

**STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH**

DOCKET NO. EMP-111, SUB 0

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of		
Application of Sweetleaf Solar, LLC for a	)	ORDER GRANTING CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY
Certificate of Public Convenience and	)	
Necessity to Construct a 94 MW Solar	)	
Facility in Halifax County, North Carolina	)	

BY THE COMMISSION: On June 2, 2020, Sweetleaf Solar, LLC (Sweetleaf or Applicant), filed an application for a certificate of public convenience and necessity (CPCN) to construct a solar energy facility with a capacity of 94 MW in Halifax County, North Carolina. In support of the Application, Sweetleaf filed the direct testimony of witnesses Donna Robichaud and Kara Price.

On June 15, 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-111, Sub 0 and considered the application to be complete and requesting that the Commission issue a procedural order.

On July 8, 2020, the Commission issued an Order Requiring Filing of Testimony, Establishing Procedural Guidelines, and Requiring Public Notice (July 8 Order).

On August 7, 2020, Sweetleaf filed an Affidavit of Publication certifying that in accordance with the July 8 Order, Sweetleaf had published notice of the application in Docket No. EMP-111, Sub 0 in The Daily Herald, a daily newspaper in Roanoke Rapids, North Carolina, on July 16, July 23, July 30, and August 6, 2020.

On August 11, 2020, Sweetleaf filed the supplemental testimony of witness Donna Robichaud.

On August 18, 2020, the North Carolina Department of Administration (NC DOA), through the State Clearinghouse, filed a letter with attached comments that various state government agencies had made in review of the project. The Department of Cultural Resources had requested additional information regarding the project. Specifically, the State Historic Preservation Office (SHPO) requested that an experienced archaeologist conduct a comprehensive archaeological survey to identify and evaluate the significance of archaeological sites and cemeteries that the project could damage or destroy.

On August 24, 2020, the Commission held a public witness hearing remotely via WebEx to receive comments from members of the public regarding the proposed Facility.

On August 25, 2020, the Public Staff filed a Motion for Extension of Time seeking an extension of the deadline for filing its recommendation and supporting testimony.

On August 26, 2020, Sweetleaf, through counsel, filed a letter stating that Sweetleaf did not object to a reasonable extension of procedural deadlines but could not agree to an indefinite extension of deadlines. Sweetleaf proposed an extended schedule for the Commission's consideration.

On August 31, 2020, the NCDOA, through the State Clearinghouse, filed comments from the North Carolina Department of Environmental Quality (NCDEQ) Division of Environmental Assistance and Customer Service and from the North Carolina Wildlife Resources Commission. The same day, the State Clearinghouse also filed additional comments from SHPO clarifying SHPO's earlier comments and reiterating the recommendation for a comprehensive archaeological survey.

On September 1, 2020, the Commission issued an Order Granting Further Extension of Time, extending the deadlines for the Public Staff's testimony and exhibits and for Sweetleaf's rebuttal testimony.

On September 18, 2020, the Public Staff filed the testimony of witness Jay Lucas.

On September 18, 2020, the Commission issued an Order Rescheduling Hearing and Providing Procedures for Remote Hearing.

On September 23, 2020, the Public Staff filed a letter indicating that it consented to a remote expert witness hearing.

On September 28, 2020, Sweetleaf filed a Motion for Further Extension and Order Directing Supplemental Testimony.

On September 29, 2020, the Commission issued an Order Allowing Supplemental Testimony and Canceling Hearing.

On October 13, 2020, the Commission issued an Order Rescheduling Hearing.

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

On October 19, 2020, the Public Staff filed a letter indicating that it consented to a remote expert witness hearing.

On October 22, 2020, Sweetleaf filed a letter indicating that it consented to a remote expert witness hearing.

On November 12, 2020, Sweetleaf updated its application to reflect the sale of Sweetleaf to EDF and filed the supplemental prefiled testimony of witness Emily Dalager containing additional information pertaining to EDF and Sweetleaf.

On November 13, 2020, the Public Staff filed the supplemental testimony of witness Lucas.

