

**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 Certificate of Public
Convenience and Necessity to
Construct an 80 MW Solar Facility
in Bertie County, North Carolina

) PROPOSED ORDER ISSUING
) CERTIFICATE FOR MERCHANT
) GENERATING FACILITY

BY THE COMMISSION: On April 16, 2020, Sumac Solar LLC (Sumac or Applicant) filed an application pursuant to N.C. Gen. Stat. § 62-20.1 and Commission Rule R8-63 (the Application) for a certificate of public convenience and necessity (CPCN) to construct an 80 MW_{AC}¹ solar photovoltaic electric generating facility to be located in Bertie County, North Carolina and operated as a merchant generating facility (Facility).

In support of its application, Sumac filed the direct testimony of Kara Price, along with several exhibits. In summary, the Facility is located on seven parcels of land for a total of approximately 3400 acres located around Woodard Road near Morning Road on its western side, and Middle Tract Road to the east outside of Windsor in Windsor, Bertie County, North Carolina. The Facility will interconnect with the electric transmission system owned by Virginia Electric and Power Company d/b/a Dominion Energy North Carolina (DENC), affording access to the competitive wholesale markets administered by PJM Interconnection, LLC (PJM). Applicant stated it is negotiating a contract for the sale of the output of the Facility with an out-of-state corporate buyer. The expected service life of the Facility is 20 or more years.

On April 23, 2020, the 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.G.S. § 62-82, and addressing other procedural matters.

On April 28, 2020, the Commission issued an Order Scheduling Hearing, Requiring Testimony, Establishing Procedural Guidelines, and Requiring Public

¹ Sumac's CPCN application was originally for a 120 MW_{AC} solar photovoltaic electric generating facility but was later downsized.

Notice (Scheduling Order). The Scheduling Order, among other things, scheduled a hearing on Tuesday, June 23, 2020, at 6:00 p.m. at the Bertie County Courthouse in Windsor, North Carolina, for the purpose of receiving public witness testimony regarding the application, and required the Applicant to publish public notice of the hearing in a newspaper having general circulation in Bertie County once a week for four consecutive weeks. Further, the Scheduling Order provided that the Commission may cancel the public witness hearing if no substantial written complaints regarding the proposed facility were filed on or before ten days following the last day of publication of the notice.

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

On May 7, 2020, the Commission issued its Errata Order amending certain details of the Scheduling Order.

On May 7, 2020, the Commission filed a letter to the State Clearinghouse advising the State Clearinghouse of the Application.

On May 12, 2020, Applicant filed the testimony of Donna Robichaud. In summary, Ms. Robichaud testified Applicant received system impact study (SIS) reports from PJM relative to the Facility during December 2017 and December 2019 (December 2019 SIS Report). The December 2019 SIS Report identified over \$43,000,000 in network upgrades required to interconnect and energize the Facility. Ms. Robichaud noted this figure was likely to change as PJM retooled their studies and/or other projects received a cost allocation for the same network upgrades on PJM's system. Ms. Robichaud stated that construction costs, in any event, would not be borne by ratepayers as Applicant (and/or other interconnection customers) would be responsible for funding the PJM network upgrades. Finally, Ms. Robichaud stated the December 2019 SIS Report identified certain affected system network upgrades relative to a tie-line connecting the systems of DENC and Duke Energy Progress, LLC (DEP).

On May 21, 2020, the Clerk filed an email from the State Clearinghouse informing the Commission that the State Clearinghouse received the Application, and that environmental review of the Sumac project was expected by June 10, 2020.

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

On May 29, 2020, the Public Staff filed the testimony of Evan Lawrence. Mr. Lawrence stated Applicant demonstrated need for the Facility, complied with the Commission's filing requirements, and provided testimony on network upgrades; stated that the Public Staff does not have concerns regarding network upgrades; and stated that the Public Staff recommends approval of the Application subject to certain conditions.

On June 4, 2020, Applicant filed an affidavit of publication certifying that notice of the Application was published in the Roanoke-Chowan News-Herald, a

newspaper published daily at Ahoskie, North Carolina on May 9, 2020, May 16, 2020, May 23, 2020, May 30, 2020.

On June 11, 2020, Applicant filed a motion to cancel the public witness and expert witness hearings established by the Scheduling Order and accept into the record all prefiled testimony and exhibits of the Applicant and the Public Staff on ground there were no intervening parties and no written complaints from public witnesses relative to the Facility. The motion stated that the Public Staff consented to cancellation of the hearings and recommended granting the CPCN application.

