § 62-2, that the “legislature intends the

Commission to encourage cost-efficient siting of generation facilities, and thus that the Commission has the authority to consider all costs borne as a result of that siting decision.” Id. at 17-18.

In fulfilling these obligations imposed by statute and rule, the Commission has determined, in the context of CPCN applications for merchant plant facilities, that “it is appropriate for the Commission to consider the total construction costs of a facility, including the cost to interconnect and to construct any necessary transmission Network Upgrades, when determining the public convenience and necessity of a proposed new generating facility.” See Order Denying Certificate of Public Convenience and Necessity for Merchant Plant Generating Facility, In the Matter of Application of Friesian Holdings, LLC for a Certificate of Convenience and Necessity to Construct a 70-MW Solar Facility in Scotland County, North Carolina, No. EMP-105 Sub 0, at 6 (N.C.U.C. June 11, 2020), *aff’d* State ex rel. Utils. Comm’n v. Friesian Holdings, LLC, 281 N.C. App. 391, 2022-NCCOA-32, 869 S.E.2d 327, 2022 N.C. App. LEXIS 37. Further, the Commission has decided, at the present time, that “the use of the levelized cost of transmission (LCOT) provides a benchmark as to the reasonableness of the transmission Network Upgrade cost associated with interconnecting a proposed new generating facility.” Id.

In the instant proceeding, on March 11, 2021, Cherry prefiled supplemental testimony of Nwadike attaching analysis of the levelized cost of transmission and the Facility’s study reports, including the: (i) Revised August 2020 System Impact Study Report issued by PJM, (ii) August 2020 Facility Study Report issued by PJM, (iii) Revised May 2017 Feasibility Study Report issued by PJM, and (iv) the May 6, 2020 Affected System Study Report issued by DEP.

In summary, Nwadike testified Cherry was allocated cost responsibility for \$2,676,883 worth of six PJM Network Upgrades identified in PJM queue AC1-086 and that these upgrades are designed to reinforce DENC’s system in Virginia and North Carolina.⁶

With respect to affected systems, Nwadike testified PJM’s System Impact Study for the Facility identified a contribution to the previously identified overload on the Battleboro — Rocky Mount 115kV tie line (the Overload). On that ground, PJM’s Facilities Study Agreement required Cherry to enter an Affected System Facilities Study with DEP.

The Affected System Study Report later issued by DEP identifies \$23,204,593 in costs to mitigate the Overload, but it does not identify projects in PJM queue AC1-086 (including the Plant) as triggering the upgrades (although projects in the AC1 cluster benefit from the upgrades). Similarly, PJM’s Interconnection Study Agreement does not require Cherry to resolve the Overload.

⁶ The six network upgrades were identified with specificity in Nwadike’s testimony. (See p. 1, l. 17-23 – p. 2, l. 3.)

Finally, Nwadike testified Cherry is not proposing to sell energy or capacity from the Plant to a distribution utility regulated by the Commission (or otherwise not regulated by the Commission) or to a purchaser that is subject to a statutory mandate with respect to its energy supply.

On April 14, 2021, the Public Staff filed the direct testimony and exhibits of Lucas. In his testimony Lucas recommended that the Commission grant Cherry's CPCN subject to certain conditions. Specifically, witness Lucas suggested that the Commission condition CPCN approval on Cherry: (i) filing a verified statement acknowledging that Cherry is responsible for all Affected System Upgrade costs assigned to the Plant, if any, without reimbursement, (ii) notifying the Commission of any significant change in the cost estimates for the Interconnection Facilities, Network Upgrades, Or Affected System Upgrades costs within 30 days of becoming aware of such change, (iii) that the Commission weigh costs to DEP's customers of Affected Systems Upgrades, in the event Cherry ever sought reimbursement from the same; and (iv) resolving all State Clearinghouse concerns.

Additionally, and in summary, Lucas's testimony confirmed much of the testimony provided by Cherry in its prefiled supplemental testimony of Nwadike. Lucas further expressed concern that (i) unneeded upgrades do not serve the using and consuming public, particularly when borne by customers that do not use the energy from merchant plants connecting with PJM; (ii) DEP could build Affected System Upgrades that go unused for extended periods of time if some interconnection projects withdraw from the queue late in the review process; and (iii) in order to accommodate future clusters, upgrades to accommodate an earlier cluster may need to be replaced with even greater transmission assets long before the end of their normal service life of 40 to 60 years, thereby resulting in stranded costs.

