



Fox Rothschild ^{LLP}
ATTORNEYS AT LAW

Tel (919) 755-8700 Fax (919) 755-8800
www.foxrothschild.com

KAREN M. KEMERAIT
Direct No: 919.755.8764
Email: kkemerait@foxrothschild.com

September 4, 2019

Ms. Janice Fulmore
Interim Chief Clerk
North Carolina Utilities Commission
430 N. Salisbury Street
Raleigh, NC 27603

RE: *In the Matter of Biennial Determination of Avoided Cost Rates for Electric Utility Purchases from Qualifying Facilities—2018*
DOCKET NO. E-100, SUB 158

Dear Ms. Fulmore:

On behalf of Ecoplexus Inc. (“Ecoplexus”), we hereby submit **Ecoplexus’ Partial Proposed Order** in the above-referenced docket.

If you have any questions or comments regarding this filing, please do not hesitate to call me. Thank you in advance for your assistance.
Sincerely,

/s/ Karen M. Kemerait

Karen M. Kemerait

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Enclosures

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-100, SUB 158

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of:

Biennial Determination of Avoided
Cost Rates for Electric Utility
Purchases from
Qualifying Facilities—2018

PARTIAL PROPOSED ORDER
OF ECOPLEXUS INC.

Pursuant to the North Carolina Utilities Commission’s (“Commission”) *Order Granting Extension of Time* dated August 28, 2019, Ecoplexus Inc. (“Ecoplexus”), through its counsel, respectfully submits this Partial Proposed Order in the Biennial Determination of Avoided Cost Rates for Electric Utility Purchases from Qualifying Facilities - 2018.

FINDINGS OF FACT

1. It is appropriate that the output of the addition of energy storage to a committed Qualifying Facility (“QF”) (i.e., a QF that has established a legally enforceable obligation (“LEO”) or has executed a purchase power agreement (“PPA”)) be calculated at the current avoided cost rate and available for the remaining life of the QF’s current PPA. Further, the QF shall not lose its eligibility for the avoided costs rates it established for the original output of the facility.

2. It is appropriate for Duke Energy Process, LLC, Duke Energy Carolinas, LLC (together, “Duke Energy”), and Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina (“Dominion”) (collectively, the “Utilities”) to host stakeholder meetings to establish a methodology to separately track or meter the output of

the energy storage addition from the output of the original facility, and to require the Utilities to file the methodology for Commission consideration.

EVIDENCE AND CONCLUSIONS SUPPORTING FINDING OF FACT NO. 1

The evidence supporting this finding of fact is found in the testimony and exhibits of Michael R. Wallace, PE, CEM, GBE with Ecoplexus, the testimony and exhibits of Dustin R. Metz with the Public Staff, the testimony and exhibits of Tyler H. Norris with the North Carolina Sustainable Energy Association (“NCSEA”), the testimony and exhibits of Glen A. Snider with Duke Energy, and the testimony and exhibits of James M. Billingsley with Dominion Energy.

The Commission recognizes that Duke Energy’s proposal is that it will terminate a QF’s PPA any time the QF seeks to add energy storage equipment, and will then require the QF to enter into a new or modified PPA -- for both the energy storage addition and the underlying solar facility -- at the then-current avoided cost rates. Duke’s position would mean that a QF would have to forfeit its rights to the avoided cost rates for the underlying facility to which it is entitled if it wanted to add energy storage to the facility. The Commission finds it significant that all other parties in the docket oppose Duke’s proposal because it would impose punitive barriers to the deployment of storage.