On June 16, 2020 the Commission issued its Order Cancelling Public Witness Hearing finding good cause to cancel the public witness hearing scheduled in this docket for June 23, 2020 at the Bertie County Courthouse in Windsor, North Carolina.

On June 22, 2020, the Commission issued its Order Cancelling Expert Witness Hearing and Requiring Additional Testimony finding good cause to cancel the expert witness hearing scheduled for July 6, 2020, in Raleigh, North Carolina. The order also required the parties to provide testimony on various matters including network upgrades on DENC's system or any affected system's transmission system, related SIS studies and affected system studies, the Levelized Cost of Transmission (LCOT) for any required transmission system upgrades or modifications, and any relevant PPA agreements. The order provided a procedural schedule for the filing of additional testimony and exhibits.

On June 26, and July 13, 2020, the State Clearinghouse filed comments identifying various permits that may need to be obtained in order for the Facility to comply with North Carolina law, and stating that it determined that no further action was required by the Commission for compliance with the North Carolina Environmental Policy Act.²

On July 21, 2020, Applicant filed a Motion for Extension of Time for the filing of its additional testimony and exhibits. In the motion, the Applicant also seeks an extension of deadlines for the testimony of the Public Staff, and rebuttal testimony. In support of its motion, the Applicant stated that while it has been working diligently to prepare testimony and exhibits, the complexity of the underlying issues related to the PJM interconnection process requires additional time beyond the time provided for in the Order. In addition, Applicant stated that it had contacted Public Staff regarding its request for an extension of time, and that the Public Staff does not object to the request provided that other deadlines for testimony are similarly extended. Applicant requests that the additional testimony and exhibits deadline be extended to August 12, 2020, the Public Staff and Intervenor's testimony and exhibits deadline be extended to August 26, 2020, and Applicant's rebuttal testimony and exhibits be extended to September 2, 2020

² The letter from the Clearinghouse that was filed on July 13, 2022, was dated June 11, 2020.

On July 22, 2020, the Commission issued its Order Granting Extension of Time To File Testimony finding good cause to extend the dates filing additional testimony and exhibits and adopting Applicant's proposed schedule for the same.

On August 12, 2020, Applicant filed the supplemental testimony and exhibits of Donna Robichaud. In summary, Ms. Robichaud testified that the Facility was being studied by PJM in the AD1 cluster study and that Ms. Robichaud expected approximately \$3,000,000 in PJM network upgrades (PJM Network Upgrades) ultimately be allocated to the Facility once PJM retooled SIS studies during April 2021 and issued an interconnection study agreement. Ms. Robichaud noted it was not possible to provide definitive provided LCOT calculations for the PJM Network Upgrades at the time of her testimony, but calculated them as follows: \$5.57/MWh, based on the December 2019 SIS Report, and \$0.49/MWh, based on how Ms. Robichaud expected the December 2019 SIS Report to resolve itself after retooling in April 2021.

Ms. Robichaud also testified she expected DEP to issue an affected system upgrade study report during September or October 2020. The report was expected to show a portion of the Everetts-Greenville 230 kV line would need to be reconducted, at cost of \$8,500,000 million, to address an overload on the DEP side of the tie-line connecting the transmission systems of DEP and DENC (DEP Upgrade). Ms. Robichaud provided LCOT calculations for the DEP Upgrade as follows: \$1.37/MWh, if Applicant funded the upgrade alone, and \$0.12/MWh, if all projects in the AD1 cluster funded the upgrade. Ms. Robichaud highlighted that DEP had not confirmed that the Facility would trigger a need for the DEP Upgrade at the time of her testimony.

Finally, Ms. Robichaud discussed that Applicant was in discussions with corporate buyers for offtake and attached a letter from an energy advisory consultant stating, "there is substantial demand among the large C&I clients that they serve for utility-scale solar projects located in PJM."

On August 25, 2020, the Public Staff filed a Motion for Extension of Time for the filing of its testimony and exhibits due to the press of other business, including the currently ongoing rate case hearings for Duke Energy Carolinas, LLC, and DEP (together, Duke). In the motion, the Public Staff requests the deadline for the filing of its testimony be extended until five business days following the conclusion of the Duke rate case hearings.

On August 26, 2020, the attorney for the Applicant filed a letter proposing an alternative extension schedule. The alternative proposal of the Applicant proposes that the Public Staff file its recommendation and supporting testimony by September 25, 2020, and that the Applicant file rebuttal testimony by October 9, 2020.

