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April 24, 2024

Ms. A. Shonta Dunston
Chief Clerk
NC Utilities Commission
430 N. Salisbury Street
Room 5063
Raleigh, NC 27603-5919

Re: In the Matter of Application of Cherry Solar, LLC for a Certificate of Public Convenience and Necessity to Construct a 180-MW Solar Facility in Northampton County, NC
NCUC Docket EMP-115 Sub 0
Applicant's Public Redacted Additional Cost Information

Dear Ms. Dunston:

In accordance with the Commission's April 11, 2024, Order Requiring Additional Cost Information, and on behalf of Cherry Solar, LLC ("Applicant"), we herewith provide Applicant's Public Redacted Additional Cost Information as requested.

If you have any questions concerning this submission, please do not hesitate to contact me.

Thank you.

Sincerely,

/s/ Benjamin L. Snowden

Ben Snowden

pbb

A Pennsylvania Limited Liability Partnership

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Apr 24 2024



Ms. A. Shonta Dunston
April 24, 2024
Page 2

Enclosure

Copy to: Parties and Counsel of Record
Commission Staff
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STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. EMP-115, SUB 0

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of	
Application of Cherry Solar, LLC, for a)	
Certificate of Public Convenience and)	APPLICANT'S
Necessity to Construct a 180 MW Solar)	ADDITIONAL COST
Facility in Northampton County, North)	INFORMATION
Carolina)	

Applicant Cherry Solar LLC ("Cherry Solar" or "Applicant") hereby provides the following information responsive to the Order Requiring Additional Cost Information issued in this docket on April 11, 2024 ("April 11 Order"). The information provided herein relates to: (1) the estimated cost of the generating plant, interconnection facilities, upgrades, and affected system upgrades required for the facility; (2) LCOT calculations for affected system upgrades; and (3) the expected online date of the facility.

As an initial matter, the Applicant notes that most of the information requested in the April 11 Order has previously been provided in this docket, either in the Application and in supporting testimony; in testimony filed in response to the Commission's Dec. 18, 2020 *Order Scheduling Hearings, Requiring Filing of Testimony, Establishing Procedural Guidelines, and Requiring Public Notice*;¹ in supplemental testimony filed on March 11, 2021, and January 13, 2022; or in the revised Interconnection Service Agreement (March 2024 ISA) and Interconnection Construction Service Agreement (March 2024 ICSA) filed

¹ Among other things, the December 2020 Order directed the Applicant to provide any interconnection studies available for the facility, information about any transmission system upgrades required for the facility (including LCOT calculations), and any affected system impacts.

on April 3, 2024. The estimated costs of various elements of the project have changed with the passage of time, but the scope of interconnection work required for the project has not changed since Proposed Orders were filed in October 2023.

1. Cost of Generating Plant

The estimated cost of constructing the Cherry Solar facility is approximately [REDACTED]. As discussed below, this estimate includes the cost of Interconnection Facilities that will be constructed by Cherry Solar at its own expense.

2. Cost of Interconnection Facilities

As set forth in the March 2024 ISA, Cherry Solar is required to construct, and will own, the following Interconnection Facilities:

- a. Portion of 230 kV generator lead line shared with PJM Queue Position No. AB1-132 (Oak Solar LLC, discussed below);
- b. Three (3) 230 kV circuit breakers; and
- c. Communication equipment to the PJM's bidirectional metering equipment.²

Because Cherry Solar will construct these Interconnection Facilities, the ICSA and ISA do not provide cost estimates for Interconnection Facilities, and the cost of these Interconnection Facilities is included in the overall construction costs of the Facility.

3. Cost of Network Upgrades

As described in the March ICSA, the following Upgrades are required for the Cherry Facility:

1. PJM Network Upgrade #n6220 – Install a second back-to-back breaker between existing line positions #241 and #2141 at the Lakeview Substation.
2. PJM Network Upgrade #n6118: Replace Battleboro Substation terminal equipment on the line to Rocky Mt. Substation.³

² ICSA, Schedule I (p. 164 of document as filed)

³ March 2024 ICSA, Schedule I (p. 164 of filed document).