On November 20, 2020, Sweetleaf and Sumac Solar LLC (Sumac) filed a Motion for Further Extension of Time, requesting an extension of the procedural schedule in this docket and in Docket No. EMP-110, 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-110, Sub 0 concerns Sumac's application for a CPCN to construct an 80 MW solar facility in Bertie County, North Carolina.

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

On February 9, 2021, Sweetleaf and Sumac filed a Motion for Further Extension of Time in the two dockets requesting an extension of the procedural schedule in the dockets until June 2021, 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 Sweetleaf file supplemental testimony and exhibits by June 1, 2021, that the Public Staff file testimony and exhibits by June 22, 2021, and that Sumac file reply testimony and exhibits by July 6, 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, Sweetleaf stated that it 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 further 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.

On May 27, 2021, Sweetleaf and Sumac also filed in both dockets a Motion for Stay of Proceedings, requesting 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 because PJM was

retooling the System Impact Studies in the AC2 cluster to account for changes in the interconnection queue and subsequently would retool the AD1 project studies. 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 January 3, 2022, Sweetleaf filed a retooled Generation Interconnection System Impact Study (SIS) Report for PJM Generation Interconnection Request Queue Position AD1-056/AD1-057.

On June 24, 2022, Sweetleaf filed the second supplemental testimony of witness Robichaud and the supplemental testimony of witness Amanda Mack.

On July 25, 2022, the Public Staff filed a Consent Motion for Procedural Order in Docket Nos. EMP-110, Sub 0; EMP-111, Sub 0; and EMP-119, Subs 0 and 1. Docket Nos. EMP-119, Subs 0 and 1 involve applications filed by Macadamia Solar, LLC (Macadamia) 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. By way of background, on June 14, 2022, the Commission had issued an Order Scheduling Hearing and the Filing of Testimony, scheduling an expert witness hearing in Docket Nos. 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—Sweetleaf, Sumac and Macadamia: (1) are in the PJM AD1 cluster; (2) trigger the same Affected System Upgrade on the Everetts-Greenville transmission line in the 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 set for the hearing for EMP-119, Subs 0 and 1. The Public Staff also proposed a schedule for the filing of supplemental direct testimony and reply testimony.

On July 29, 2022, the Public Staff filed the second supplemental testimony of witness Lucas.

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, Sweetleaf filed second supplemental reply testimony of witness Robichaud in accordance with the August 5 Order.

On August 15, 2022, Macadamia filed a letter in Docket Nos. EMP-119, Subs 0 and 1 stating that it planned to execute an Affected System Operating Agreement (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. In the filing, Macadamia indicated that it is 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 the Commission 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 in the respective dockets.

On September 6, 2022, the Commission convened the hearing for Docket Nos. EMP-119, Subs 0 and 1 in the Commission Hearing Room 2115 at 1:00 p.m. as scheduled. Upon opening the hearing, the Chair noted that the parties waived cross-examination of each other's witnesses and that Sweetleaf and the Public Staff were presenting witnesses solely for the purpose of answering the questions the Commission posed in its September 2 Order. Because the issues those questions would 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, 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 Public Staff filed Late-Filed Exhibit 1.

On September 8, 2022, the Commission issued an Order Excusing Witnesses, Accepting Testimony, Canceling Expert Witness Hearing, and Requiring Proposed Orders in this docket.

On October 19, 2022, Sweetleaf, Sumac, and Macadamia filed in their respective dockets an ASOA between Sumac and DEP providing for the construction of upgrades on DEP's system at a cost of \$150,000. The Applicants stated that DEP had filed the ASOA with FERC on October 17, 2022. It filed the ASOA unexecuted because it is litigating the issue of whether it is appropriate for FERC to require DEP to provide reimbursement to the customer under the ASOA.

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

On May 24, 2023, Sweetleaf filed an Interconnection Service Agreement (ISA) and an Interconnection Construction Service Agreement (ICSA) among PJM Interconnection, LLC (PJM), Sweetleaf, and Virginia Electric and Power Company (VEPCO) for PJM Queue AD1-056/AD2-057.

