

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. EMP-111, SUB 0

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

<p>In the Matter of Application of Sweetleaf Solar, LLC for a Certificate of Public Convenience and Necessity to Construct a 94 MW Solar Facility in Halifax County, North Carolina</p>)))))	<p>PROPOSED ORDER ISSUING CERTIFICATE FOR MERCHANT GENERATING FACILITY</p>
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BY THE COMMISSION: On June 2, 2020, Sweetleaf Solar LLC (Sweetleaf 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 a 94 MW_{AC} solar photovoltaic electric generating facility to be located in Halifax County, North Carolina and operated as a merchant generating facility (Facility).

In support of its application, Sweetleaf filed the direct testimony of Kara Price and Donna Robichaud, along with several exhibits. In summary, the Facility is located on approximately 3,000 acres of land generally east and west of Justice Branch Road, between Delmar Road and Beaverdam Road, north of Enfield, Halifax County, North Carolina. The Facility will interconnect with the electric transmission system owned by Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina (DENC), affording access to the competitive wholesale markets administered by PJM Interconnection, LLC (PJM). Applicant states that 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 June 15, 2020, the Public Staff filed a Notice of Completeness stating that the Public Staff reviewed the CPCN application as required by Commission Rule R8-63(d) and that the Public Staff considers the application to be complete. The notice requested the Commission to issue a procedural order setting the application for hearing, requiring public notice, and addressing any other necessary procedural matters.

On July 8, 2020, the Commission issued its Order Requiring Filing of Testimony, Establishing Procedural Guidelines, and Requiring Public Notice, which scheduled two hearings: a remote hearing via WebEx on Monday, August 24, 2020, at 7:00 p.m. for the purpose of receiving public witness testimony and a hearing on Monday, October 5, 2020, at 2:00 p.m. for the purpose of receiving expert witness testimony. The order provided that the Commission would confirm

by subsequent order whether the hearing for expert witness testimony would be held remotely via Webex or in person. 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 system impact studies (SIS) and affected system studies, the Levelized Cost of Transmission (LCOT) for any required transmission system upgrades or modifications, and any relevant PPA agreements.

On July 8, 2020, the Commission directed a letter to the State Clearinghouse advising it of the Application.

On July 21, 2020, Applicant filed a Motion for Extension of Time requesting that Applicant's supplemental testimony and exhibits be filed by August 11, 2020; Public Staff's testimony and exhibits be filed by August 31, 2020; and Applicant's rebuttal testimony and exhibits be filed by September 15, 2020. On July 22, 2020, the Commission issued an Order Granting Extension of Time to File Testimony finding good cause to extend the date for filing additional testimony and exhibits and adopting Applicant's proposed schedule.

On August 7, 2020, Applicant filed an affidavit of publication certifying that notice of the Application had been published in The Daily Herald, a newspaper published daily at Roanoke Rapids, North Carolina on July 16, 2020, July 23, 2020, July 30, 2020, August 6, 2020.

On August 11, 2020, Applicant filed the supplemental testimony of Donna Robichaud. In summary, Ms. Robichaud testifies the Facility was being studied by PJM in the AD1 cluster; that initial study reports allocated nearly \$30 million in Network Upgrade costs to Applicant; that these numbers would likely decrease as the studies refined over time; and that Duke Energy Progress, LLC (DEP) expected to release an Affected System Study report for anticipated upgrades during September or October 2020. Ms. Robichaud provides an LCOT analysis for anticipated PJM and DEP upgrades and highlighted that the analysis would change as PJM and DEP issued retooled study reports. Ms. Robichaud attaches 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 17, 2020, Applicant filed a motion to cancel the remote hearing for the purpose of receiving public witness testimony on ground there were no intervening parties and no written complaints from public witnesses relative to the Facility.

On August 18, 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, recommending that a comprehensive archaeological survey be conducted, and stating that permits from Halifax County, North Carolina might be required given the Facility's proximity to a special flood hazard area.