On August 27, 2020, the Commission issued an Order Granting Further Extension of Time finding good cause to adopt Applicant's proposed alternative

schedule and requiring the Public Staff's additional testimony by September 25, 2020 and Applicant's additional testimony by October 9, 2020.

On September 25, 2020, the Public Staff filed a Motion for Further Extension of Time for the filing of its testimony and exhibits until October 26, 2020, and the filing of rebuttal testimony by the Applicant until November 6, 2020. In its Motion, the Public Staff notes that DEP anticipates completing affected system studies for several the clusters of generating facilities anticipated to interconnect into the DENC system, and that the Commission has requested comments in Docket No. E-100, Sub 170 on the affected system study process. In its motion, the Public Staff states that both the Public Staff and the Applicant believe it would be beneficial to allow the time for the filing of testimony in this proceeding to occur after the parties have been able to review the DEP affected system studies, and the comments of the parties in Docket. No. E-100, Sub 170.

On September 25, 2020, the Commission issued its Order granting Further Extension of Time finding good cause to extend the dates for filing testimony and exhibits of the Public Staff on or before October 26, 2020, and the date for filing rebuttal testimony of Applicant to on or before November 6, 2022.

On October 15, 2020, Applicant filed a letter pursuant to Rule R8-63(e)(4) notifying the Commission of a change in ownership of the Facility. The letter noted the Facility was sold at a closing that occurred on October 15, 2020 and that Applicant would file supplemental testimony providing details of the transaction.

On October 22, 2020, the Public Staff filed a motion requesting an extension time for the filing of its supplemental testimony and the Applicant's reply testimony. In support of its motion, the Public Staff stated that the request is necessary to file additional supplemental testimony due to the sale of the facility, the interrelated nature of the comments on this Application and the comments to be filed in Docket No. E-100, Sub 170, and the pending receipt of the Public Staff of several affected system studies for clusters of facilities in DENC territory. The Public Staff requested an extension to allow the testimony of the Public Staff to be filed on or before November 16, 2020, and to allow the reply testimony of the Applicant to be filed on or before November 30, 2020.

On October 26, 2020, the Commission issued an Order Granting Extension of Time finding good cause to grant the Public Staff's request for an extension of time and adopting the testimony filing schedule proposed in the Public Staff's motion.

On November 16, 2020, Applicant filed a supplemental CPCN application and supporting testimony of Emily Dalager. The supplemental application and testimony stated that EDF Renewables Development, Inc. (USA) acquired the proposed Facility and that Geenex Solar, LLC (Geenex) would continue participating in the development of the Facility until it achieved commercial operation.

On November 16, 2020, the Public Staff filed the supplemental testimony of Evan Lawrence. In summary, Mr. Lawrence expressed concern over the volume of merchant plant facilities interconnecting with DENC's system and whether DEP ratepayers would bear construction costs for affected system upgrades required by the related interconnections. Mr. Lawrence stated the Public Staff did not disagree with Applicant's LCOT calculations but expressed further concern over whether it would be appropriate for the Commission to consider LCOT when determining whether a facility is in the public convenience and necessity, in these circumstances, where DEP ratepayers may fund affected system upgrades, but not achieve the benefit of the energy produced by the merchant facility. Nevertheless, Mr. Lawrence's testimony recommends granting the Application subject to certain conditions and upon the assumption that the interconnection customer, not DEP ratepayers, bear the expense of affected system upgrade costs.

On November 20, 2020, the Applicant filed a motion requesting that the Commission extend the procedural schedule for this proceeding. In support of its motion, the Applicant stated that PJM recently informed the Applicant that DEP now expects to provide Affected System Study results relating to the Facility in late December 2020 or early January 2021. PJM also stated that it intends to provide the Applicant a revised SIS during the same time period. In its motion, the Applicant further noted that the interconnection studies are of critical importance to the consideration of its CPCN application. In the motion the Applicant requested that the Commission allow supplemental testimony and exhibits of the Applicant to be filed on or before Monday, February 22, 2021, the testimony and exhibits of Public Staff to be filed on or before Monday, March 8, 2021, and the reply testimony and exhibits of the Applicant to be filed on or before Monday, March 22, 2021.

On November 20, 2020, the Commission issued an Order Granting Further Extension of Time and Canceling Hearing finding good cause to adopt Applicant's proposed schedule for the filing of additional testimony.