On July 14, 2023, the State Clearinghouse filed a letter indicating that it had reviewed the environmental impact information for the Facility and had determined that no further State Clearinghouse review action on the Commission's part was necessary for compliance with the North Carolina Environmental Policy Act.

On August 2, 2023, the Commission issued an Order Requesting Additional Information directing Sweetleaf to submit new LCOT calculations for the proposed Facility, including both Network Upgrades and Affected System Upgrades.

On August 15, 2023, Sweetleaf filed an Interconnection Study Update and Response to Order Requesting Additional Information and a confidential attachment (Interconnection Study Update).

## **FINDINGS OF FACT**

1. Sweetleaf Solar, LLC (Sweetleaf) 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 Sweetleaf Solar, LLC, the direct owner of the Facility (hereinafter defined), from a Geenex affiliate on October 15, 2020. Geenex Solar plans to continue participating in the development of Sweetleaf Solar until the Facility achieves commercial operation.

2. In compliance with N.C. Gen. Stat. § 62-111.1 and Commission Rule R8-63, Sweetleaf filed with Commission an application for a CPCN for the construction of a single-axis tracking solar photovoltaic generating facility, totaling approximately 93 megawatts of capacity, on portions of 2,894.86 acres of land north of Enfield in Halifax County, North Carolina (the Facility). The main substation serving the Facility will be located at 3901 Beaverdam Rd., Town of Enfield, North Carolina 27823. There will be six access points to the Facility, located off main roads.

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

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

5. The Facility will be interconnected to the transmission grid owned by Dominion Energy North Carolina (DENC). the output of the Facility to a purchase located in the PJM footprint. The Facility maintains the AD1-056 and AD1-057 positions in the PJM interconnection queue. AD1-056 has a planned capacity of 60 MW and AD1-057 had a planned capacity of 34 MW, for the total of 94 MW. In November 2022, Sweetleaf requested that PJM reduce the AD1-057 queue position by 1 MW to 33 MW, for a total of 93 MW, which eliminated the need for one of the Network Upgrades allocated to Sweetleaf. The Facility will interconnect with the DENC transmission system via a new three breaker ring bus switching station that connects on the Hornertown-Hathaway 230 kV line after a new step-up transformer.

6. Sweetleaf currently expects to begin construction of the Facility in mid-2025, with an estimated date of commercial operation in the fourth quarter of 2026.

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

8. The Network Upgrade costs allocated to the Facility, earlier calculated at \$82,962,766, have been reduced to \$16,109, as a result of a reduction in generating capacity of the Facility. The February 2023 SIS Report reflects the capacity reduction and identifies one Network Upgrade, Upgrade n6618.1, for which the Facility is allocated a portion of the total cost, which portion is \$16,109. In addition, two Network Upgrades, for which the Facility was initially assigned some cost responsibility, were subsequently characterized as reliability projects, meaning that a subset of PJM ratepayers will bear the costs for those upgrades in accordance with PJM's Open Access Transmission Tariff (OATT).

11. Sweetleaf has entered into an Interconnection Service Agreement (ISA) with PJM on March 30, 2023, which was filed in this docket on May 24, 2023. Pursuant to the ISA, Sweetleaf, as the interconnection customer, is subject to charges of \$751,903 for the interconnection facilities and charges of \$9,127,771 for Network Upgrades.

12. The Facility, in addition to Sumac and Macadamia, contributes to an overload on the DEP portion of the Everetts-Greenville 230 kV tie-line between DENC and DEP. As initially determined, the DEP Upgrade to address this overload included reconductoring two miles of the 230 kV Everetts-Greenville line and upgrading disconnect switches and CT ratios. The initial cost of the DEP Upgrade was estimated at \$10 million, and Sumac was originally allocated the full cost. The June 2022 Affected System Study revised the cost of the DEP Upgrade to \$150,000, based on DEP's conclusion that the impacted section of the Everetts-Greenville line would be replaced for reliability reasons due to the age and condition of the line rather than as a result of the generator interconnection. Sweetleaf, Sumac and Macadamia discussed with DEP expediting the construction of DEP Upgrade at an additional cost of approximately \$1.6 million. While Sweetleaf, Sumac, and Macadamia indicated an intent not to seek any reimbursement from DEP of the costs to expedite construction, the Public Staff expressed concern over the possibility of DEP's ratepayers being responsible for the cost of expediting the construction in light of pending litigation involving affected system costs.