On August 24, 2020, the Commission convened the remote hearing for the purpose of receiving public witness testimony. A public witness appeared remotely and expressed concern regarding the volume of large-scale solar generation capacity in North Carolina and its impact on the retail price of electricity. The witness expressed his opinion that the relative cost of generation from photovoltaic solar should be made public. The witness's comments were not specific to the Facility or the Sweetleaf's application.

On August 25, 2020, the audio recording of the public witness hearing was filed on the docket.

On August 25, 2020, the Public Staff filed a Motion for Extension of Time, requesting that the deadline for the filing of its testimony be extended until five business days following conclusion of the Duke rate case hearings. The motion noted the proposed extension would not necessitate a delay in the hearing for the purpose of receiving expert witness testimony.

On August 26, 2020, the attorney for the Applicant filed a letter proposing an alternative extension schedule under which the Public Staff would file testimony by September 18, 2020, and Applicant file rebuttal testimony by September 29, 2020. Applicant's letter stated the proposed alternative schedule would not necessitate a delay in the hearing for the purpose of receiving expert witness testimony.

On August 28, 2020, the Commission filed a transcript of the public witness hearing for the purpose of receiving public witness testimony, along with related exhibits.

On August 31, 2020, the State Clearinghouse filed additional comments regarding the proposed Facility.

On September 1, 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 18, 2020 and Applicant's additional testimony by September 29, 2020.

On September 18, 2020, the Commission issued an Order Rescheduling Hearing and Providing Procedures for Remote Hearing, finding good cause to reschedule the hearing for the purpose of receiving expert witness testimony to begin on Thursday, October 29, 2020, at 1:30 p.m. remotely via Webex (Remote Expert Hearing).

On September 18, 2020, the Public Staff filed the testimony of Jay Lucas. Mr. Lucas testifies that DEP had reported that it would issue an affected system study for the AD1 cluster during October 2020; that upgrades to DENC's system are not reimbursable; and that the Public Staff does not disagree with witness Robichaud's LCOT calculations. Mr. Lucas further expresses his concern that LCOT calculations for affected system upgrades may have limited applicability in

circumstances presented in this proceeding where a merchant facility's generation is not utilized to benefit DEP ratepayers but is delivered to the PJM system for consumption.

On September 23, 2020, the Public Staff filed a consent to the Remote Expert Hearing.

On September 28, 2020, Applicant filed a Motion for Further Extension and Order Directing Supplemental Testimony requesting that the Commission delay the Remote Expert Hearing and direct the parties to provide further supplemental testimony. In its motion, the Applicant noted that DEP anticipated completing affected system studies for several study clusters interconnecting with PJM's system and that the Commission had requested comments in Docket No. E-100, Sub 170 on the affected system study process. Applicant requested that the Commission allow the parties to provide supplemental testimony on the CPCN application based on this additional information on affected system studies, specifically, that the Public Staff be allowed to file additional supplemental testimony and exhibits on or before October 23, 2020 and the Applicant be allowed to file reply testimony and exhibits on or before October 30, 2020. The Applicant further requested that the hearing for the purpose of receiving expert witness testimony be delayed until mid-November or early December 2020.

On September 29, 2020, the Commission issued an Order Allowing Supplemental Testimony and Cancelling Hearing, finding good cause to permit the parties' supplemental testimony; adopting Applicant's proposed schedule for supplemental testimony; and canceling the Remote Expert Hearing, to be rescheduled in a subsequent order of the Commission.

On October 13, 2020, the Commission issued its Order Rescheduling Hearing finding good cause to reschedule the Remote Expert for December 8, 2020, at 2:00 p.m. remotely via Webex (Rescheduled Remote Expert Hearing).

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 19, 2020 and October 22, 2020, the Public Staff and Applicant filed, respectively, each party's consent to the Rescheduled Remote Expert Hearing.

On October 22, 2020, the Public Staff filed a motion requesting an extension of time for the filing of its supplemental testimony and Applicant's reply testimony. The Public Staff requested an extension to allow the testimony of the Public Staff to be filed on or before November 13, 2020, and to allow the reply testimony of the Applicant to be filed on or before November 20, 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 12, 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) had acquired the proposed Facility but that Geenex Solar, LLC (Geenex) would continue participating in the development of the Facility until it achieves commercial operation.

