



**NORTH CAROLINA
PUBLIC STAFF
UTILITIES COMMISSION**

October 19, 2022

Ms. A. Shonta Dunston, Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4300

Re: Docket No. EMP-119, Sub 0 – Application of Macadamia Solar, LLC for a Certificate of Public Convenience and Necessity to Construct a 484-MW Solar Facility in Washington County, North Carolina pursuant to N.C. Gen. Stat. § 62-110.1 and Commission Rule R8-63; and EMP-119, Sub 1 - Application of Macadamia Solar, LLC for a Certificate of Environmental Compatibility and Public Convenience and Necessity to Construct a Transmission Line in Washington County, North Carolina

Dear Ms. Dunston:

In connection with the above-referenced dockets, I transmit herewith for filing on behalf of the Public Staff the attached Proposed Order of the Public Staff.

By copy of this letter, I am forwarding a copy to all parties of record by electronic delivery.

Sincerely,

Electronically submitted
s/ William E. H. Creech
Staff Attorney
zeke.creech@psncuc.nc.gov

Attachment

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**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. EMP-119, SUB 0)	
)	
In the Matter of)	
Application of Macadamia Solar, LLC for a)	
Certificate of Public Convenience and)	
Necessity to Construct a 484-MW Solar Facility)	
in Washington County, North Carolina)	PROPOSED ORDER OF
)	THE PUBLIC STAFF
DOCKET NO. EMP-119, SUB 1)	
)	
In the Matter of)	
Application of Macadamia Solar, LLC for a)	
Certificate of Environmental Compatibility and)	
Public Convenience and Necessity to)	
Construct a Transmission Line in Washington)	
County, North Carolina)	

BY THE COMMISSION: On August 31, 2021, Macadamia Solar, LLC (Macadamia or Applicant) filed an application for a certificate of public convenience and necessity (CPCN), pursuant to N.C. Gen. Stat. § 62-110.1 and Commission Rule R8-63, to construct a solar energy facility (the Facility) with a capacity of 484 MW in Washington County, North Carolina. In support of the application, Macadamia filed the testimony and exhibits of Donna Robichaud and Kara Price.

On September 13, 2021, Macadamia filed an application for a certificate of environmental compatibility and public convenience and necessity (CECPCN) pursuant to N.C.G.S. § 62-101 to construct a 6.53-mile 230 kV transmission line (Transmission Line) in Washington County, North Carolina to allow interconnection of the Facility. In support of the CECPCN application, Macadamia filed the testimonies of Amanda Corll, Donna Robichaud, Kara Price, and Robert Turnbull.

On September 24, 2021, the Commission issued an Order Consolidating Dockets, Scheduling Hearings, Requiring Filing of Testimony, and Establishing Procedural Guidelines (September 24 Order). The September 24 Order consolidated the Docket No. EMP-119, Sub 0 and Docket No. EMP-119, Sub 1 proceedings.

On October 20, 2021, Macadamia filed the Supplemental testimony of Donna Robichaud.

On October 21, 2021, in Docket No. EMP-119, Sub 1, the State Clearinghouse filed additional comments from the North Carolina Department of Natural and Cultural Resources, State Historic Preservation Office (Historic Preservation Office), requesting that the Applicant perform an archaeological survey to identify any archaeological sites that may be destroyed by the construction of the Transmission Line.

On October 27, 2021, the Applicant filed a Motion to Cancel Public Witness Hearing, which was granted by the Commission on October 29, 2021.

On November 1, 2021, the State Clearinghouse filed Comments in Docket No. EMP-119, Sub 0, stating no further State Clearinghouse review action is needed for compliance with the North Carolina Environmental Policy Act.

On November 23, 2021, the Public Staff filed the testimony of Jay B. Lucas, recommending that the Commission hold the docket open until after PJM releases its retooling of the PJM cluster AD1 and PJM completes its study of the retooling and DEP develops a revised affected system study, if necessary. Witness Lucas stated that the Public Staff requested that upon completion of the PJM retooling and the DEP revised affected system study that the Commission issue an order requiring the Applicant to file supplemental testimony addressing the new studies and allowing the Public Staff to file supplemental testimony.

On December 10, 2021, Macadamia filed the rebuttal testimony of Amanda Corll, Donna Robichaud, and Sami Abdulsalam.