On November 4, 2021, the Public Staff filed a Motion for Leave to File Supplemental Testimony. In support of its motion, the Public Staff stated, on October 1, 2021, FERC rejected an ASOA between DEP and another interconnection customer, American Beech, in FERC Docket No. ER21-1955-002. On November 1, 2021, DEP filed a Request for Rehearing with FERC, requesting that FERC reconsider its October 1, 2021 order addressing the ASOA between DEP and American Beech. The Public Staff stated FERC's rejection of the ASOA between DEP and American Beech may impact future ASOAs and reimbursements between DEP and other generators, including Cherry. Therefore, the Public Staff sought to file supplemental testimony after it reviewed and evaluated FERC's response to the Request for Rehearing. On November 5, 2021, the Commission issued its Order Granting Public Staff's Motion to File Supplemental Testimony.

On December 17, 2021, the Public Staff filed the supplemental testimony of Witness Lucas. Mr. Lucas testified DEP Affected Systems Upgrade costs associated with the Overload increased to \$31,285,275; that his previous

testimony made recommendations based on an assumption that DEP's customers would not bear expenses associated with mitigating the Overload; and that, if American Beech did not execute a new ASOA acceptable to FERC (following FERC's rejection of the proposed ASOA in Docket No. ER21-1955-002), that the Affected Systems Upgrade costs associated with the Overload could be passed to DEP ratepayers, instead of Cherry. Consequently, witness Lucas recommended it was appropriate for the Commission to consider the reasonableness of Affected Systems Upgrade costs when determining whether a facility is in the public convenience and necessity. He also testified Affected Systems Upgrade costs may become stranded, in the event later-queued projects create additional affected systems upgrades that require mitigation beyond managing the Overload. Witness Lucas recommended, if the Commission decided to grant Cherry's CPCN, that the Commission condition it on Cherry: (i) notifying the Commission within 30 days of any changes to cost estimates for construction of the Plant, Interconnection Facilities, Network Upgrades or Affected Systems Upgrades costs, (ii) filing a copy of any executed ASOA with the Commission at the same time such filing is made at FERC, and (iii) filing in this docket an itemized list of the affected system costs reimbursed.

On January 13, 2022, Cherry filed the reply supplemental testimony of Nwadike. In summary, witness Nwadike testified Cherry disagreed with the concerns raised by Public Staff witness Lucas and that Cherry would agree to the conditions raised in witness Lucas's testimony for granting the CPCN. Specifically, Nwadike testified Cherry agreed to bear all Affected Systems Upgrade costs associated with mitigating the Overload, that solar developers have little incentive to pay for Affected Systems Upgrades and then not use them, that Affected Systems Upgrade are important for resiliency of the grid and also contribute to avoiding transmission congestion (and, thus, incentivize dispatch of the lowest cost generation resource), that load growth in the PJM's BA will also drive replacement of Network Upgrades (not just merchant generation), and, finally, not granting the CPCN would be inconsistent with the Commission's previous orders providing certificates to merchant plants constructed in DENC territory (and this includes the Oak CPCN). Therefore, Nwadike recommended the Commission grant authority to construct the Plant.

On October 27, 2023, Public Staff filed a letter providing confidential LCOT calculations for the PJM Network Upgrades allocated to Cherry, along with a request (which Cherry consented to) that they be moved into the record.⁷ In its letter the Public Staff also stated that because of recent developments related to filings at the Federal Energy Regulatory Commission of Affected System Operating Agreements entered into between DEP and other developers of North Carolina-sited projects in PJM cluster AC1, the Public Staff no longer expects that Cherry Solar would be responsible for the affected system costs attributable to the AC1

⁷ The Commission grants the Public Staff's request and admits this evidence into the record.

cluster. Accordingly, the Public Staff recommends that the Commission approve Cherry's CPCN application, subject to the following conditions:

1. The Applicant shall construct and operate the facility in strict accordance with applicable laws and regulations, including any local zoning and environmental permitting requirements.
2. The CPCN shall be subject to Commission Rule R8-63(e) and all orders, rules, and regulations as are now or may hereafter be lawfully made by the Commission.
3. The Applicant shall file with the Commission in this docket any significant revisions in the cost estimates for the construction of the facility itself, interconnection facilities, network upgrades, or affected system upgrades, or any other significant change in costs, within 30 days of becoming aware of such revisions.
4. The Applicant shall file a copy of any executed Affected System Operating Agreement with the Commission at the same time such filing is made at the Federal Energy Regulatory Commission (at least 61 days prior to commencing construction of the upgrades).
5. If at any time the Applicant seeks reimbursement for any interconnection facilities, network upgrade costs, affected system costs, or other costs required to allow energization and operation of the facility, the Applicant shall notify the Commission no later than 60 days before seeking reimbursement.

The Applicant does not object to the issuance of a CPCN subject to the conditions listed above.

As applied here, under the applicable regulatory paradigm, Cherry will bear all costs associated with the interconnection of the Facility to the DENC transmission system, including costs associated with the Network Upgrades on the transmission system operated by PJM (currently estimated to be \$2,676,883). Additionally, Cherry will bear all costs associated with the construction of the generating plant.

Cherry's prefiled supplemental testimony of Nwadike provides confidential LCOT for the Plant, accounting for \$25,676,883 in costs associated with the PJM Network Upgrades and the DEP Affected System Upgrades. Nwadike's calculation assumes the Facility is constructed without the other four projects in PJM Cluster AC1. Lucas's prefiled testimony states LCOT for the Plant, as calculated by witness Nwadike, is less than the PJM average LCOT of \$3.22 and it will be even less if any of the other four projects in PJM Cluster AC1 are built.

The Commission concludes from the evidence in the record that the costs for the Network Upgrades are reasonable and that DEP ratepayers will not be unreasonably impacted by the construction of this Facility.

Although the Commission continues to be concerned about the impact to North Carolina ratepayers of Affected System Upgrades triggered by project interconnecting in PJM, these concerns are not relevant to Cherry's application. Cherry has not been allocated any costs for Affected System Upgrades and it is unlikely this will change. In this respect, the Commission takes judicial notice of its November 21, 2021 order in Docket No. EMP-112, Sub 0 issuing a CPCN for the Oak Solar facility, which discusses Witness Lucas's testimony that the Oak Solar Facility will not require any Affected System Upgrades. The Commission also notes that the projects to which those upgrade costs *have* been allocated have all received CPCNs,⁸ and at least one of those projects has begun construction of its interconnection facilities.⁹

There is no LCOT calculation in the record that represents the total amount of generation that will rely on the Affected System Upgrade. However, the LCOT calculation provided by Ms. Nwadike—which is based on the assumption that Cherry would be the only project relying on the upgrade, and almost certainly overstates by a substantial margin the actual LCOT—is consistent with and in line with the 2019 Lawrence Berkeley National Laboratory interconnection cost study (LBNL Study), on which the Commission has relied to consider LCOT calculations in perspective with data from other balancing authorities.¹⁰

In previous analysis of public convenience and necessity in the context of merchant generating facilities, the Commission has considered the long-term energy and capacity needs in the State and region, as well as system reliability concerns. Nwadike testified in her prefiled direct testimony that Cherry will sell power from the Plant to a Fortune 100 corporate purchaser located in the balancing area (BA) administered by PJM Interconnection, LLC (PJM) via an existing long-term power purchase agreement (PPA). She further testified on the expected load growth in PJM's BA. Summer peak load is expected to grow by 1.2.% per year

⁸ Order Granting Certificate of Public Convenience and Necessity with Conditions, Docket No. EMP-108, Sub 0 (Jan. 31, 2023); Order Issuing Certificate for Merchant Generating Facility, Docket No. EMP-107, Sub 0 (June 11, 2020); Order Issuing Certificate for Merchant Generating Facility, Docket No. EMP-101, Sub 0 (Nov. 13, 2020).

⁹ Edgecombe Solar LLC – Annual Progress Report, Docket No. EMP-101, Sub 0 (Nov. 29, 2022).