NCSEA Witness Norris testified that it is broadly recognized that energy storage resources in general, and utility-scale batteries in particular, will play an increasingly significant role in enabling a more affordable, reliable, and sustainable electricity system. It is in part for this reason that the North Carolina General Assembly in House Bill 589 (Session Law 2017-192) required a study on energy storage technologies to assess their

potential value to North Carolina consumers.¹ The results of the study published by NC State University in December 2018 concluded that “[e]nergy storage can help ensure reliable service, decrease costs to ratepayers, and reduce the environmental impacts of electricity production.”² While there is currently only a small amount of battery storage capacity deployed in North Carolina, Public Staff Witness Metz recognizes the potential for battery storage to be an important resource, especially when it is paired with a solar facility.³ According to NCSEA Witness Norris and Public Staff Witness Metz, solar-plus-storage resources will provide unique values over stand-alone storage resources, including more predictable output that will help to reduce some of the issues related to the intermittency of solar facilities, interconnection efficiency, and reduced solar clipping.⁴ Moreover, Public Staff Witness Metz made it clear that “energy storage coupled with solar generation has the potential to provide benefits to ratepayers and should be appropriately encouraged and fairly treated.”⁵

In light of the substantial benefits of adding energy storage to a solar facility, Duke, the Public Staff, Ecoplexus, and NCSEA collectively submit that there should be no barriers to the deployment of energy storage.⁶ The Public Staff points out that Duke Energy’s position (that a new or modified PPA at Duke’s then-current avoided cost rates for both the underlying solar facility and the energy storage addition would be required

¹ See T. Vol. 6, p. 124.

² See *id.* (North Carolina State University, *Energy Storage Options for North Carolina*, prepared for the NC Energy Policy Council Joint Legislative Commission on Energy Policy, December 2018).

³ See T. Vol. 6, pp. 329-30.

⁴ See T. Vol. 6, pp. 129-34, 329-30.

⁵ See T. Vol. 6, pp. 134, 136, 349.

⁶ Ecoplexus Witness Wallace, Public Staff Witness Metz, NCSEA Witness Norris, and Duke Witness Snider testified there should be no unnecessary barriers to the deployment of energy storage T. Vol. 3, p. 68; T. Vol. 6, pp. 330-31.

whenever storage is proposed) would “frustrate” the addition of energy storage and effectively prevent the numerous customer and system benefits that storage could provide.⁷

Public Staff Witness Metz, Ecoplexus Witness Wallace, NCSEA Witness Norris, and Dominion Witness Billingsley realize the inequity of Duke’s position. If a QF were required to enter into a new or modified PPA for the underlying solar facility at the Utilities’ then-current avoided cost rates in order to add energy storage to the facility, the QF would have to forfeit its rights to avoided cost rates for the underlying solar facility.⁸ Such a requirement would effectively prevent QFs from ever adding energy storage to facilities. They take issue with Duke Energy’s punitive position that the underlying solar facility would have to relinquish its rights to avoided cost rates whenever energy storage is proposed. Contrary to Duke, they believe that a QF should not be required to enter into a new PPA under the current avoided cost rates for the entire facility when storage is added. Dominion Witness Billingsley succinctly stated Dominion’s position (that corresponds with the positions of all parties except Duke Energy): “[A]llowing the existing solar generation facility to continue to receive the original rates for which it is eligible, while applying the current rates to the output from the battery addition, appears to be a reasonable approach.”⁹ Also, the Public Staff points out that Duke’s proposal would frustrate storage’s potential to “provide system and retail customer benefits if existing solar facilities were able to use energy storage to shift their output away from those times when the sun is shining, or to smooth the delivery of energy during times of sporadic sunshine”.¹⁰

⁷ See T. Vol. 6, pp. 330-31.

⁸ See T. Vol. 6, pp. 137, 330-31.

⁹ See T. Vol 5, p. 69.

¹⁰ See *Order Approving Revised Interconnection Standard and Requiring Reports and Testimony* issued in Docket No. E-100, Sub 101, on June 14, 2019, p. 27.

To solve this problem, NCSEA, with the support of the North Carolina Clean Energy Business Alliance (“NCCEBA”), has proposed a compromise under which QFs would relinquish a portion of the rights they have under their PPAs. A key element of NCSEA’s compromise proposal is that the new avoided cost rate for the storage addition be calculated and available for the remaining life of the QF’s current PPA, and that the PPA price paid for the rest of the output of the facility be unaffected.¹¹ This compromise proposal is similar to the approach suggested by the Public Staff.¹² Specifically, NCSEA recommends the following equitable approach when a QF seeks to add additional energy output to the grid from the addition of energy storage: (1) the storage addition should be calculate at the new avoided cost rate and available for the remaining life of the QF’s current PPA; and (2) the QF should not lose its eligibility for the rates it established for the original output of the facility that the QF committed to sell to the Utilities.

