

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. EMP-110, SUB 0

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of		
Application of Sumac Solar, LLC for a)	ORDER GRANTING CERTIFICATE
Certificate of Public Convenience and)	OF PUBLIC CONVENIENCE AND
Necessity to Construct an 80 MW Solar)	NECESSITY WITH CONDITIONS
Facility in Bertie County, North Carolina)	

BY THE COMMISSION: On April 16, 2020, Sumac Solar, LLC (Sumac or Applicant), filed an application for a certificate of public convenience and necessity (CPCN) to construct a solar energy facility with a capacity of 120 MW in Bertie County, North Carolina (Facility).¹ In support of the application, Sumac filed the direct testimony of witness Kara Price.

On April 23, 2020, the Public Staff — North Carolina Utilities Commission (Public Staff) filed a Notice of Completeness stating that it had reviewed the application in Docket No. EMP-110, Sub 0 and considered the application to be complete and requesting that the Commission issue a procedural order.

On April 28, 2020, the Commission issued an Order Requiring Filing of Testimony, Establishing Procedural Guidelines, and Requiring Public Notice (April 28 Order).

On May 5, 2020, Sumac filed an updated site plan for the proposed Facility.

On May 7, 2020, the Commission issued an Errata Order making some additions and corrections to the April 28 Order.

On May 12, 2020, Sumac filed the prefiled direct testimony of witness Donna Robichaud.

On May 21, 2020, Sumac filed a second updated site plan for the proposed Facility.

On May 29, 2020, the Public Staff filed the prefiled testimony of witness Evan D. Lawrence.

On June 4, 2020, Sumac filed an Affidavit of Publication certifying that, in accordance with the April 28 Order and the subsequent Errata Order, Sumac had published

¹ In prefiled supplemental testimony of witnesses Donna Robichaud and Amanda Mack filed on June 1 and June 2, 2022, the Applicant stated that Sumac had downsized its proposed Facility from 120 MW to 80 MW.

notice of the application in Docket No. EMP-110, Sub 0 in the Roanoke-Chowan News-Herald, a daily newspaper in Ahoskie, North Carolina, on May 9, 16, 23, and 30, 2020.

On June 11, 2020, Sumac filed a Motion to Cancel Hearings requesting that the Commission cancel the public witness hearing scheduled for June 23, 2020.

On June 16, 2020, the Chair issued an Order Canceling Public Witness Hearing canceling the public witness hearing scheduled for June 23, 2020.

On June 22, 2020, the Presiding Commissioner issued an Order Canceling Expert Witness Hearing and Requiring Additional Testimony (June 22 Order). The Order directed Sumac to provide additional information addressing issues related to interconnection costs and Sumac's plans for selling the energy and capacity that the Facility will generate.

On June 26, 2022, the North Carolina Department of Administration (NC DOA), through the State Clearinghouse, filed a letter stating it had determined that no further State Clearinghouse review action was necessary for Sumac's compliance with the North Carolina Environmental Policy Act (NCEPA).

On July 13, 2020, the NC DOA, again through the State Clearinghouse, filed a second letter with comments attached. The NC DOA stated again that, because of the nature of the comments, no further State Clearinghouse review action was necessary for Sumac's compliance with the NCEPA.

On August 12, 2020, Sumac filed the prefiled supplemental testimony of witness Robichaud providing additional information in response to the June 22 Order.

On October 15, 2020, Sumac filed a letter in the docket informing the Commission that Geenex Solar LLC, the owner of Sumac, had sold Sumac to EDF Renewables Development, Inc. (EDF) and that closing had occurred on October 15, 2020.

On November 16, 2020, the Public Staff filed the supplemental testimony of witness Lawrence.

On November 16, 2020, Sumac filed updated its application to reflect the sale of Sumac to EDF and filed the supplemental prefiled testimony of witness Emily Dalager containing additional information pertaining to EDF and Sumac.