On February 9, 2021, the Applicant filed a motion requesting that the Commission extend the schedule for the filing of testimony in this proceeding. In support of its motion, Applicant stated PJM will not complete revised interconnection studies for the Facility until at least April 2021. DEP indicated it cannot provide an affected system study for projects in the AD1 cluster including the Facility until after it receives the revised interconnection studies from PJM. Applicant further noted the interconnection studies and affected system study will generate information of critical importance to the Commission's consideration of the Application. In the motion Applicant requested that the Commission allow supplemental testimony and exhibits of Applicant to be filed on or before June 15, 2021, the testimony and exhibits of Public Staff to be filed on or before July 6, 2021, and the reply testimony and exhibits of Applicant to be filed on or before July 20, 2021.

On February 16, 2021, the Commission issued an Order Granting Further Extension of Time, finding good cause to grant Applicant's motion for extension of time and adopt Applicant's proposed schedule for the filing of additional testimony.

On May 27, 2021, Applicant filed DEP's April 5, 2021, affected system study report for PJM interconnection cluster AD1 (April 2021 DEP Study Report). Applicant's filing noted that April 2021 DEP Study Report would likely need to be retooled given that it was based on study results that PJM planned to update.

On May 27, 2021, Applicant filed a motion requesting that the Commission stay all proceedings in this docket. In support of its motion, Applicant stated it was informed PJM will provide a revised interconnection study for the Facility in the Fall of 2021. The Applicant further stated that the revised PJM interconnection studies will require DEP to revise its affected system study report for the Facility. The Applicant requested that the Commission stay the proceedings in this docket, direct Applicant to file in the docket any additional interconnection studies it receives for the Facility, and direct the Applicant to propose an appropriate procedural schedule after receipt of the additional interconnection studies.

On June 3, 2021, the Commission issued an Order Granting Request for Stay of Proceedings, finding good cause to the grant Applicant's request for a stay; requiring Applicant to file any additional interconnection studies for the Facility; and permitting Applicant to propose an appropriate procedural schedule after receipt of the additional interconnection studies.

On June 1, 2022, Applicant filed the second supplemental testimony and exhibits of Donna Robichaud. Ms. Robichaud testified that Applicant withdrew one of its queue positions, reducing the size of the Facility from 120 MW_{AC} to 80 MW_{AC}.

Ms. Robichaud also testified that, during May 2022, PJM issued its retooled SIS report (May 2022 SIS Report). The May 2022 SIS Report allocated to Applicant just over \$14 million in PJM network upgrades associated with routing flow away from the DENC-DEP tie-line (Revised PJM Upgrades). Ms. Robichaud notes the Revised PJM Upgrades may be recategorized as reliability upgrades, meaning they would be deemed unrelated to interconnection of the facilities in the AD1 cluster. Ms. Robichaud calculated LCOT for the Revised PJM Upgrades at \$3.72/ MWh, if Applicant was the only facility that funded the upgrades.

Ms. Robichaud further testified that, during September 2021, DEP issued its retooled affected system study for PJM cluster AD1 (September 2021 Affected System Study). The September 2021 Affected System Study allocated \$10,000,000 in upgrade costs to Applicant relative to the DEP Upgrade. Ms. Robichaud discussed payment of construction costs for these upgrades. She stated Applicant was affiliated with another merchant plant facility owned by Macadamia Solar, LLC (Macadamia) that was studied in the AD1 cluster, along with the Facility, and that Macadamia was negotiating an Affected System Operating Agreement (ASOA) with DEP, whereby Macadamia would cover the

cost of the DEP Upgrade without reimbursement by DEP ratepayers. Ms. Robichaud calculated LCOT for the DEP Upgrade as follows: \$.32/MWh, if all facilities in the AD1 cluster fund the DEP Upgrade, and \$2.65/MWh, if only Applicant funded the upgrades.

Finally, Ms. Robichaud disputed the Public Staff's concerns relative to merchant plant facilities in DENC territory as speculative and unsupported, and notes that the LCOT for the Revised PJM Upgrades compares favorably to the benchmark LCOT figures cited by the Public Staff and relied on by the Commission in prior decisions.

On June 2, 2022, Applicant filed the supplemental testimony of Amanda Mack. Ms. Mack supplemented Sumac's Application to account for the decreased size of the Facility.