13. 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 Sweetleaf, Sumac, and Macadamia had agreed not to seek expedited construction of the DEP Upgrade and, in return, the Public Staff would recommend that the Commission approve the CPCN applications and forego recommending 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 DEP Upgrade.

14. Sumac and DEP executed an Affected System Operating Agreement (ASOA) on September 30, 2022. The ASOA was filed with the Commission in Docket No. EMP-110, Sub 0 on October 19, 2022. Pursuant to the ASOA, Sumac accepted responsibility for the cost of the DEP Upgrade, estimated to be \$150,000. The ASOA does not reflect any cost for expediting construction of the DEP Upgrade.

15. For the DEP Upgrade, the total capacity of Sumac, Macadamia, and Sweetleaf, the three facilities in the AD1 cluster that contribute to the need for the upgrade, is 657 MW. Based on this capacity and the estimated cost of the upgrade, the LCOT is \$.01/MWh. If only the capacity of Sweetleaf and Sumac are considered, the LCOT would be \$0.02/MWh.

16. PJM projects load growth in the Dominion Zone of PJM.



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

These findings of fact are essentially informational, procedural, and jurisdictional in nature and are not in dispute. The Application itself, including the testimony of Sweetleaf witnesses Robichaud and 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 Sweetleaf Solar, LLC filed with the North Carolina Secretary of State on August 12, 2015, in the docket on June 2, 2020, as an exhibit to the Facility CPCN Application.

An examination of the Application and testimony and exhibits of Sweetleaf'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 August 7, 2020, Sweetleaf filed the Affidavit of Publication showing that The Daily Herald, a newspaper published daily in Roanoke Rapids, North Carolina, published the Public Notice as prescribed by the Commission in its July 8 Order in four successive weeks on July 16, July 23, July 30, and August 6, 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 Sweetleaf witnesses Price, Dalager, and Mack. No party disputes this finding.

According to Sweetleaf witness Dalager's supplemental testimony, EDF has the experience to build, own, and operate solar power generation facilities, including the Sweetleaf 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.<sup>1</sup>

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<sup>1</sup> Witness Dalager provided direct testimony in this docket on November 12, 2020. Sweetleaf witness Mack filed supplemental testimony on June 24, 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 and Sweetleaf as if it were her own for all purposes in this docket.

Based on the foregoing, the Commission concludes that EDF's experience in the construction and operational control of solar energy facilities demonstrates that Sweetleaf 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 direct testimony of Sweetleaf witnesses Robichaud and Price, the supplemental testimony of Sweetleaf witness Mack, the testimony of Public Staff witness Lucas, and Sweetleaf's Interconnection Study Update.

According to the Application and the testimony of Sweetleaf witness Robichaud, Sweetleaf will locate the Facility on portions of land owned by seven different landowners who in total own 2,894.86 acres of privately-owned land north of Enfield in Halifax County, North Carolina. The project is located generally east and west of Justice Branch Road, between Delmar Road and Beaverdam Road, north of Enfield, North Carolina. Sweetleaf will site the project on approximately 1,235 fenced acres of the privately-owned land. The site is largely rural and agricultural in nature and many of the landowners will continue to farm and live in proximity to the site. Sweetleaf has executed seven lease or purchase options for the solar array area of the site, and the land control agreements give Sweetleaf the right to develop and use the property for solar energy purposes. Sweetleaf included a site plan for the proposed project as an exhibit with the CPCN Application.