On January 4, 2022, the Applicant filed a Motion to Continue Hearing, pending the receipt of the additional interconnection studies and the issuance of a revised procedural order. The Commission granted the motion on January 5, 2022.

On May 25, 2022, Macadamia filed the Second Supplemental Testimony of Donna Robichaud, and Amanda Corll.

On June 1, 2022, the Applicant filed a Consent Motion for Procedural Schedule.

On June 14, 2022, the Commission issued an Order Scheduling Hearing and the Filing of Testimony, scheduling an expert witness hearing in Docket No. EMP-119, Subs 0 and 1 for September 6, 2022, at 1:00 p.m. in Commission Hearing Room 2115.

On July 25, 2022, the Public Staff filed a Consent Motion for Procedural Order in Docket Nos. EMP-110, Sub 0; EMP-111, Sub 0; and EMP-119, Subs 0 and 1. Docket No. EMP-110, Sub 0 is an application filed by Sumac Solar, LLC (Sumac) for a CPCN to construct an 80 MW solar facility in Bertie County, North Carolina. Docket No. EMP-111, Sub 0 is an application filed by Sweetleaf Solar, LLC (Sweetleaf) for a CPCN to construct a 94 MW solar facility in Halifax County, North Carolina. Collectively, all three parties are the Applicants.

In its motion, the Public Staff noted that all three projects referenced in its motion: (1) are in the PJM AD1 cluster; (2) trigger the same Affected System Upgrade on the Greenville-Everetts transmission line in Duke Energy Progress, LLC (DEP) territory; and (3) are owned by, or being developed primarily by, Geenex Solar, LLC (Geenex). The Public Staff further noted that some expert witnesses filed testimony in all three CPCN dockets. For these reasons, the Public Staff moved to hold all three CPCN hearings and the CECPCN hearing on the same day, September 6, 2022, the date already chosen for the hearing for EMP-119, Sub 0 and Sub 1. The Public Staff also proposed a schedule for the filing of supplemental direct testimony and reply testimony.

On July 6, 2021, the State Clearinghouse filed additional comments in Docket No. EMP-119, Sub 1, stating that due to the nature of the comments no further State Clearinghouse review action is needed for compliance with the North Carolina Environmental Policy Act.

On August 5, 2022, the Commission issued an Order Accepting Testimony, Requiring Further Testimony, and Scheduling Hearings (August 5 Order) in Docket Nos. EMP-110, Sub 0 and EMP-111, Sub 0. The August 5 Order accepted supplemental testimony filed in Docket Nos. EMP-110, Sub 0 and EMP-111, Sub 0; set a date for the filing of supplemental reply testimony in those dockets; scheduled the expert witness hearing in Docket No. EMP-110, Sub 0 to immediately follow the expert witness hearing in Docket No. EMP-119, Subs 0 and 1 on September 6, 2022; and scheduled the expert witness hearing in EMP-111, Sub 0 to immediately follow the hearing for Docket No. EMP-110, Sub 0.

On August 15, 2022, Macadamia filed a Letter providing Update Regarding Affected System Operating Agreement.

On August 18, 2022, Macadamia filed a Consent Motion to Excuse Witnesses Amanda Corll and Sami Abdulsalam from Macadamia's hearing.

On August 24, 2022, the Commission issued an Order Excusing Witnesses from Expert Witness Hearing, granting Macadamia's motion as to witnesses Corll and Abdulsalam.

On August 30, 2022, the Public Staff filed a Motion for Leave to File Joint Supplemental Testimony and the Joint Supplemental Testimony of Public Staff witnesses Jay B. Lucas and Evan D. Lawrence in Docket Nos. EMP-110, Sub 0; EMP-111, Sub 0; and EMP 119, Subs 0 and 1.

On September 2, 2022, the Commission issued an Order (September 2 Order) accepting the joint supplemental testimony of Public Staff witnesses Lucas and Lawrence into each respective docket. The Commission also directed the Applicants and the Public Staff to produce witnesses at the hearings on September 6, 2022, to provide testimony in each respective docket addressing specific questions that were listed in the Order.