On November 20, 2020, Sumac and Sweetleaf Solar LLC (Sweetleaf) filed a Motion for Further Extension of Time moving the Commission for an extension of the procedural schedule in this docket and in Docket No. EMP-111, Sub 0 until February 2021, so that the parties and the Commission could have the benefit of additional interconnection-related information regarding the two projects before the filing of additional testimony or the conducting of evidentiary hearings. Docket No. EMP-111, Sub 0 concerns Sweetleaf's application for a CPCN to construct a 94 MW solar facility in Halifax County, North Carolina.

On November 20, 2020, the Commission issued an Order Granting Further Extension of Time.

On February 9, 2021, the Sumac and Sweetleaf filed a Motion for Further Extension of Time in the two dockets moving the Commission for an extension of the procedural schedule in the dockets until June 2022, again so that the parties and the Commission could have the benefit of additional interconnection-related information regarding the two projects before the filing of additional testimony or the conducting of evidentiary hearings.

On February 16, 2021, the Commission issued an Order Granting Further Extension of Time directing that Sumac file supplemental testimony and exhibits by June 15, 2021, that the Public Staff file testimony and exhibits by July 6, 2021, and that Sumac file reply testimony and exhibits by July 20, 2021.

On May 27, 2021, Sumac and Sweetleaf filed in Docket Nos. EMP-110, Sub 0 and EMP-111, Sub 0 the Generator Interconnection Affected System Study Report for PJM Interconnection Cluster AD1 (Affected System Study) dated April 5, 2021. In its accompanying letter, Sumac stated that Sumac and Sweetleaf understood that PJM planned to update its power-flow model for the AD1 cluster to reflect more current system conditions. PJM expected to deliver that update in September 2021, and the Applicants stated that the update could require further revisions to the Affected System Study and could impact the assignment of upgrades on the Duke Energy Progress (DEP) system. The Affected System Study likely did not reflect Sumac's or Sweetleaf's actual responsibility for DEP upgrades, according to their May 27, 2021 filing.

On May 27, 2021, Sumac and Sweetleaf also filed in both dockets a Motion for Stay of Proceedings, moving the Commission for a stay of all proceedings in Docket Nos. EMP-110, Sub 0 and EMP-111, Sub 0, pending further order of the Commission so that the parties and the Commission could have the benefit of additional interconnection-related information regarding the two projects before the filing of additional testimony or the conducting of evidentiary hearings. According to the Applicants, further delays in PJM's interconnection studies necessitated the motion. PJM had informed Sumac and Sweetleaf that it would provide revised interconnection studies for them in the fall of 2021 and was retooling the System Impact Studies in the AC2 cluster to account for changes in the interconnection queue and would retool the AD1 project studies after that. Sumac and Sweetleaf stated that PJM anticipated delivering revised studies for the AD1 cluster in September 2021. The revisions to the AC2 and AD1 studies would require DEP to revise the Affected System Study Report based on the results of the PJM studies. Sumac and Sweetleaf asserted that the revised interconnection studies and a revised Affected System Study would generate critically important information to the Public Staff and the Commission, and that delaying further factual development or evidentiary hearings until after completion of those studies would be the most efficient use of resources. Because of the uncertainty regarding when there would be a revised Affected System Study report, the Applicants requested that the Commission stay the proceedings pending further order of the Commission.

On June 3, 2021, the Commission issued an Order Granting Request for Stay of Proceedings.

On June 1, 2022, Sumac filed the prefiled supplemental testimony of witness Amanda Mack and the second supplemental testimony of witness Robichaud.

On July 22, 2022, Sumac filed additional interconnection studies for Sumac.

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 (July 25 Motion). Docket No. EMP-119, Subs 0 and 1 involves applications filed by Macadamia Solar, LLC, for a CPCN to construct a 484 MW solar facility in Washington County, North Carolina (Sub 0) and for a Certificate of Environmental Compatibility and Public Convenience and Necessity (CECPCN) to construct a transmission line in Washington County, North Carolina. On June 14, 2022, the Commission had 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.

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 Everetts-Greenville transmission line in DEP territory; and (3) are owned by or being developed primarily by Geenex Solar, LLC (Geenex). The Public Staff further noted that there was overlap of expert witnesses filing 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 and reply testimony.

On July 29, 2022 the Public Staff filed the second supplemental testimony of witness Lawrence in this docket in accordance with the schedule it had proposed in its July 25 Motion.