On November 13, 2020, the Public Staff filed a supplemental testimony of Jay Lucas. In summary, Mr. Lucas discusses the volume of merchant plant facility capacity being studied by PJM and interconnecting through DENC's territory; expresses concern about DEP ratepayers covering affected system upgrade costs associated with those merchant plant facilities; and opines that it would be appropriate for the Commission to consider those costs in determining whether a facility is in the public convenience and necessity. Nevertheless, Mr. Lucas's testimony recommends granting Sweetleaf's application subject to certain conditions.

On November 20, 2020, Applicant filed a motion requesting that the Commission extend the procedural schedule for this proceeding, Applicant requested that the Commission allow supplemental testimony and exhibits of Applicant to be filed by February 15, 2021, testimony and exhibits of the Public Staff to be filed by March 1, 2021, and reply testimony and exhibits of Applicant to be filed by March 15, 2021, and that the Commission reschedule the Rescheduled Remote Expert Hearing.

On November 20, 2020, the Commission issued an Order Granting Further Extension of Time and Canceling Hearing finding good cause to adopt the testimony filing schedule proposed in Applicant's motion and cancel the Rescheduled Remote Expert Hearing, to be rescheduled by subsequent order of the Commission.

On February 9, 2021, the Applicant filed a motion requesting that the Commission extend the schedule for the filing of testimony in this proceeding. Applicant requested that the Commission allow supplemental testimony and exhibits of the Applicant to be filed on or before June 1, 2021, the testimony and exhibits of Public Staff to be filed on or before June 22, 2021, and the reply testimony and exhibits of the Applicant to be filed on or before July 6, 2021.

On February 15, 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 20, 2021, affected system study report for PJM interconnection cluster AD1 (DEP's April 2021 Report). Applicant's filing noted that DEP's April 2021 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 for Stay of Proceedings pending further order of the Commission so that the parties and the Commission could have the benefit of additional interconnection-related information regarding the Facility before the filing of additional testimony or the conducting of evidentiary hearings. Applicant stated that its motion was necessitated by further delays in the delivery of interconnection studies by PJM. Applicant anticipated retooled PJM studies for the PJM AD1 cluster in the fall of 2021. Further, Applicant expected that PJM's retooled studies would require DEP to revise the DEP's April 2021 Report based on the results of the retooled PJM studies, and Applicant had no timeline for the expected delivery of a revised affected system study report. Applicant maintained that the revised interconnection studies and the revised affected system study report would be crucial to the Public Staff's recommendations and to the Commission's consideration of the applications.

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 January 3, 2022, Applicant filed a retooled SIS report for the PJM AD1 cluster, which was issued during December 2021.

On June 24, 2022, Applicant filed the supplemental testimony of Amanda Mack and second supplemental testimony of Donna Robichaud. Ms. Mack testifies regarding a delay in the Facility's estimated date of commercial operation to the fourth quarter of 2026.

Ms. Robichaud's testimony includes and discusses a retooled SIS report for the PJM AD1 cluster issued during June 2022 (June 2022 SIS Report) and an affected system study report for the PJM AD1 cluster issued during June 2022 (June 2022 Affected System Study Report). As to PJM network upgrades, Ms. Robichaud testifies the June 2022 SIS Report allocated all or a portion of three unfunded upgrades to Applicant, at a cost of nearly \$83,000,000 (PJM Network Upgrades). Ms. Robichaud notes that two of those upgrades may be recategorized as reliability upgrades, meaning they would be deemed unrelated to interconnection of the facilities in the AD1 cluster. Regardless, none of the PJM Network Upgrades would be reimbursable to Applicant. Ms. Robichaud calculates an LCOT for the PJM Network Upgrades of \$19.54/MWh if Applicant were to exclusively fund the upgrades.