Sweetleaf witness Robichaud, in her prefiled direct testimony filed on June 2, 2020, states that the project maintains PJM queue numbers AD1-056 and AD1-057. The Facility will consist of approximately 93 MW of mono- or poly-crystalline photovoltaic solar modules on single-axis trackers. These trackers will be installed on a north-south axis tilting in an east-west direction to enable the modules to follow the sun throughout the day. Trackers consist of galvanized steel and are anchored on H-shaped steel posts driven about six feet into the ground. The trackers do not have a concrete foundation. The project would include roughly 311,108 mono- or poly-crystalline photovoltaic solar modules with a total capacity of approximately 118 MWdc. These would be connected to 29 inverters, each with a capacity of 3.36 MW, which will transform DC power generated by the solar modules into 97.44 MW for gross capacity. Forty transformers will step the voltage of generated power up from 550-600V at the inverters to 34.5 kV. Power from these 29 step-up transformers will be collected at the main power transformer, which will further increase voltage to 230 kV, aligning with the voltage at the switching station that will be built for the project. The switching station will connect to the existing 230 kV transmission lines crossing the project site.

Sweetleaf witness Robichaud states that the Sweetleaf Facility will interconnect to DENC's transmission grid via a new three breaker ring bus switching station that connects on the Hornertown-Hathaway 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 August 18, 2020, August 31, 2020, and July 14, 2023.

On August 18, 2020, the NC DOA, through the State Clearinghouse, filed a letter with the comments of various state government agencies. As noted above, SHPO requested a comprehensive archaeological of the site for the proposed Facility.

On August 31, 2020, the NCDOA, through the State Clearinghouse, filed comments from the NCDEQ Division of Environmental Assistance and Customer Service and from the North Carolina Wildlife Resources Commission. The same day, the State Clearinghouse also filed additional comments from SHPO clarifying SHPO's earlier comments and reiterating the recommendation for a comprehensive archaeological survey.

On July 14, 2023, the State Clearinghouse filed a letter indicating that it had reviewed the environmental impact information for the Sweetleaf Facility and had determined that no further State Clearinghouse review action on the Commission's part was necessary for compliance with the North Carolina Environmental Policy Act.

Considering the foregoing, the Commission concludes that Sweetleaf has complied with the NCEPA and that nothing in the Act precludes issuance of the CPCN.

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

The evidence supporting these findings of fact is in the Application, the testimonies of Sweetleaf witnesses Robichaud, Price, and Mack, the Public Staff Joint Supplemental Testimony of witnesses Lucas and Lawrence, the Public Staff letter and affidavits filed September 2, 2022, the ICA and ICSA filed on May 24, 2023, and Sweetleaf's Interconnection Study Update.

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). 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.”).

The Commission has explained that “the very reason the CPCN statute was enacted was to stop the costly overexpansion of facilities to serve areas that did not need them.” *Id.* at 17. See also *High Rock Lake Ass’n*, 97 N.C. App. at 140-41, 245 S.E.2d at 790; *State ex rel. Utils. Comm’n v. Empire Power*, 112 N.C. App. 265, 280, 435 S.E.2d 553, 561 (1994). The Commission has noted, based on policies established explicitly in N.C.G.S. § 62-2, that the “legislature intends the Commission to encourage cost-efficient siting of generation facilities, and thus that the Commission has the authority to consider all costs borne as a result of that siting decision.” *Id.* at 17-18.

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

In this instance, the Application and later-filed testimony in the proceeding originally provided costs for the Facility that included charges of \$82,962,766 for Network Upgrades that would be required to interconnect the Facility. If Sweetleaf were the only project to fund those upgrades, the LCOT would have been \$19.54/MWh. Sweetleaf witness Robichaud testified that, regardless of the LCOT, the Facility would bear the cost of the Network Upgrades, in accordance with the terms of PJM’s OATT. Neither PJM nor DEP would reimburse Sweetleaf, and DEP ratepayers would not bear those costs.

As Sweetleaf witness Robichaud discussed in her second supplemental and second supplemental reply testimonies. Sweetleaf is one of several projects that PJM identifies as contributing to an overload on DEP’s Everetts-Greenville 230 kV line. DEP’s revised Affected System Study for the PJM Cluster AD1, which DEP issued on June 8, 2022, revised 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 DEP 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 the federal level regarding the reimbursement of affected system costs. The Public Staff recommended that the Commission not issue the CPCNs for the Sweetleaf, Sumac, and Macadamia facilities 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, then the Commission should deny the CPCN applications.