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 12, 2022, Sumac filed second supplemental testimony of witness Robichaud, in accordance with the schedule the Commission established in the August 5 Order. Witness Robichaud stated that Sumac contributes to an overload on the DEP

portion of the Everetts-Greenville 230 kV tie-line between DENC and DEP and originally was assigned the full \$10 million cost of funding this Affected System Upgrade, which includes reconductoring two miles of the 230 kV Everetts-Greenville line and upgrading disconnect switches and CT ratios. The June 2022 Affected System Study revised the cost of the DEP Upgrade to \$350,000, based on DEP's conclusion that it needed to replace the impacted section of the Everetts-Greenville 230 kV line for reliability reasons due to the age and condition of the line rather than because of the interconnection of new generation.

On August 15, 2022, Macadamia Solar filed a letter in Docket No. EMP-119, Subs 0 and 1 stating that it was seeking to execute an ASOA with DEP providing for the construction of the incremental Network Upgrades required for the interconnection of the cluster AD1 projects (the DEP Upgrade), the estimated costs for which had been reduced to \$150,000. Macadamia was also planning to pay \$1,615,000 in costs for expediting the construction of the upgrades but stated that it would not seek reimbursement for either cost.

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 September 2 Order.

On September 2, 2022, the Public Staff filed a letter 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 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 those questions address 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, the attorney for the Applicants moved to cancel any subsequent hearings to be held in Docket Nos. EMP-110, Sub 0; and EMP-111, Sub 0. On September 8, 2022, the Commission issued an Order Excusing Witnesses, Accepting Testimony, Canceling Expert Witness Hearing, and Requiring Proposed Orders wherein the Commission found good cause to excuse all witnesses from testifying at a further expert witness hearing in Docket No. EMP-110, Sub 0 and to receive the witnesses' prefiled testimony, exhibits, and affidavits into the record.

On October 19, 2022, Sumac, Sweetleaf, and Macadamia filed in the three dockets an Affected System Operating Agreement (ASOA) between Sumac and DEP. The ASOA provides for the construction of the DEP Upgrade at an estimated cost of \$150,000. The Applicants noted that DEP had filed the ASOA with FERC on October 17, 2022. DEP filed the ASOA unexecuted because it is litigating the issue of whether FERC can require DEP to provide reimbursement to the customer under the ASOA.

On November 9, 2022, Sumac and the Public Staff filed proposed orders in the docket.

FINDINGS OF FACT

1. Sumac Solar, LLC (Sumac) is a North Carolina limited liability company with its principal place of business in Charlotte, North Carolina. Geenex Solar is a Delaware limited liability company with its principal place of business in Charlotte, North Carolina. Geenex Solar is a development partner and independent contractor of EDF Renewables Development, Inc. (USA) (EDF Renewables), which purchased all ownership interests in Sumac Solar, LLC, the direct owner of the Project, from a Geenex affiliate on October 15, 2020. Geenex Solar plans to continue participating in the development of Sumac Solar until the Facility achieves commercial operation.

2. In compliance with N.C. Gen. Stat. § 62-111.1 and Commission Rule R8-63, Sumac filed with the Commission an application for a CPCN authorizing the construction of the Facility on portions of land owned by seven different landowners who own 3,420.32 acres of privately owned land outside of the town of Windsor in Bertie County, North Carolina. The proposed Facility would be located generally on and around Woodard Road near Morning Road on its western side and Middle Tract Road to the east, outside of Windsor. The proposed Facility will include approximately 1,269 fenced acres of the privately owned land plus land outside the fence that Sumac will use for screening and other project needs. The main project Substation location will be 1022 Woodard Road, Town of Windsor, North Carolina 27983. There will be 16 access points located off the main roads for the Facility.

3. The Application has met all requirements for publication of notice.

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

5. The Facility is a solar energy facility and will be interconnected to the transmission grid owned by Dominion Energy North Carolina (DENC). Sumac proposes to interconnect 80 MW of solar generation capacity to the DENC transmission grid and to sell wholesale power from the Facility located within the PJM footprint.² The Facility maintains the AD1-022 position in the PJM interconnection queue. It will interconnect with the DENC transmission system that PJM operates via a new three breaker ring bus switching station that connects on the Cashie-Trowbridge 230 kV line after a new step-up transformer.