On July 22, 2022, Application filed a revised SIS report developed by PJM during July 2022 (July 2022 SIS Report).

On July 25, 2022, the Public Staff filed a Consent Motion for Procedural Order in this proceeding, Docket No. EMP-110, Sub 0, and EMP-119, Sub 0 and Sub 1 (together, Dockets). Docket No. EMP-119, Sub 0 and Sub 1 involve applications filed by Macadamia for a CPCN to construct a 484-MW solar facility in Washington County, North Carolina and for a certificate of environmental compatibility and public convenience and necessity to construct a related transmission line. Docket No. EMP-111, Sub 0 involves an application filed by Sweetleaf Solar, LLC (Sweetleaf) for a CPCN to construct a 120-MW solar facility in Bertie County, North Carolina. The motion discussed that Applicant, Macadamia, and Sweetleaf (collectively, the Projects) are all under development by Geenex Solar. The Public Staff's motion noted that the Projects are in the PJM AD1 cluster and involve similar parties and witnesses. Because of the relationship between the applicants in the Dockets and the overlap in witnesses, the motion requested the Commission to hold all three CPCN hearings on the same day (September 6, 2022), when the hearing for Macadamia was already scheduled. Finally, the Public Staff's motion proposed that the Public Staff file supplemental testimony in this docket and the Sweetleaf docket on or before July 29, 2022; and that Applicant and Sweetleaf file supplemental reply testimony, if any, in the appropriate dockets on or before August 12, 2022.

On July 29, 2022, the Public Staff filed the second supplemental testimony of Evan Lawrence. In summary, Mr. Lawrence stated that DEP had issued another revised affected system study report for PJM's AD1 cluster on June 8, 2022 (June 8, 2022 DEP Study Report), shortly after Applicant filed the second supplemental testimony of Ms. Robichaud and Ms. Mack. DEP indicated in the June 8, 2022 DEP Study Report that it planned to construct the DEP Upgrade for reliability reasons due to the age and condition of the Greenville-Everetts 230 kV line, and not because of the interconnection of projects in the AD1 cluster; and that the only upgrades required for interconnection were reconductoring the line to a higher

capacity, at an incremental cost of \$350,000 (Revised DEP Upgrade). Mr. Lawrence stated the Public Staff continued to recommend granting the Application subject to certain conditions, including that Applicant will inform the Commission if it seeks reimbursement for any network upgrades.

On August 5, 2022 the Commission entered its Order Accepting Testimony, Requiring Further Testimony, and Scheduling Hearings finding good cause to grant the Public Staff's July 25, 2022 Consent Motion for Procedural Order.

On August 12, 2022, Applicant filed the second supplemental reply testimony and exhibits of Donna Robichaud. Ms. Robichaud's testimony provides updates on the Revised DEP Upgrade and the related ASOA. DEP provided Macadamia an executable ASOA that further reduced the cost of the Revised DEP Upgrade from \$350,000 to \$150,000 and placed the in-service date of the DEP Upgrade during 2026 or 2027. Ms. Robichaud testified that, because an in-service date of 2026 or later would adversely impact the Facility and related Projects in the AD1 cluster, Macadamia was negotiating an ASOA with DEP that would expedite completion of the DEP Upgrade to 2025. The cost for expediting the work would be approximately \$1.6 million (Expediting Costs). Ms. Robichaud states that the executable ASOA (which would have to be approved by FERC) did not provide for reimbursement for the Revised DEP Upgrade or the Expediting Costs, and therefore would not result in any costs being imposed on DEP ratepayers. Ms. Robichaud provides updated LCOT calculations for the Revised DEP Upgrade, together with the Expediting Costs, as follows: \$0.05/MWh, if the total capacity of the Projects is considered, and \$0.41/MWh, if only the Facility is considered. Ms. Robichaud opines that these LCOT figures are extremely favorable compared to the benchmark figures cited by the Public Staff and relied on by the Commission in prior proceedings.

On August 30, 2022, the Public Staff filed a Motion for Leave to File Joint Supplemental Testimony, along with the joint supplemental testimony of Public Staff witnesses Jay B. Lucas and Evan D. Lawrence. Witnesses Lucas and Lawrence testified that if FERC were to reject the ASOA between Macadamia and DEP because it did not provide for reimbursement, then DEP's ratepayers would ultimately pay for the Revised DEP Upgrade and Expediting Costs. The Public Staff highlights its concern about the potential for ratepayers to cover the Expediting Costs, since expediting is not necessary for interconnection. The Public Staff recommends that the Commission not issue CPCNs in the Dockets until FERC decides whether to approve the ASOA, and that the Commission ultimately deny the CPCNs if FERC were to allow reimbursement for the Expediting Costs. Alternatively, the Public Staff continues to recommend approval of the CPCNs if Macadamia were to withdraw its request to expedite the DEP Upgrade, subject to certain conditions.