PJM estimates that cost of these Upgrades is \$1,817,391.⁴ In addition, Cherry Solar will share Interconnection Facilities and Attachment Facilities⁵ that will be constructed by Oak Solar LLC (queue no. AB1-132), another solar project currently under development by SunEnergy1, pursuant to Oak Solar's agreements with PJM.⁶ The estimated cost of those shared Attachment Facilities is \$1,175,217.⁷ Cherry Solar will also be constructing a project substation at its own expense, at an estimated cost of [REDACTED]

Cherry Solar will not receive reimbursement for any Upgrade costs.

4. Cost of Affected System Upgrades

No Affected System Upgrade costs have been allocated to Cherry.

5. Updated LCOT Calculation for Affected System Upgrades

The April 11 Order directs the Applicant to:

provide an updated LCOT calculation assuming that the Facility is responsible for all affected system costs necessitated by the facilities in its cluster, regardless of whether any of those costs presently are assigned or allocated to the Facility or to any other facility in the cluster, or whether any facility has a signed ASOA, and using the expected annual generator output in MWh of only the Facility;

⁴ Specifications for March 2024 ISA §§ 4.0-4.5 (p. 19 of filed document).

⁵ PJM manuals define Attachment Facilities as "facilities required to physically interconnect the Interconnection Customer facilities to the system." PJM classifies Attachment Facilities as Upgrades. *PJM Manual 14A: New Services Request Process* (Rev. 30) (July 26, 2023), Sec. 4.5.3, at <https://www.pjm.com/~media/documents/manuals/m14a.ashx>

⁶ The Commission issued a CPCN for Oak Solar in docket no. EMP-112, Sub 0 on November 19, 2021.

⁷ Specifications for Interconnection Service Agreement by and among PJM Interconnection, LLC, and Oak Lessee, LLC and Virginia Electric Power Company § 4.0 (Jan. 8, 2024), at https://www.pjm.com/pub/planning/project-queues/isa/ab1_132_isa.pdf.

While the Applicant acknowledges the Commission's duty to consider potential ratepayer impacts and its need to generate more information about potential impacts on Affected Systems including DEP, the Applicant respectfully submits that it is not possible to generate an LCOT calculation for *all* affected system costs necessitated by the facilities in Cherry Solar's PJM cluster.

Cherry Solar is part of PJM's AC1 cluster. Based on PJM's current Service Request Status report,⁸ there are approximately 99 projects with active interconnection requests in the AC1 cluster, spread across twelve states. There are seven AC1 projects in North Carolina, and 31 projects in neighboring Virginia. Cherry Solar has no information about what affected system upgrades might be triggered for the vast majority of those projects. Nor would an LCOT calculation based on all affected system costs necessitated by projects in the AC1 cluster (most of which costs would likely be incurred by utilities outside of North Carolina) be relevant to the Application.

To the best of Applicant's knowledge, the only affected system impacts triggered by AC1 projects that might impact North Carolina ratepayers are reflected in the May 6, 2020 Affected System Study ("2020 Affected System Study") submitted by the Applicant as Exhibit 5 to Ms. Nwadike's March 2021 Supplemental Testimony, and discussed at length in Ms. Nwadike's and Mr. Lucas's subsequent testimony. That study indicated that five projects in the AC1 cluster (including Cherry) would be dependent on reconductoring of DEP's segment of the Rocky Mount-Battleboro 115 kV transmission line ("the DEP Upgrade"). As discussed in Ms. Nwadike's Testimony, Cherry Solar and the other AC1 projects did not actually trigger the need for the DEP Upgrade: PJM System Impact Studies

⁸ <https://www.pjm.com/planning/service-requests/services-request-status>

identified the overload on the Rocky Mount-Battleboro 115 kV line as having existed *prior to* the studies for the AC1 cluster.⁹

The Applicant is not party to any agreement with DEP regarding the DEP Upgrade, nor does DEP keep the Applicant updated on the cost or status of that upgrade. The only information Applicant possesses about the cost of the DEP Upgrade comes from publicly available sources. The most up-to-date source Applicant has been able to find, the North Carolina Transmission Planning Collaborative's February 2024 report on the status of Duke's local transmission plan, states that the estimated cost of the DEP Upgrade is 30 million dollars.¹⁰ That report also states that the upgrade is under construction, with a planned in-service date of June 1, 2025.

