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December 16, 2020

VIA ELECTRONIC FILING

Ms. Kimberley A. Campbell
Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4300

Re: Duke Energy Carolinas, LLC's, Duke Energy Progress, LLC's and Dominion Energy North Carolina's Joint Reply Comments
Docket No. E-100, Sub 158

Dear Ms. Campbell:

Enclosed for filing in the above-referenced docket are the Joint Reply Comments of Duke Energy Carolinas, LLC, Duke Energy Progress, LLC and Dominion Energy North Carolina.

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

Sincerely,

Kendrick C. Fentress

Kendrick C. Fentress

cc: Parties of Record

Enclosure

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-100, SUB 158

In the Matter of: Determination of Avoided Cost Rates for Electric Utility Purchasers from Qualifying Facilities -- 2020	)))))))	JOINT REPLY COMMENTS OF DUKE ENERGY CAROLINAS, LLC, DUKE ENERGY PROGRESS, LLC AND DOMINION ENERGY NORTH CAROLINA

NOW COME Duke Energy Carolinas, LLC ("DEC"), Duke Energy Progress, LLC ("DEP" and together with DEC, "Duke" or the "Companies") and Dominion Energy North Carolina ("Dominion" and jointly with the "Companies", the "Utilities") by and through counsel, and pursuant to the *Order Allowing Comments on Storage Retrofit Stakeholder Meetings Report*, issued by the North Carolina Utilities Commission ("NCUC" or "Commission") on November 5, 2020 in the above-captioned docket ("Order") and hereby respectfully provide their joint reply comments in response to comments filed by the North Carolina Business Alliance ("NCCEBA"), North Carolina Sustainable Energy Association ("NCSEA") and Southern Alliance for Clean Energy ("SACE", collectively "Intervenors") in this docket on November 20, 2020 ("Nov. 20 Comments").

REPLY COMMENTS

A. The Utilities' Recommendation to Amend Existing PPAs Strikes a Balance Between Easing Administrative Burdens for QFs Retrofitting Storage And Protecting Customers from the Risk of Overpayment for PURPA Power.

To lessen the administrative burdens for qualifying facilities ("QFs") seeking to retrofit their facilities with storage, the Utilities agree that the QFs' existing PPAs may be amended to reflect the addition of storage, rather than nullifying the existing solar PPA and requiring a separate

PPA to address the added storage. The amendment will run with the existing PPA and expire when the PPA expires. The Intervenors, however, appear to misunderstand and/or incompletely describe the Utilities' position on the term of amendment to the PPA for the energy storage. Their Nov. 20 Comments state that

> Duke Energy and DENC argue that the contract term for the energy storage addition for facilities greater than 1 MW should be the lesser of the remaining term of the underlying solar-only PPA or five years. In other words, Duke and DENC believe that the contract term for the storage addition should be limited to five years even when there are more than five years remaining on the underlying solar-only [power purchase agreement] PPA.[1]

. This statement misrepresents the Utilities' position. To be clear, the Utilities' position is that

> retrofit storage be added as an amendment to the existing solar contract, and not as a separate contract altogether . . . The amendment would permit the existing facility to be modified to add storage under the condition that the output from the storage will be subject to a separate fixed-price term based on current methodology. Therefore, while the amendment would expire at the same time as the existing contract, *the duration of the fixed price for the battery energy is limited by HB 589*.[2]

In other words, for QFs of one megawatt ("MW") or less that are eligible for the standard offer, the amendment to add storage will revise the definition of Facility to include storage capability and establish a contract price for the energy released from the storage device. The amendment would expire when the PPA expired, but the fixed rate price for the energy from the added storage would expire at the lesser of 10 years or the remaining length of the PPA. For QFs greater than one MW, the amendment to the PPA will continue for the PPA's duration, but the fixed long-term rates applicable to the added storage will expire after the lesser of five years or the remaining term of the PPA. At the expiration of the fixed-price term applicable to the battery storage resource, the rate calculation will be refreshed based on the then-applicable avoided cost methodology until

[1] Nov. 20 Comments at 6.