On September 2, 2022, the Commission issued an Order (September 2 Order) accepting the joint supplemental testimony of Public Staff witnesses Lucas and Lawrence. The Commission also directed the Applicants and the Public Staff

to produce witnesses at the hearings on September 6, 2022, to provide testimony in the Dockets addressing specific questions listed in the Order.

On September 2, 2022, the Public Staff filed a letter stating the parties had resolved the concerns raised in the August 30, 2022 joint supplemental testimony of Public Staff witnesses Jay B. Lucas and Evan D. Lawrence. In summary, Applicant, Macadamia, and Sweetleaf agreed not to seek expedited construction of the Revised DEP Upgrade; while the Public Staff recommended the Commission approve the CPCNs. The Public Staff further recommends that the Commission not impose any conditions that might prevent the Applicant, Macadamia, or Sweetleaf from executing an ASOA with DEP that would provide for reimbursement of Revised DEP Upgrade. The Public Staff's letter attaches affidavits from representatives of Applicant, Macadamia, and Sweetleaf affirming that those entities will not seek expedited construction of the Revised DEP Upgrade.

On September 6, 2022, the Commission convened the Consolidated Hearings in the Commission Hearing Room 2115 at 1:00 p.m., as scheduled. The Presiding Commissioner noted that the parties had 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 Dockets being heard, the Commission found good cause to consolidate the proceedings 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 the 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 Consolidated Hearings, Applicant presented witnesses Kara Price, Amanda Mack, and Donna Robichaud, and the Public Staff presented witnesses Jay Lucas and Evan Lawrence, all for the limited purpose of offering testimony addressing the Commission's questions posed in the September 2 Order. In addition, Applicant, Macadamia, and Sweetleaf requested and were granted leave to present additional direct testimony from Donna Robichaud on issues raised in the Commission's September 2 Order.

Ms. Robichaud testified that Macadamia sought to expedite the DEP Upgrade because an additional one-to-two-year delay in achieving commercial operation would increase project risk related to site control, zoning approvals, inflation, and changes in marketability. Ms. Robichaud also testifies regarding the Applicant's efforts to engage with FERC staff regarding DEP's calculation of Expediting Costs, as well as the potential for approval of an ASOA that would not provide for reimbursement of affected system costs or Expediting Costs. Ms. Robichaud testified that even if FERC were to accept an ASOA that did not provide for reimbursement of these costs, the approval or acceptance of the ASOA could be significantly delayed solely because FERC could disapprove of or have

questions regarding DEP's calculation of Expediting Costs.

Ms. Robichaud further testified that continued uncertainty about the CPCN for Macadamia would make it difficult to obtain funding for significant interconnection obligations due in the fall. Macadamia withdrew its request to expedite the DEP Upgrade in order to resolve the Public Staff's concerns about the Expediting Costs, so that the CPCN could (subject to approval by the Commission) be issued in advance of those obligations coming due.

Finally, Ms. Robichaud testified that because the Expediting Costs would no longer be included in the ASOA, then Applicant, not Macadamia, would most likely sign the ASOA. Applicant was originally assigned responsibility for the DEP Upgrade, but Macadamia (due to its size) was economically better able to bear the increased costs associated with expediting. Without Expediting Costs, Applicant is more easily able to absorb the cost of the Revised DEP Upgrade and will most likely execute the ASOA with DEP.

On September 8, 2022, Public Staff filed a letter with the Commission attaching Public Staff Late-Filed Exhibit No. 1. The exhibit included an e-mail exchange between Public Staff and DEP and various attachments. In the e-mail, DEP's counsel responded to questions posed by the Commission to the Public Staff during the Evidentiary Hearing. DEP stated that it had discovered an overload on the Greenville-Everetts 230 kV transmission line (referring to the DEP Upgrade) approximately two years before DEP first discussed the existence of the overload in its affected system study report of the PJM AD1 cluster, published during April 2021. DEP further stated that the overload has not yet been presented to the North Carolina Transmission Planning Cooperative (NCTPC) or its Transmission Advisory Group; however, discussion of the DEP Upgrade will be included in the next NCTPC plan, after the related ASOA is approved by FERC.