Ms. Robichaud further testifies the June 2022 Affected System Study Report provided for significantly reduced affected system upgrade costs. Previous reports identified an overload on DEP's portion of the Everetts-Greenville 230 kV tie-line (combining DEP and DENC's systems) that would require reconductoring at an estimated cost of \$10,000,000 (DEP Upgrade). Instead, DEP stated in the June 2022 Affected System Study Report that it planned to rebuild the line for reliability reasons due to its age and condition, 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). Ms. Robichaud calculates an LCOT for the Revised DEP Upgrade of \$.01/MWh if the capacity of all projects in the AD1 cluster triggering the upgrade are considered, and \$.04/MWh if only the capacity of the Facility and Sumac Solar, which is in the AD1 cluster and under common ownership with Applicant, are considered.

Finally, Ms. Robichaud disputes 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 DEP Upgrade compares favorably to the benchmark LCOT figures cited by the Public Staff and relied on by the Commission in prior decisions.

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 Solar, LLC (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 (CEPCN) to construct a related transmission line. Docket No. EMP-110, Sub 0 involves an application filed by Sumac Solar, LLC (Sumac) for a CPCN to construct a 120-MW solar facility in Bertie County, North Carolina. The motion discussed that Applicant, Macadamia, and Sumac (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; trigger the same Revised DEP Upgrade; 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 Sumac docket on or before July 29, 2022; and that Applicant and Sumac 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 Jay Lucas. In summary, Mr. Lucas continues to recommend approval of the Application on the condition that Applicant operate the Facility in accordance with laws, regulations, and Commission orders; update the Commission with changes in upgrade costs, if any; and file any ASOA with the Commission.

On August 5, 2022, the Commission issued an Order Accepting Testimony, Requiring Further Testimony, and Scheduling Hearings finding good cause to grant the Public Staff's Consent Motion for Procedural Order and accepting its proposed procedural schedule and scheduling a hearing for the purpose of receiving expert witness testimony to occur immediately following the previously scheduled expert witness hearing for Macadamia's CPCN and CECPCN applications scheduled to begin on Tuesday, September 6, 2022, at 1:00 p.m. (Consolidated Hearings).

On August 12, 2022, Applicant filed the second supplemental testimony 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 testifies 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 \$0.35/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 testify 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 each respective docket 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 Sumac agree not to seek expedited construction of the Revised DEP Upgrade; while the Public Staff recommends the Commission approve the CPCNs. The Public Staff further recommends that the Commission not impose any conditions that might prevent Macadamia and DEP from executing an ASOA providing for reimbursement of Revised DEP Upgrade. The Public Staff's letter attaches affidavits from representatives of Applicant, Macadamia, and Sumac 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 Sumac 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 testifies 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 testifies 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 testifies 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 testifies that because the Expediting Costs would no longer be included in the ASOA, then Sumac, not Macadamia, would most likely sign the ASOA. Sumac 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, Sumac 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 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 its 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 Commission filed a transcript of the Consolidated Hearings.

On October 19, 2022, Applicant filed the final, unexecuted ASOA between DEP and Sumac. DEP filed the ASOA with FERC the same day; 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 24, 2022 testimony indicates Applicant may be required to fund approximately \$83 million in PJM Network Upgrade costs 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 Sumac'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 Lucas testifies, DEP has 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. Although Sumac ultimately executed the ASOA, the Commission finds it appropriate to discuss those costs here, given that all three Projects are reliant on the Revised DEP Upgrade, and that those Projects are all under development by Geenex. The Commission also 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 Sumac.

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. 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 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 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 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 24, 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 after NC DOA, through the State Clearinghouse, files comments that it has received the additional information requested and NC DOA concludes that no further State Clearinghouse review action on Applicant's part is needed for compliance with the North Carolina Environmental Policy Act, a certificate of public convenience and necessity shall be issued to Applicant for the construction of a 94 MW_{AC} Solar Facility in Halifax County, North Carolina, and to be operated as a merchant generating facility. 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

SWEETLEAF 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 a 94 MW_{AC} solar photovoltaic electric generating facility

located

on approximately 3,000 acres of land generally east and west
of Justice Branch Road, between Delmar Road and Beaverdam
Road, north of Enfield, Halifax 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