[2] Joint Report at 21-22 (emphasis added.).

the end of the PPA's term. This concept is also used as an option in the Companies' Green Source Advantage PPA in North Carolina, which offers the following price terms:

> **Administratively Established Avoided Cost Bill Credit**: A fixed levelized avoided energy and capacity rate calculated using the methodology approved pursuant to N.C. Gen. Stat. § 62-156(c) calculated over a period of 2 years (for terms of 2 years or more) or 5 years (for terms of 5 years or more). In the case of 10, 15, or 20-year terms, the Administratively Established Avoided Cost Bill Credit will be refreshed at either two-year or five-year intervals until the end of the contract term utilizing the then current methodology approved pursuant to N.C. Gen. Stat. § 62-156(c).[3]

Upon expiration of the amended PPA, the QF would be free to seek a new PPA for both the original facility and storage together and would no longer need a bifurcated rate. In a letter dated September 26, 2020 and filed in this docket, the Public Staff of the North Carolina Utilities Commission ("Public Staff"), generally supported this and the Utilities' other recommendations in its Joint Report.

The Intervenors appear eager to accept the administrative ease of a PPA amendment, but they oppose protecting the Utilities' customers from the risk of overpayment for the storage under the Public Utility Regulatory Policies Act of 1978 ("PURPA"). The Intervenors instead assert that "the storage addition should be compensated for the remainder of the QF's current PPA, such that the fixed price for retrofit storage would be available for as long as the fixed price for the QF it supports."[4] Their proposal, however, does not align with the Commission's current PURPA policies or state law, both of which are designed to protect customers from the risk of overpayment for PURPA power resulting from long-term fixed PPAs that were not competitively bid.

Prior to November 2016, standard offer PPAs (which at that time were available to QFs five MW and less) and some negotiated PPAs were up to 15 years in duration. To illustrate, a five

[3] *Order Approving Compliance Filing*, Docket Nos. E-2, Sub 1170 and E-7, Sub 1169, issued June 5, 2019.
[4] Nov. 20 Comments at 5.

MW QF signing a 15-year PPA with DEC in October 2016 will still receive long-term fixed avoided cost rates based on DEC's *2015* avoided costs for the next 10 years, until 2031.[5] In short, PPAs entered into before November 2016 may still have approximately a decade left before they expire. Under the Intervenors' proposal, QFs would be able to amend these long-term PPAs to "lock in" current long-term fixed avoided cost rates for retrofitted storage for up to 10 years, regardless of whether they are currently eligible for the standard offer or negotiated PPAs under N.C. Gen. Stat. § 62-156(b) or (c).

The Commission revisited its PURPA polices with respect to these long-term fixed rate PPAs in the 2016 avoided cost proceeding, Docket No. E-100, Sub 148 ("Sub 148 Proceeding"). In the Sub 148 Proceeding, the Commission heard evidence that the existing 15-year PPAs had already contributed to a long-term overpayment risk for PURPA power to utility customers. Customers were locked into paying excessive avoided cost rates because the avoided cost rates in the long-term PPAs had been fixed while the Utilities' avoided costs, namely the price of fuel commodities, had significantly declined over that same period.[6] QFs operating under those PPAs were being paid avoided cost rates far in excess of the Utilities' then current avoided costs, and they would continue to be paid those excessive rates until the PPAs expired. PURPA and FERC rules implementing PURPA require that electric utilities pay rates that are just and reasonable to the ratepayers of the utility, are in the public interest, and do not discriminate against small power producers.[7] Additionally, FERC regulations require that the rates electric utilities pay to purchase

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[5] Standard Offer PPAs entered into before November 15, 2016 would have been based on the Companies' 2015 Standard Offer avoided cost rates, which did not expire until November 2016. The avoided cost rates were approved by the Commission in December 2015 in Docket No. E-100, Sub 140. *Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, Docket No. E-100, Sub 140, issued Dec. 17, 2015.

[6] *See Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, Docket No. E-100, Sub 148, issued Oct. 11, 2017, at p. 11 ("Sub 148 Order") (describing overpayment risk borne by the Companies' customers).