On September 8, 2022, the Commission issued an Order Accepting Testimony and Requiring Proposed Orders, finding good cause to receive all witnesses' prefiled testimony, exhibits, and affidavits into the record—to the extent they have not already been received—and requiring 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.

On October 10, 2022, the transcript of the Consolidated Hearings was filed.

On October 19, 2022, Applicant filed the final, unexecuted ASOA with DEP. DEP filed the ASOA with FERC on October 17; and also filed the ASOA with this Commission in docket no. E-100, Sub 170. Consistent with evidence and testimony previously provided by Applicant, the ASOA provides for the construction of the Revised DEP Upgrade at an estimated cost of \$150,000 and does not provide for the upgrade to be expedited, thereby eliminating Expediting Costs.

On November 9, 2022 Applicant and the Public Staff filed proposed orders for the Commission's consideration.

DISCUSSION AND CONCLUSIONS

After careful consideration and noting Public Staff's recommendation that a CPCN be issued for the Facility, the Commission finds good cause to approve the Application and issue the requested CPCN for the Facility, subject to certain conditions set forth below.

The Commission finds that the uncontested evidence demonstrates that there is a need for the Facility in the region, in accord with the provisions of Commission Rule R8-63(b)(3). Supporting this finding is Applicant's verified application and the testimony of Applicant's witness Donna Robichaud, which speaks to the significant need for solar developments to serve wholesale and retail buyers taking electrical service in PJM territory.

The Commission also reviewed this application in light of its mandate under N.C.G.S. § 62-110.1 (c) to analyze and plan for the long-range need for generating resources in North Carolina and to evaluate CPCN applications for new generating facilities in North Carolina in light of such analysis and plan. Based upon the evidence of record the Commission finds that due to the Applicant's plans for the sale of energy and capacity from the Facility to an out-of-state customer or, alternatively, into the PJM market, it does not appear that the Facility will have any material impact on the long-range balance of demand for electricity and the generation resources available to meet that demand in North Carolina. In addition, the Commission notes that, based on the evidence of record, the Facility will not affect the projections of load or the identification of needed generating resources set forth in the integrated resource plans for any public utility subject to the Commission's jurisdiction.

Further, consistent with the plain language of N.C.G.S. § 62-110.1 (e), the Commission has considered the construction costs associated with the construction of the Facility. Specifically, the statute provides that, "[a]s a condition for receiving a certificate, the applicant shall file an estimate of construction costs in such detail as the Commission may require . . . and no certificate shall be granted unless the Commission has approved the estimated construction costs and made a finding that construction will be consistent with the Commission's plan for expansion of electric generating capacity." N.C.G.S. § 62-110.1 (e). The Commission evaluated the construction costs for the Facility, including the cost of the generating plant, as well as costs associated with the PJM Network Upgrade and the Revised DEP Upgrade.

Ms. Robichaud's June 1, 2022 testimony indicates Applicant may be required to fund approximately \$14 million in construction costs relative to the Revised PJM Network Upgrade and states that the costs of those upgrades will not be imposed on North Carolina ratepayers. The Public Staff does not dispute or

raise any concerns regarding these costs of the Facility. The Commission finds that these costs are reasonable and will not negatively impact ratepayers. With respect to the Revised DEP Upgrade, the Commission concludes that while some affected system costs related to the Facility and Macadamia and Applicant's projects may ultimately be allocated to North Carolina ratepayers, those costs are reasonable in relation to the amount of generation they will facilitate and will not unduly burden North Carolina ratepayers. The related evidence is discussed below.

As witness Lawrence testifies, DEP concluded that it is necessary to replace the Everetts-Greenville 230 kV line for reliability reasons due to the age of the line. As determined by DEP, the only cost triggered by the Projects is the incremental cost of using a higher rated conductor in that line replacement project—a cost of \$150,000. The Commission finds it appropriate, in considering the LCOT of the Revised DEP Upgrade, to consider the output of all three Projects in the AD1 cluster, *i.e.*, the facilities associated with Applicant, Macadamia, and Sweetleaf, all of which are reliant on the Revised DEP Upgrade.