6. Sumac currently expects to begin construction of the Facility in the middle of 2024, with an estimated date of commercial operation in the fourth quarter of 2025.

7. The State Clearinghouse has concluded that no further action by Sumac is necessary to comply with the NCEPA.

8. Sumac does not yet have an executed Interconnection Services Agreement with DENC or PJM. PJM's May 2022 System Impact Study report identified two Network Upgrades that Sumac and other projects necessitate. Sumac is allocated cost responsibility for one of those upgrades, an upgrade to DENC's system that is the second step necessary to address an overload on the DEP side of the Rocky Mt.-Battleboro line at a cost of \$14,073,759. Because it is on the PJM system, there is no cost allocation to DEP's ratepayers. It is possible that the upgrade will be incorporated in a supplemental or baseline upgrade if necessary for reliability purposes, in which case a subset of PJM ratepayers would bear the cost pursuant to PJM's Open Access Transmission Tariff (OATT). If Sumac is the only project funding the upgrade, the Levelized Cost of Transmission (LCOT) for the upgrade is \$3.72/MWh. The cost would not be reimbursed by PJM or Duke and would not be passed on to Duke's ratepayers.

9. Sumac contributes to an overload on the DEP portion of the Everetts-Greenville 230 kV tie-line between DENC and DEP and originally was assigned the full \$10 million cost of funding this Affected System Upgrade, which includes reconductoring two miles of the 230 kV Everetts-Greenville line and upgrading disconnect switches and CT ratios. The June 2022 Affected System Study revised the cost of the DEP Upgrade to \$350,000 based on DEP's conclusion that the impacted section of the Everetts-Greenville 230 kV line needed to be replaced for reliability reasons due to the age and condition of the line rather than because of the interconnection of new generation.

10. Macadamia sought to execute an ASOA with DEP providing for the construction of the incremental network upgrades, at a cost of \$150,000 and expediting costs of \$1,615,000 to complete the construction of the upgrades a year early. Macadamia asserted that it would not seek reimbursement for either cost. The Public

² Although Sumac originally filed its Application for a 120 MW Facility, it filed the supplemental testimony of witnesses Mack and Robichaud on June 1 and June 2, 2022, which indicated that Sumac had resized the Facility to 80 MW to avoid triggering certain substantial Network Upgrades on DENC's system.

Staff opposed the inclusion of expediting costs in the ASOA because of the risk that FERC might not approve the ASOA since it did not provide for reimbursement of the costs and that DEP ratepayers would ultimately be responsible for those costs. The Public Staff recommended that the Commission not issue CPCNs for Sumac, Macadamia, or Sweetleaf until FERC issued a decision on the ASOA. The Public Staff also recommended that if FERC ruled that the expedited construction costs were reimbursable, the Commission deny the CPCNs.

11. On September 2, 2022, the Public Staff filed a letter in Docket Nos. EMP-110, Sub 0, EMP-111, Sub 0, and EMP-119, Sub 0 indicating that the Public Staff and the Applicants in the dockets had come to an agreement under which the Applicants agreed not to seek expedited construction of the Network Upgrades on the Everetts-Greenville line, and the Public Staff would recommend that the Commission approve the CPCN applications for each of the Applicants and forego any conditions on the CPCNs that may prevent the Applicants and DEP from executing an ASOA providing for reimbursement of the estimated \$150,000 to construct the incremental network upgrades on the Everetts-Greenville line.

12. Sumac prepared LCOT calculations based on the allocated cost of Network Upgrades provided in the May 2022 System Impact Study (SIS) Report. If Sumac is the only project that funds the Network Upgrade n6618, the necessary Network Upgrade to which Sumac contributes, the LCOT for that upgrade is \$3.72/MWh. The projects would bear the cost of the upgrade. Neither PJM nor DEP would reimburse those costs and pass them on to their ratepayers.

13. For the DEP Upgrade, the LCOT is \$0.05/MWh if one considers all projects in the AD1 cluster that benefit from the upgrade and \$0.41/MWh if one considers only the Sumac project.