[7] *See Order Establishing Standard Rates and Contract Terms for Qualifying Facilities* in Docket No. E-100, Sub 158 ("Sub *158* Order"), issued April 15, 2020, at 3 (discussing PURPA regulations).

electric energy and capacity from qualifying cogenerators and small power producers reflect the cost that the purchasing utility can avoid as a result of obtaining energy and capacity from these sources, rather than generating an equivalent amount of energy itself or purchasing the energy or capacity from other suppliers.[8] Therefore, to meet these requirements, the Commission concluded that it would balance the federal and North Carolina state policy requirements to encourage QF development against the risks and burdens, such as overpayment, that long-term fixed rate contracts (along with a five MW eligibility threshold for the standard offer) place on the Utilities' customers.[9] The Commission recognized that standard offer PPAs with a duration in excess of 10 years exacerbated those risks.[10]

As the Commission considered the evidence in the Sub 148 proceeding, Governor Cooper signed House Bill 589 ("HB 589") into law on July 27, 2017. Admittedly, HB 589 does not directly address retrofitting QFs with battery storage, but it does directly address the Commission's implementation of PURPA by amending N.C. Gen. Stat. § 62-156(b) to provide that a PURPA standard contract offering be no more than 10 years in duration and by enacting N.C. Gen. Stat. § 62-156(c) to provide PURPA negotiated contracts be no more than five years in duration. The apparent policy determination underlying N.C. Gen. Stat. § 62-156(b) is that five years strikes the appropriate balance between providing QFs greater than one MW a fixed rate term that is consistent with PURPA on the one hand, and protecting customers from having to pay out-of-date, potentially excessive, avoided cost rates, on the other.[11] Therefore, the Utilities' recommendation

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[8] *See id.* (discussing PURPA regulations).
[9] Sub 148 Order at 34-35.
[10] *Id*. at 35.
[11] Although Intervenors assert in a footnote that the five-year term for PURPA contracts was included in HB 589 for "the express purpose" of discouraging PURPA contracts and driving North Carolina solar development into the competitive procurement program, Intervenors have failed to actually cite where that purpose is "express." A comprehensive review of the plain language of HB 589 instead reveals the General Assembly's intent to balance between integrating renewable energy in North Carolina and protecting customers from increasing costs.

on fixing the avoided cost rates associated with the retrofit of battery storage strikes the same balance by reflecting those same PPA durations. In sum, HB 589 supports, and certainly does not prohibit, the Utilities' position.

The Intervenors attempt to support their argument for extending the fixed avoided cost rates period by falsely equating installing battery storage on an existing facility to a mere "equipment upgrade" that would be included in the term of the original PPA.[12] The Commission, however, has already rejected this notion. In its Sub 158 Order, the Commission distinguished between regular maintenance of a facility or repair after a storm and upgrading the facility to increase its energy output by co-locating energy storage.[13] It agreed that regular maintenance and repair of a facility after a storm, or similar instances that occur on a normal basis, should be treated within the normal course of operations and should not be considered a change that would allow the utility to void the existing PPA.[14] The Commission concluded, however, that adding energy storage was a separate issue.[15] Adding energy storage to an existing facility is not simply an equipment upgrade. It can significantly increase the amount of energy being exported (by capturing clipped energy), even if the maximum export capacity of the facility does not change. Therefore, with respect to the addition of battery storage, the Commission has already agreed "with Duke, DENC, and the Public Staff that *the right to sell power under a pre-existing PPA* and standard offer rates *should be limited to the facility that originally entered into the PPA*."[16]

The Intervenors' comments regarding Docket No. E-2, Sub 1185 also do not support their proposal to prolong fixed avoided cost rates for storage beyond five years for QFs greater than one

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[12] Nov. 20 Comments at 5.
[13] Sub 158 Order at 129.
[14] *Id.*
[15] Sub 158 Order at 130.
[16] *Id*. at 129-30. (emphasis added.).

MW. Comparing the Hot Springs Microgrid Solar and Batter Storage Facility and a QF retrofitting its facility to add battery storage is comparing apples and oranges. Whether the battery storage generates electricity itself is irrelevant to this issue. A QF will be paid an avoided cost rate for the battery output just as it is paid an avoided cost rate for the solar facility. As such, the policies underlying N.C. Gen. Stat. § 62-156(b) and (c) and the Commission's policies on long-term fixed cost PPAs are directly relevant.