On September 2, 2022, the Public Staff filed a letter and affidavits of Macadamia's witnesses in all three dockets providing an update on its negotiations regarding and resolution of outstanding issues between the Public Staff and the Applicants to the respective dockets.

On September 6, 2022, the Commission convened the hearing for Docket No. EMP-119, Subs 0 and 1 in the Commission Hearing Room 2115 at 1:00 p.m., as scheduled. Upon opening the hearing, the Chair noted that the parties waived cross-examination of each other's witnesses and that the witnesses were being presented solely for the purpose of answering the questions posed by the Commission in its September 2 Order. Because the issues to be addressed by those questions are common among the three dockets, the Commission found good cause to consolidate the proceedings in Docket Nos. EMP-110, Sub 0; EMP-111, Sub 0; and EMP-119, Subs 0 and 1, solely to receive testimony on the Commission questions. The Commission noted that a copy of the transcript of the consolidated hearing would be placed in all three dockets and that the Commission would issue a subsequent order in each respective docket accepting into the record the testimony and exhibits of the parties' witnesses filed in each docket.

At the September 6, 2022, consolidated hearing for the purpose of addressing the questions in the September 2 Order, no witnesses appeared on behalf of Macadamia in Docket No. EMP-119, Subs 0 and 1 for the purpose of offering testimony other than that required to address the Commission's questions posed in the September 2 Order.

Based on the foregoing and the record, the Commission finds good cause to receive all witnesses' prefiled testimony, exhibits, and affidavits into the record to the extent they have not already been received and to require that the parties file proposed orders, or a joint proposed order, on or before 30 days from notice of the transcript of the consolidated hearing held on September 6, 2022, and briefs by the same date, if they desire to file briefs.

FINDINGS OF FACT

1. Macadamia is a North Carolina limited liability company. Macadamia is wholly owned by Geenex Solar, LLC (Geenex), a Delaware limited liability company registered to do business in the State of North Carolina. EDF Renewables Development, Inc., a Delaware corporation registered to do business in the State of North Carolina, is partnering with Geenex in the development of this project and has an option to acquire the Facility.

2. In compliance with N.C.G.S. § 62-110.1 and Commission Rule R8-63, Macadamia filed with the Commission an application for a CPCN to construct the Facility (CPCN Application).

3. In compliance with N.C.G.S. § 62-101 et seq. and Commission Rule R8-62, Macadamia filed with the Commission an application for a CECPCN to construct the Transmission Line (CECPCN Application) in Washington County, North Carolina.

4. The applications have met all requirements for publication of notice.

5. The Facility will be interconnected to the grid operated by Dominion Energy North Carolina (DENC).

6. Construction of the Facility is anticipated to begin in the fourth quarter of 2023, and the expected commercial operation date for the Facility is the fourth quarter of 2025.

7. No further State Clearinghouse review action by the Commission is required for compliance with the North Carolina Environmental Policy Act.

8. Macadamia is financially and operationally able to undertake the construction and operation of the Facility.

9. Macadamia is one of the earliest-queued active projects in the Dominion territory of PJM without an executed Interconnection Service Agreement (ISA). Macadamia has not yet received a completed facilities study report from PJM, though it anticipates receiving a report along with an executable ISA for the project.

10. Macadamia stated it would seek an Affected Systems Operating Agreement (ASOA) with DEP providing for the construction of incremental network upgrades on the Greenville-Everetts line, which are estimated to cost \$150,000.

11. The Facility has a Levelized Cost of Transmission (LCOT) of \$2.75 per megawatt-hour (MWh). With respect to affected system upgrade costs, based on the June 2022 Affected System Study, the LCOT value is \$0.010/MWh if all projects in the AD1 cluster benefitting from the proposed DEP Upgrade are considered and \$0.013/MWh if only Macadamia is considered.

12. Macadamia has shown a need based on the projected demand in the PJM region, projections for corporate purchase of energy and renewable energy credits from solar facilities in the southeast market of PJM, and projected load growth in PJM.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 1 – 6

These findings of fact are essentially informational, procedural, and jurisdictional in nature and are not in dispute.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 7

The evidence supporting this finding of fact is located in the State Clearinghouse comments filed in this docket.