14. PJM has projected regional load growth and regional generation requirements.

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 Sumac witnesses Price and the supplement to the Application, and the Affidavit of Publication support these findings.

The Applicant filed a copy of the Articles of Organization for Sumac Solar, LLC, filed with the North Carolina Secretary of State on August 12, 2015, in the docket on April 16, 2020, as an exhibit to the Facility CPCN Application.

An examination of the Application and testimony and exhibits of Sumac's witnesses confirms that the Applicant has 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 June 4, 2020, Sumac filed the Affidavit of Publication showing that the Roanoke-Chowan News-Herald published the Public Notice as proscribed by the Commission in its April 28 Order in four successive weeks on May 9, May 16, May 23, and May 30, 2020. The Commission concludes that the Applicant timely and adequately published the Public Notice.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 4

The evidence supporting this finding of fact is in the Application and the testimony of Sumac witnesses Price, Dalager, and Mack. No party disputes this finding.

According to Sumac witness Dalager's supplemental testimony, EDF has the experience to build, own, and operate solar power generation facilities, including the Sumac Facility. It develops projects that deliver grid-scale power including wind, solar photovoltaic, and storage projects. As of October 2020, EDF's North American portfolio consisted of 16 GW of developed projects and 11 GW of operating assets under service contracts, and EDF had another 26 GW of projects in development. EDF's development of solar power only totals approximately 14 GW. Witness Dalager testified that EDF builds projects on-balance sheet, some of which have capital costs over \$500 million. Renewable projects involve tax benefits beyond the tax appetite of the developer. EDF works with large tax equity investors in the market and had raised over \$5.5 billion as of the time of witness Dalager's testimony. EDF does not invest tax equity until the project has neared completion. The balance of long-term capital at energization is provided by EDF. For smaller facilities, EDF Renewables may sell down interests after the project has reached commercial operation.³

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

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 5-6

The evidence supporting these findings of fact is in the Application (including the Exhibit 3 Description of Need), the supplemental testimony of Sumac witnesses Price and Mack, and the testimony of Public Staff witness Lawrence.

According to the Application and the testimony of Sumac witness Price, Sumac will locate the Facility on approximately 1,269 fenced acres of privately owned land outside

³ Witness Dalager provided direct testimony in this docket on November 16, 2020. Sumac witness Mack filed supplemental testimony on June 2, 2022, wherein witness Mack testifies that witness Dalager is no longer associated with EDF. Witness Mack adopted witness Dalager's direct testimony on behalf of EDF Renewables and Sumac as if it were her own for all purposes in this docket.

of Windsor in Bertie County, North Carolina. The site is largely rural and agricultural, and many of the property owners will continue to farm and live in proximity to the site. Sumac has executed seven lease or purchase options for the solar array area of the site. The agreements give Sumac the right to develop and use the property for solar energy purposes. Sumac included a site plan for the proposed project as an exhibit with the CPCN Application and later updated the site plan and included it as an exhibit to the supplemental testimony of witness Mack.

Sumac witness Robichaud, in her second supplemental testimony filed on June 2, 2022, states that there were originally two PJM interconnection queue positions for Sumac, AD1-022 (80 MW) and AD1-023 (40 MW). On April 21, 2022, Sumac withdrew the AD1-023 queue position, reducing the size of the Sumac project to 80 MW and eliminating a Network Upgrade allocated to Sumac. Witness Mack states that as redesigned the project will include approximately 167,706 solar photovoltaic modules, 22 inverters, 22 pad mounted step-up transformers to medium voltage, and one transmission level voltage step-up transformer. Sumac expects to begin construction in mid-2024, with an estimated date of commercial operation in the fourth quarter of 2025.

Sumac witness Price testifies that the Facility will interconnect to the DENC transmission grid and the PJM transmission system via a new three breaker ring bus switching station that connects on the Cashie-Trowbridge 230 kV line after a new step-up transformer.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 7

The evidence supporting this finding of fact is in the State Clearinghouse comments filed on June 26, 2020, and July 13, 2020.