EVIDENCE AND CONCLUSIONS SUPPORTING FINDING OF FACT NO. 2

Ecoplexus Witness Wallace Public Staff Witness Metz, and Duke Witness Snider agree that it is technically feasible to separately track or meter storage additions to solar facilities.¹³ Ecoplexus Witness Wallace testified that there are multiple methods to accurately track, record, and transfer the energy from an energy storage system (such as transferring the data from the Energy Management System provided by the battery storage provider through on-site network communications or adding a separate DC meter to the

¹¹ See T. Vol. 6, pp. 145-46.

¹² See *id.* In its Initial Statement, the Public Staff wrote: “The Public Staff suggests that one approach to balance the need to incentivize new technologies with establishing rates would be to separately meter any additional energy output from the original facility and compensate the additional output at the then-current Commission approved avoided cost rates without requiring the existing facility to forfeit payments under the terms of its pre-existing PPA. . . . If it is feasible to separately meter or otherwise estimate the incremental energy output from the modification to the facility, the Public Staff believes the QF should request to amend its existing PPA for increased DC output and should not be required to enter into a new PPA for the entire facility.”

¹³ See T. Vol. 5, pp. 343-51;

storage output).¹⁴ Likewise, Duke Witness Snider acknowledged that technologies are currently available to separately measure the energy storage output, including utilization of separate DC meters or blended rates.¹⁵ Public Staff Witness Metz expects that technologies to separately measure the energy storage output will continue to be developed and improved.

In citing the complexity of separately measuring energy storage output, Public Staff Witness Metz recommended a stakeholder process to consider technical solutions to measure the energy storage output.¹⁶ Ecoplexus Witness Wallace and Dominion Witness Billingsley agree that a stakeholder process would be beneficial.¹⁷ Duke Energy is the sole party that did not expressly advocate for a stakeholder process, but Duke Energy Witness Snider nonetheless stated that Duke Energy is not opposed to a stakeholder process.¹⁸

IT IS THEREFORE ORDERED AS FOLLOWS:

1. That the Utilities shall (1) compensate the QF for the output of the energy storage addition at the current avoided cost rate for the remaining life of the QF's current PPA, and (2) continue to compensate the QF for the original output of the facility pursuant to the avoided costs rates it has established.

2. That the Utilities shall host stakeholder meetings dedicated to establishing a methodology to separately track or meter the output of the energy storage addition from the output of the original facility. The Utilities shall file the methodology for Commission consideration.

¹⁴ See T. Vol. 5, p. 347.

¹⁵ See T. Vo. 3, p. 77.

¹⁶ See T. Vol. 6, pp. 345-46, 442.

¹⁷ See T. Vol. 5, p. 69.

¹⁸ See T. Vo. 3, pp. 77, 78.

Respectfully submitted this the 4th day of September, 2019.

FOX ROTHSCHILD LLP

BY: /s/ Karen M. Kemerait
Karen M. Kemerait
Fox Rothschild LLP
434 Fayetteville Street, Suite 2800
Raleigh, NC 27601
kkemerait@foxrothschild.com
Telephone: (919) 755-8764

CERTIFICATE OF SERVICE

I, Karen M. Kemerait, hereby certify that a true and exact copy of the foregoing Partial Proposed Order has been duly served upon all persons on the docket service list by either depositing a true and exact copy of same in a depository of the United States Postal Service, first-class postage prepaid, and/or by electronic delivery of same with the party's consent.

This the 4th day of September, 2019.

FOX ROTHSCHILD LLP

BY: *Kawh*
Karen M. Kemerait
Attorney for Ecoplexus Inc.