On November 1, 2021, in Docket No. EMP-119, Sub 0, the State Clearinghouse filed a letter that included comments from multiple state agencies. The letter stated that, because of the nature of the comments, no further State Clearinghouse review action was needed for compliance with the North Carolina Environmental Policy Act.

On October 21, 2021, in Docket No. EMP-119, Sub 1, the State Clearinghouse filed additional comments from the North Carolina Department of Natural and Cultural Resources, Historic Preservation Office, requesting that the Applicant perform an archaeological survey to identify any archaeological sites that may be destroyed by the construction of the Transmission Line.

On July 6, 2022, in Docket No. EMP-119, Sub 1, the State Clearinghouse filed a letter in this docket stating that, because of the nature of the comments, no further State Clearinghouse review action was needed for compliance with the North Carolina Environmental Policy Act.

Based on the foregoing, the Commission concludes that the Applicant has resolved the concerns of the Historic Preservation Office and that no further State Clearinghouse review action is required for compliance with the North Carolina Environmental Policy Act.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 8

The evidence supporting this finding of fact is located in the application and the testimony and exhibits of Macadamia witnesses Robichaud and Price.

Macadamia is wholly owned by Geenex. Financial statements for Macadamia were provided as Schedule 3 to the application.

According to Macadamia witness Rubin, Macadamia will fund the Affected System Network Upgrade.

Witness Price testified that Geenex develops high-quality solar projects ultimately for sale to its partners and investors, that Geenex is skilled in all aspects of a solar project's development including site evaluation, real estate procurement, facility and interconnection engineering, environmental analysis, power purchase agreements, as well as federal, state, and local permitting processes. Witness Price testified that more information about Geenex's corporate history, business model, financial capabilities, and expertise in the development of solar projects, as well as a list of Geenex-developed

projects, are set forth in Exhibit 1, Items (ii) and (iii) to the Application. Witness Price testified that the development of the Facility is funded through readily available funds and a credit facility provided by a specialty lender.

Witness Robichaud also testified regarding Geenex's substantial experience with solar power development and offtake in the PJM market. She also testified that Geenex has previously secured and is actively negotiating for over 6.3 GW of offtake within the PJM market and is using this experience to secure offtake for Macadamia.

Based on the foregoing, the Commission concludes that Macadamia is financially and operationally able to undertake the construction and operation of the Facility.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 9-12

The evidence supporting these findings of fact is located in the application, the testimony and exhibits of Macadamia witness Robichaud, the testimony and exhibits of Public Staff witness Lucas, and the Public Staff's letter filed with the Commission on September 2, 2022, informing the Commission of an agreement between the parties.

N.C.G.S. § 62-110.1(e) states 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, which requires an independent power producer to obtain a contract or a written commitment from a utility to demonstrate need.

In 2001, the Commission initiated a generic proceeding in Docket No. E-100, Sub 85 to consider changes to the certification requirements for merchant plants. As impetus for its Order, 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.¹ Further, the Commission cited FERC Order 2000 as "encouraging the formation of regional transmission organizations which would operate interconnected transmission systems, reduce the cost of transmitting power to more distant markets, and further enhance wholesale competition."² In the E-100, Sub 85 Order, the Commission ordered the Public Staff to file a proposal for certification requirements for merchant plants.³ 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

¹ Order Initiating Further Proceedings, *Investigation of Certification Requirements for New Generating Capacity in North Carolina*, Docket No. E-100, Sub 85, at 3 (N.C.U.C. February 7, 2001).

² *Id.*

³ *Id.*

“when the facility is intended in whole or in part to serve . . . load outside of North Carolina, on varying bases and for varying duration.”⁴

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 in a position 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.”⁵

The Commission has determined in previous merchant plant proceedings 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.”⁶

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.”⁷ Lastly, 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.”⁸

The proposed Macadamia facility holds three positions in the PJM interconnection queue: AD1-074/075/076 facilities will have a total capability of 484 MW with 320.7 MW of this output being recognized by PJM as capacity.

PJM completed its study of the AD1 cluster in December 2019, with revisions in February, May, and June of 2022.