On June 26, 2020, the North Carolina Department of Administration (NCDOA), through the State Clearinghouse, filed a letter in the docket stating that no further State Clearinghouse review action was necessary for compliance with NCEPA.

On July 13, 2020, NCDOA, through the State Clearinghouse, filed an additional letter in the docket that included comments from multiple state agencies and stated that no further State Clearinghouse review action was necessary for compliance with NCEPA. The agencies included the Department of Environmental Quality (DEQ), Division of Environmental Assistance and Customer Service, DEQ Division of Waste Management, and North Carolina Department of Public Safety.

Considering the foregoing, the Commission concludes that Sumac has complied with the NCEPA and that the Act does not prohibit or impede issuance of the certificate of authority. However, the Commission notes that the Sumac Facility is also subject to the North Carolina Department of Environmental Quality's (NCDEQ's) permitting requirements under N.C.G.S. §§ 143-215.115-125. The Facility shall be constructed and operated only after Sumac receives all necessary environmental or other permits and approvals, including any necessary permits under N.C.G.S. §§ 143-215.115-125.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 8-14

The evidence supporting these findings of fact is in the Application, the testimonies of Sumac witness Robichaud, the Public Staff Joint Supplemental Testimony of witnesses Lucas and Lawrence, and the Public Staff letter and affidavits filed September 2, 2022.

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 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).

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.” *Id.* 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 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.” 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.”).

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.*

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 this instance, the Application and later-filed testimony in the proceeding provide costs for the Facility that include \$14,073,759 in Network Upgrade Costs that will be required to interconnect the Facility. If Sumac is the only project that funds the upgrade, the LCOT is \$3.72/MWh. Sumac witness Robichaud testifies that, regardless of the LCOT, the Facility would bear the cost of the Network Upgrades. Neither PJM nor DEP would reimburse Sumac, and DEP ratepayers would not bear those costs.

As witness Robichaud discusses in her second supplemental and second supplemental reply testimonies, Sumac is one of four projects that PJM identifies as contributing to an overload on DEP's Everett's-Greenville 230 kV line. DEP's revised Affected System Study for the PJM Cluster AD1, which DEP issued on June 8, 2022, revises the cost of this upgrade to \$350,000 based on DEP's conclusion that the impacted section of the Everetts-Greenville 230 kV line needed replacing for reliability reasons and not because of the interconnection of new generation. DEP had indicated that the work would not be completed until 2026 or 2027 unless the Interconnection Customer paid to expedite it. At that time, Macadamia was seeking to enter an ASOA with DEP for the work to be completed by December 31, 2025 for \$150,000 plus an expediting cost of \$1,615,000. The draft ASOA between Macadamia and Duke did not provide for any reimbursement of those costs by ratepayers.

In its Joint Supplemental Testimony of witnesses Lucas and Lawrence, the Public Staff expressed concern over the possibility that DEP ratepayers might ultimately be responsible for the cost of expediting the construction of the DEP Upgrade, given the ongoing litigation at FERC regarding the question of reimbursement. The Public Staff recommended that the Commission not issue the CPCNs for each applicant until FERC issued a decision on the ASOA between DEP and Macadamia (the party thought to be entering the ASOA with DEP). The Public Staff further recommended that if FERC ruled that the expedited construction costs were reimbursable, the Commission should deny the CPCN applications.

The Public Staff and Sumac eventually came to an agreement whereby the AD1 Applicants (Sumac, Sweetleaf, and Macadamia) agreed not to seek expedited construction of the DEP Upgrade, and the Public Staff agreed to recommend that the Commission approve the CPCN applications for the Applicants and recommend that the Commission forgo any conditions on those CPCNs that may prevent the Applicants and DEP from executing an ASOA that provides for reimbursement of the \$150,000 to construct the incremental Network Upgrades on the Everetts-Greenville line.

On October 19, 2022, Sumac, Sweetleaf, and Macadamia filed in the three dockets an Affected System Operating Agreement (ASOA) between Sumac and DEP. The ASOA provides for the construction of the DEP upgrade at an estimated cost of \$150,000. The Applicants note that DEP had filed the ASOA with FERC on October 17, 2022. DEP filed the ASOA unexecuted because it is litigating the issue of whether FERC can require DEP to provide reimbursement to the customer under the ASOA.