¹⁰ See Order Issuing Certificate for Merchant Generating Facility, Application of Oak Trail Solar, LLC, for a Certificate of Public Convenience and Necessity to Construct a 100 MW Solar Facility in Currituck County, North Carolina, No. EMP-114, Sub 0 (N.C.U.C. Oct. 8, 2021) and Order Granting Certificates and Accepting Registration, Application of Timbermill Wind, LLC, for a Certificate of Public Convenience and Necessity to Construct a Merchant Plan Wind Energy Facility in Chowan County, North Carolina, and Registration as a New Renewable Energy Facility, No. EMP-118, Sub 0 (N.C.U.C. May 4, 2022).

over the next ten years and by 1.0% over the next fifteen years (citing a PJM load forecast). In the Dominion Zone of PJM, specifically, winter peak load growth is expected to grow by 1.4% per year over the next ten years and by 1.2% per year over the next fifteen years. Finally, the annual net energy in the Dominion zone of PJM is expected to grow by 1.5% per year over the next ten years and 1.3% per year over the next fifteen years. No party disputes this evidence. Based on the foregoing, the Commission concludes there is adequate need for the Facility.

In view of the total cost of the Facility, including the Network Upgrades and the DEP Affected System Upgrade costs associated with the Overload (even if allocated to Cherry), the Commission concludes that the siting of the Applicant's Facility in this area is not inconsistent with the Commission's obligation under N.C.G.S. § 62-110.1(d) for the provision of "reliable, efficient, and economical service" in the region.

After having carefully considered and weighed the evidence presented in this proceeding and using a case-specific and flexible standard, the Commission concludes that granting the CPCN for the Facility is in the public convenience and necessity. However, as the Public Staff recommends, the Commission will condition the certificate in the manner described below to ensure that the Commission is notified of any future material revisions in the cost estimates for any costs, including but not limited to, Network Upgrades, Attachment Facilities, and Affected System Upgrades.

IT IS, THEREFORE, ORDERED as follows:

1. That a certificate of public convenience and necessity shall be, and is hereby, issued to Applicant for the construction of a 180 MW_{AC} solar facility in Hampton, North Carolina. This certificate is subject to the following conditions:

a. The Applicant shall construct and operate the facility in strict accordance with applicable laws and regulations, including any local zoning and environmental permitting requirements.

b. The CPCN shall be subject to Commission Rule R8-63(e) and all orders, rules, and regulations as are now or may hereafter be lawfully made by the Commission.

c. The Applicant shall file with the Commission in this docket any significant revisions in the cost estimates for the construction of the facility itself, interconnection facilities, network upgrades, or affected system upgrades, or any other significant change in costs, within 30 days of becoming aware of such revisions.

d. The Applicant shall file a copy of any executed Affected System Operating Agreement with the Commission at the same time such

filing is made at the Federal Energy Regulatory Commission (at least 61 days prior to commencing construction of the upgrades).

e. If at any time the Applicant seeks reimbursement for any interconnection facilities, network upgrade costs, affected system costs, or other costs required to allow energization and operation of the facility, the Applicant shall notify the Commission no later than 60 days before seeking reimbursement.

2. That Appendix A hereto shall constitute the certificate of public convenience and necessity issued for the Facility.

ISSUED BY ORDER OF THE COMMISSION.

This the ____ day of _____ 2023.

NORTH CAROLINA UTILITIES COMMISSION

Erica N. Green, Deputy Clerk

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. EMP-115, SUB 0

CHERRY SOLAR, LLC
595 Summer Street, 4th Floor
Stamford, CT 06901

is hereby issued this

**CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY
PURSUANT TO N.C. GEN. STAT. § 62-110.1**

for a 180 MW_{AC} solar photovoltaic electric generating facility

located

Located at 922 Oak Grove Church Road, 1315 Oak Grove Church Road, 105 Crossvine Lane, and 610 Cherry Tree Road, in the Town of Gaston, North Carolina

GPS 36.5384, -77.7417

subject to all orders, rules, regulations and conditions as are now or may hereafter be lawfully made by the North Carolina Utilities Commission.

ISSUED BY ORDER OF THE COMMISSION.

This the ____ day of _____, 2023.

NORTH CAROLINA UTILITIES COMMISSION

Erica N. Green, Deputy Clerk