On August 12, 2022, witness Donna Robichaud filed supplemental reply testimony on behalf of Sumac and Sweetleaf. Her supplemental reply testimony stated that Macadamia is negotiating an Affected System Operating Agreement (ASOA) with DEP for the construction of the necessary upgrades to DEP’s portion of the Greenville-Everetts transmission line at approximately \$150,000, and that Macadamia is seeking to expedite

⁴ Public Staff’s Initial Comments, *Investigation of Certification Requirements for New Generating Facilities*, Docket No. E-100, Sub 85, at 8 (January 10, 2000).

⁵ 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).

⁶ 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*, Docket No. EMP-105 Sub 0, at 6 (N.C.U.C. June 11, 2020).

⁷ *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).

⁸ *Id.* at 17-18.

the upgrades at a cost of approximately \$1.6 million. She further stated that the final ASOA is not expected to provide for reimbursement of either the \$150,000, or the \$1.6 million in expediting fees to Macadamia.

On August 15, 2022, Macadamia filed a letter in EMP-119, Sub 0, explaining that, “Macadamia is in the process of negotiating an ASOA for construction of the [Greenville-Everetts transmission line upgrade], which would not provide for reimbursement of any affected system upgrade costs paid by Macadamia.”

On August 30, 2022, in light of the potential for an ASOA between Macadamia and DEP containing fees for the expediting of affected system upgrades, Public Staff witness Lucas filed additional supplemental testimony revising his recommendations on the application in this docket as well as in EMP-110, Sub 0 and EMP-111, Sub 0.

On September 2, 2022, however, based upon an agreement between the parties in the three dockets, including Macadamia’s subsequent agreement to not seek expedited construction of the network upgrades, the Public Staff filed a letter recommending approval of the applications for CPCN. The Public Staff also recommended that the Commission forego any conditions on the CPCNs that may prevent the Applicants and DEP from executing an ASOA that provides for reimbursement of the estimated \$150,000 to construct the incremental network upgrades on the Greenville-Everetts line.

In its 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.

As described in the CPCN application and the testimony of witness Robichaud, the project will interconnect to PJM, which coordinates the movement of electricity through all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and the District of Columbia.

As the history of Commission Rule R8-63(b)(3) described above makes clear, the statement of need requirement is a “flexible standard” that is consistent with the Commission’s Order Adopting Rule in Docket No. E-100, Sub 85 issued on May 21, 2001. When considering the demonstration of need, the Commission must also weigh the costs of the facility, whether and to what extent those costs may be borne by ratepayers, and the benefits provided to those incurring the costs in determining the need for the facility. The Commission also evaluated the affected system upgrade costs for construction of the upgrades on the Greenville-Everetts transmission line that will be incurred by the facilities in the AD1 Cluster and ultimately by DEP ratepayers. Given the costs of the upgrades, the efficiencies of constructing these upgrades at the same time as DEP is reconstructing the Greenville-Everetts line, and the amount of MW between the three facilities that the upgrade will enable to interconnect, the Commission has determined that the costs are reasonably commensurate with the benefits. Therefore, for all the reasons explained in this Order, the Commission finds that the construction of the facility

is in the public interest and meets the public convenience and necessity as required by N.C.G.S. § 62-110.1. However, the certificate will be conditioned in the manner described below to ensure that the Commission is notified of any future material revisions in the cost estimates for the interconnection facilities and network upgrades, including network upgrades on affected systems.

The Public Staff reviewed the application, the testimony, and other evidence in the record and obtained through discovery. The Public Staff recommended in the supplemental testimony of witness Lucas filed on June 29, 2022, that the Commission approve the CPCN Application and the CECPCN Application subject to certain conditions.

IT IS, THEREFORE, ORDERED as follows:

That a certificate of public convenience and necessity (CPCN) to construct a 484-megawatt AC (MW_{AC}) solar photovoltaic electric generating facility (the Facility) and a certificate of environmental compatibility and public convenience and necessity (CECPCN) to construct approximately 6.53 miles of new 230 kV transmission line (Transmission Line) in Washington County, North Carolina, are hereby granted 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 CECPCN shall be subject to Commission Rule R8-62 and all orders, rules, and regulations as are now or may hereafter be lawfully made by the Commission.
4. 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.
5. 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 on the upgrades).
6. 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.

7.
ISSUED BY ORDER OF THE COMMISSION.

This the ____ day of _____ 2022.

NORTH CAROLINA UTILITIES COMMISSION

A. Shonta Dunston, Chief Clerk