Under the applicable regulatory paradigm, Sumac 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. Additionally, Sumac will bear all costs associated with the construction of the generating Facility. The Applicant provides that the LCOT for the PJM Network Upgrades is \$3.72/MWh, a data point that the Public Staff does not contest. Sumac, rather than North Carolina ratepayers, will bear those costs.

Sumac also provides the LCOT for the Affected Systems Costs in witness Robichaud's second supplemental reply testimony filed on August 12, 2022. The LCOT is \$0.05/MWh if one considers all projects in the AD1 cluster that benefit from the upgrade and \$0.41/MWh if one considers only the Sumac project. Even with the uncertainty regarding the ultimate resolution of the question of reimbursement of Affected Systems Costs to an interconnection customer, the low LCOT for this upgrade weighs favorably in the Commission's decision.

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.

Based on the history of the ASOA process regarding the PJM AC1 cluster, the Commission is not persuaded that the issue regarding the DEP Affected System Upgrade Costs to be borne by Sumac is resolved. Additionally, the Commission remains concerned that regardless of how many interconnecting solar projects are allocated a share of the Affected System Upgrade costs, DEP ratepayers will reimburse all of those costs (with interest) and will not receive any of the power supplied by these projects. As testified by American Beech witness Rubin, the Applicant has explored opportunities for offtake from the Facility, including responding to a DENC request for proposals as well as engaging in conversation with potential corporate buyers, and corporate purchases of energy and renewable energy credits from solar facilities in the southeast market of PJM are projected to increase over the next few years. Thus, while the record suggests this Facility is likely destined to serve the need of a corporate offtaker in the PJM region, the record provides little to no evidence of any specific benefit to DEP ratepayers from the transmission infrastructure for which they must pay so that the electricity may reach the corporate buyer. Nonetheless, the Commission is persuaded by the evidence in the record that even if Sumac were to upfront fund the entirety of these costs, the LCOT for the Facility is not unreasonable and not significantly higher than the LCOT for facilities for which the Commission has granted a CPCN in the past. 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*, Docket 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*, Docket No. EMP-118, Sub 0 (N.C.U.C. May 4, 2022).

In view of the total cost of the Facility, including the Network Upgrades and the DEP Affected System Upgrade Costs, the Commission concludes, although not without reservation, 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, though with some reservation as discussed above, 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 CPCN is hereby granted to Sumac Solar, LLC, for the construction of a solar energy facility of up to 80 MW to be located in Bertie County, North Carolina, subject to the following conditions:

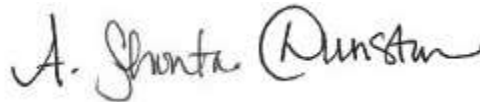
- (i) The Applicant shall construct and operate the Facility in strict accordance with applicable laws and regulations, including any local zoning and environmental permitting requirements;
- (ii) The CPCN shall be subject to Commission Rule R8-63(e) and all orders, rules, and regulations as are now or may hereafter by lawfully made by the Commission;
- (iii) The Applicant shall file with the Commission in this docket any significant revisions in the cost estimates for the construction of the Facility itself, Attachment Facilities, Network Upgrade Costs, or Affected System Upgrade Costs, or any other significant change in costs, within 30 days of becoming aware of such revisions;
- (iv) If in the future the Applicant enters into any Affected System Operating Agreement for the construction of Affected System Upgrades, in addition to or in place of the existing agreement with DEP, the Applicant shall file with the Commission in this docket a copy of any Affected System Operating Agreement at the same time such filing is made at the Federal Energy Regulatory Commission (at least 61 days before construction on the upgrades commences); and

- (v) If at any time the Applicant seeks reimbursement for any Attachment Facilities, Network Upgrade Costs, Affected System Upgrade 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.

ISSUED BY ORDER OF THE COMMISSION.

This the 31st day of January, 2023.

NORTH CAROLINA UTILITIES COMMISSION

A handwritten signature in black ink that reads "A. Shonta Dunston". The signature is written in a cursive, flowing style.

A. Shonta Dunston, Chief Clerk