Based on this cost figure and considering *only* the expected annual output of Cherry Solar, the Applicant has calculated an LCOT of [REDACTED]. The Applicant stresses, however, that this LCOT —while it is not out of line with benchmark LCOT values considered by the Commission in prior CPCN proceedings (and is lower than the analogous LCOT figure provided for the American Beech Solar project, which the Commission

⁹ Pre-Filed Supplemental Testimony of Linda Nwadike (Mar. 11, 2021) at 3:1-10.

¹⁰ *Report on the NCTPC 2023–2033 Collaborative Transmission Plan* (February 22, 2024) (“NCTPC Report”) at 148, at http://www.nctpc.org/nctpc/document/REF/2024-02-22/2023_NCTPC_Collaborative_Transmission_Plan_Report_02222024_FINAL.pdf. In the Commission's January 31, 2023, Order issuing a CPCN to American Beech Solar in docket no. EMP-108, Sub 0, the Commission found that the estimated cost of the DEP Upgrade (based on cost estimates included in an Affected System Operating Agreement between DEP and Edgecombe Solar) were \$31,285,275. However, the NCTPC estimate (which presumably came from DEP itself) is more recent.

approved a CPCN for in January 2023)¹¹— nonetheless vastly overstates the actual cost (per kWh of generation) of transmission upgrades required for Cherry Solar.

The Affected System Study conducted by DEP in December 2020 identifies five projects in the AC1 cluster as dependent on the DEP Upgrade. At least three of those projects have already been granted CPCNs by the Commission, two of them after full consideration of the costs of the DEP Upgrade.¹² So while the LCOT presented herein might represent a theoretical worst-case LCOT if all other projects dependent on the DEP Upgrade (including those in later clusters) were to withdraw, it represents an unrealistically conservative estimate of the actual LCOT of affected system upgrades required for Cherry Solar.

6. When the Facility May Be Placed in Service

Cherry Solar is ready to mobilize construction crews as soon as the Commission acts on the pending CPCN Application. Assuming the Commission approves the Application, Cherry Solar could complete potentially complete construction and be placed in service within 15 months after issuance of a CPCN.

SunEnergy1 is a North Carolina based company founded in 2009. It has approximately 250 employees and operates almost exclusively in North Carolina. SE1 has developed and built over 1000 MW of solar projects in the state. [REDACTED]

[REDACTED]

¹¹ The Applicant also notes that those benchmark LCOT figures were drawn from a study published in 2019, and thus are almost certainly far understate the actual, reasonable costs of transmission in 2024.

¹² These projects are Edgecombe Solar, which received a CPCN on in docket no. EMP-101, Sub 0 on November 13, 2020; Halifax County Solar, which received a CPCN in docket no. EMP-107, Sub 0 on June 11, 2020; and American Beech Solar, which received a CPCN in docket no. EMP-108, Sub 0 on January 31, 2023.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Conclusion and Request for Prompt Resolution of CPCN Application

Cherry Solar filed its Application in this docket on November 13, 2020. All substantive testimony in this matter was completed and filed by January 13, 2022. On October 6, 2023, the Commission—presumably having concluded that the record was sufficiently developed for it to issue a decision—directed the parties to file proposed orders, which they did on October 27, 2023.

The Commission has now issued CPCNs for three other projects – Edgecombe Solar, Halifax County Solar, and American Beech Solar – that rely on the same affected system upgrade as Cherry Solar. It has thoroughly considered the potential ratepayer

impacts of the DEP Upgrade in those proceedings. As indicated above, the Applicant has no new information on that upgrade, which is already under construction by DEP.

The Applicant submits that any further delay in action on its CPCN would be inequitable and would result in economic harm to Cherry Solar and its parent company. Consequently, the Applicant respectfully requests that the Commission promptly take action to approve the application and issue a CPCN for Cherry Solar.

Respectfully submitted, this the 24th day of April, 2024.

FOX ROTHSCHILD LLP

/s/ Benjamin L. Snowden

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CERTIFICATE OF SERVICE

I, Benjamin L. Snowden, hereby certify that the foregoing Additional Cost Information has been served on parties and counsel of record in the above captioned docket and the NC Public Staff and Commission Staff by either electronic service to the e-mail address on record and / or by first class mail deposited in the U.S. Mail, postage pre-paid.

This 24th day of April, 2024.

/s/ Benjamin L. Snowden
Benjamin L. Snowden

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