B. <u>DEC and DEP have Committed to Installing A Second Meter at No Expense to QFs to Assist Developers</u>.

The Intervenors have argued that a QF that installs a storage retrofit will bear the burden of having three meters to measure output. As the Companies explained in their Joint Report, a QF may connect batteries on either the DC side of solar inverters or on the AC side. Either case would require a meter to measure output for purposes of paying the QF the appropriate avoided cost rates. The Intervenors instead claim that the Companies should "simply replace" revenue meters with meters capable of tracking five-minute usage data.[17] The Companies' billing system, however, integrates with meters that have 15-minute data and is not currently designed to integrate five-minute data. Because the Companies recognized the added expense to developers to add their own SISC meter, the Companies have previously agreed that "they will install a second meter as needed at no expense to QFs and will study the meter for a two-year period and report back to the Commission on the results of the study."[18]

C. <u>The Development of the Standards for DC Meters is an Industry-Wide Effort that Neither DENC nor the Companies Control.</u>

[17] Nov. 20 Comments at 11.
[18] *Duke Energy Carolinas, LLC and Duke Energy Progress, LLC Reply Comments*, Docket No. E-100, Sub 158, July 31, 2020.

As the Utilities stated in their Joint Report, there are currently no certified "revenue grade" DC meters because the American National Standards Institute ("ANSI") Standard C12.32 is in development and is not yet approved.[19] Both DENC and the Companies have participated in the EMerge Alliance task force that is working closely with ANSI and a number of other organizations to complete a draft of Standard C12.32. The Companies and DENC predicted in their Joint Report that Standard C12.32 would be ready for public review in the fall of 2020 and ratified in early 2021. After the ANSI Standard is ratified, DC meter manufacturers and test labs can begin to produce DC meters and provide them to utilities for testing. Unfortunately, and for reasons beyond DENC's and the Companies' control, there were delays this fall in bringing the Standard to the ANSI ballot. It is now expected to be on the ANSI ballot before the end of 2020. Yet, despite that unforeseen delay, the Intervenors still claim that "Duke and DENC provide an overly conservative estimate of when DC meters might be available . . . ."[20]

Although DENC and the Companies have participated in the ANSI discussions to help develop the ANSI Standard for DC meters, the process is an industry-wide effort that extends far beyond DENC's and the Companies' control. DENC and the Companies encourage stakeholders to participate in the ANSI discussions and to engage with vendors themselves to ensure that meters that come to the market incorporate their needs and feedback. In the meantime, the Utilities continue to prepare and investigate DC metering and attend the ANSI discussions. The Companies have received DC meters for testing at the McAlpine Microgrid. The Companies are planning to configure them and move them for testing at McAlpine in 2021. Dominion has started ordering test samples to evaluate DC meters that are currently available.

[19] Nov. 20 Comments at 12.
[20] *Id.*

Earlier this year, at the request of representatives of Ecoplexus, and after the Utilities filed their Joint Report, the Utilities informally updated representatives of Ecoplexus and members of the Public Staff on the process of developing DC meters for use with retrofitted battery storage. The Utilities have been transparent and willing to continue to provide such informal updates and respectfully contend that the Intervenors' request to impose additional and quarterly reporting requirements will in no way expedite this process. Moreover, DEC and DEP will be including DC meter testing efforts in their respective forthcoming Renewable Energy and Energy Efficiency Portfolio Standard ("REPS") compliance and cost-recovery proceedings in March (DEC) and June (DEP) of every year, as these meter tests will build onto the work of the DC-connected storage already covered in the REPS filings. This information is included in the Companies' respective REPS filings under N.C. Gen. Stat. § 62-133.8(h)(1)(b), which allows cost-recovery for research that encourages the development of renewable energy, energy efficiency, or improved air quality, provided the costs do not exceed one million dollars per year. The Companies believe that this annual reporting, along with an additional filed update in the October 2021 timeframe, is sufficient to provide the Commission and stakeholders with formal updates, without overly burdening the Companies with quarterly filings. The Utilities also commit to provide informal updates to the stakeholders upon request.

WHEREFORE, having fully responded to the comments of the Intervenors, the Utilities respectfully request the Commission to enter an order accepting the recommendations in their Joint Report as amended by their acceptance of certain recommendations set forth herein in this filing.

Respectfully submitted, this the 16th day of December 2020.

[/s/ Andrea R. Kells]
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CERTIFICATE OF SERVICE

I certify that a copy of Duke Energy Carolinas, LLC's, Duke Energy Progress, LLC's and Dominion Energy North Carolina's Joint Reply Comments, in Docket No. E-100, Sub 158, has been served by electronic mail, hand delivery, or by depositing a copy in the United States Mail, 1st Class Postage Prepaid, properly addressed to parties of record.

This the 16th day of December, 2020.

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