In the June 2022 Affected System Study Report, DEP estimated the cost of the Revised DEP Upgrade to be \$350,000. That figure was later revised downward to \$150,000. Based on the estimated \$150,000 cost plus the Expediting Costs, and assuming the total capacity of the three Projects, Ms. Robichaud calculated an LCOT of \$0.05/MWh for the Revised DEP Upgrade.³ Although the Applicant has committed not to incur Expediting Costs (and Sumac's ASOA does not provide for the upgrade to be expedited), that decision was made only a few days before the hearing and no party provided an LCOT calculation for the Revised DEP Upgrade based on the \$150,000 cost estimate, but without also including Expediting Costs. However, as discussed below, even with the Expediting Costs the LCOT for the Revised DEP Upgrade compares very favorably to benchmark LCOT figures, and would not be unreasonable. Given that actual LCOT (with no Expediting Costs) would be considerably lower than the already-low LCOT figure provided in Ms. Robichaud's June 1 testimony, the Commission concludes that it has sufficient information to make findings about the reasonableness of the expected costs for the Revised DEP Upgrade.

The Commission stated in its June 11, 2020, *Order Denying Certificate of Public Convenience and Necessity for Merchant Generating Facility* in docket no. EMP-105, Sub 0 (the Friesian Order) that it is appropriate to use LCOT as a benchmark for the reasonableness of the transmission network upgrade costs

³ In Ms. Robichaud's second supplemental reply testimony filed in the Sweetleaf Solar CPCN docket (EMP-111, Sub 0) on June 24, 2022, Ms. Robichaud also provided an LCOT calculation for the Revised DEP Upgrade of \$0.010/MWh, considering the capacity of Sumac, Sweetleaf, and Macadamia. This calculation was based on the \$350,000 cost estimate for the Revised DEP Upgrade provided by DEP in the June 2022 Affected System Study. Ms. Robichaud's second supplemental reply testimony in this docket was filed on June 1, 2022, prior to issuance of that Affected System Study.

associated with interconnecting a new generating facility. LCOT allows for a comparison of the relative magnitude of transmission investments required to interconnect generation facilities. Based on the LCOT calculations for Revised PJM Network Upgrades and affected system upgrades in the record—*i.e.*, the Revised DEP Upgrade—and provided by Applicant in Ms. Robichaud's June 1, 2022 testimony, the Commission determines that the Facility's transmission costs are consistent with and in line with the LCOT values provided in 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. The Public Staff does not dispute or raise any concerns regarding these costs of the Facility. These facts favor granting Applicant's request for a CPCN.

In view of the total cost of the Facility, the Commission concludes that the siting of Applicant's facility in this area is not inconsistent with the Commission's obligation under N.C. Gen. Stat. § 62-110.1 (d) for the provisions of "reliable, efficient and economical service" in the state.

In summary, the Commission finds and concludes that the Facility is for the public convenience and necessity as required by N.C.G.S. § 62-110.1. The Commission concludes due to the siting of the Facility, the Facility is consistent with an orderly expansion of electricity generating capacity in the region, presents no risk of service degradation or any financial impact on North Carolina's electricity generation, transmission and distribution infrastructure and no risk of overbuilding of generation facilities in this region of North Carolina. Further, the Commission is of the opinion that the conditions proposed by the Public Staff are appropriate and should be imposed on the certificate.

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 an 80 MW_{AC} solar facility in Bertie County, North Carolina. This certificate is subject to the following conditions:

- a) Applicant will construct and operate the generating facility in strict accordance with applicable laws and regulations, including any local zoning and environmental permitting requirements;
- b) The certificate is subject to Commission Rule R8-63 and all orders, rules, regulations and conditions as are now or may hereafter be lawfully made by the Commission;
- c) Applicant shall file with the Commission in this docket a progress report on the construction of the Facility on an annual basis; and
- d) Applicant shall file with the Commission in this docket any significant revisions in the cost estimates for the construction of the Facility or the

construction of any Network Upgrades within 30 days of becoming aware of such revisions.

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 _____ 2022.

NORTH CAROLINA UTILITIES COMMISSION

Erica N. Green, Deputy Clerk

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. EMP-111, SUB 0

SUMAC SOLAR, LLC
15445 Innovation Drive
San Diego, CA 92128

is hereby issued this

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

for an 80 MW_{AC} solar photovoltaic electric generating facility

located

around Woodard Road near Morning Road on its western side, and Middle Tract Road to the east outside of Windsor in Windsor, Bertie County, North Carolina.

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 _____, 2022.

NORTH CAROLINA UTILITIES COMMISSION

Erica N. Green, Deputy Clerk