The Public Staff and Sumac, Sweetleaf, and Macadamia, the facilities that caused or contributed to the need for the DEP Upgrade, eventually agreed that expedited construction of the DEP Upgrade would not be sought and that the Public Staff would recommend that the Commission approve the CPCN applications, foregoing any conditions on those CPCNs that may prevent the reimbursement of the \$150,000 to construct the DEP Upgrade.

On October 19, 2022, Sumac, Sweetleaf, and Macadamia filed in the three dockets an 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 of the pending litigation regarding reimbursement of affected system costs.

Under the applicable regulatory paradigm, Sweetleaf 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, Sweetleaf will bear all costs associated with the construction of the generating plant. Sweetleaf provides in its August 15, 2023 Interconnection Study Update that the LCOT for the PJM Network Upgrades is \$0.004/MWh. Sweetleaf, rather than North Carolina ratepayers, will bear those costs. Although the August 2, 2023 Order Requesting Additional Information instructed the Applicant to submit new LCOT calculations for the proposed Facility, including both Network Upgrades and Affected System Upgrades, Sweetleaf's figure does not appear to include all the PJM Network Upgrades, given that according to the executed ISA with PJM and VEPCO, Sweetleaf is responsible for \$751,903 for interconnection facilities and \$9,127,771 in Network Upgrade Charges. Sweetleaf appears to base its LCOT calculation only on its being allocated \$16,109 for Network Upgrade n6618.1. Nevertheless, the Commission can conclude from the evidence in the record that the costs for the Network Upgrades are reasonable and that DEP ratepayers will not be unreasonably impacted by the construction of this Facility.

Sweetleaf also provides the LCOT for the Affected Systems Costs in its August 15 Interconnection Study Update. The total capacity of the three projects in the AD1 cluster that contribute to the need for the upgrade (Sumac, Macadamia, and Sweetleaf) is 657 MW. Based on that capacity and the estimated cost of the upgrade, Sweetleaf calculates an LCOT of \$0.01/MWh. If only the capacity of Sweetleaf and Sumac are considered, the LCOT would be \$0.02/MWh. 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 previous analysis of public convenience and necessity in the context of merchant generating facilities, the Commission has considered the long-term energy and capacity needs in the State and region, as well as system reliability concerns.

Based on the history of the ASOA process, the Commission is not persuaded that the issue regarding the DEP Affected System Upgrade Costs to be borne by Sweetleaf 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 those costs (with interest) and will not receive any of the power supplied by these projects. As testified by Sweetleaf witness Robichaud, the Applicant has explored opportunities for offtake from the Facility, may take advantage of several offtake opportunities in the PJM market, and anticipates robust long-term offtake prospects for renewable energy, renewable energy credits, and ancillary services. Thus, while the record suggests this Facility is likely destined to serve the desire 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 buyer. Nonetheless, the Commission is persuaded by the evidence in the record that even if Sweetleaf were to upfront fund the entirety of these costs, the LCOT for the Facility is not unreasonable and not 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 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 Sweetleaf Solar, LLC, for the construction of a solar energy facility of up to 94 MW to be located in Halifax 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, 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 13th day of September, 2023.

NORTH CAROLINA UTILITIES COMMISSION

A handwritten signature in cursive script, reading "Tamika D. Conyers".

Tamika D. Conyers, Deputy Clerk



**STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH**

DOCKET NO. EMP-111, SUB 0

KNOW ALL PERSONS BY THESE PRESENTS THAT

SWEETLEAF SOLAR LLC

1930 Abbott Street  
Suite 402  
Charlotte, NC 28203

is hereby issued this

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

For a 93 MW solar energy facility

located

on approximately 1,235.04 acres of privately held property in Halifax County, North  
Carolina,

subject to receipt of all federal and state permits as required by existing and  
future regulations prior to beginning construction and further subject to all other 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 13th day of September, 2023.

NORTH CAROLINA UTILITIES COMMISSION

A handwritten signature in black ink, reading "Tamika D. Conyers". The signature is fluid and cursive, with the first name "Tamika" being the most prominent part.

Tamika D. Conyers, Deputy Clerk