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November 5, 2021

VIA Electronic Filing

Ms. Shonta Dunston, Chief Clerk
North Carolina Utilities Commission
Dobbs Building
430 North Salisbury Street
Raleigh, North Carolina 27603

*Re: Reply Comments of Duke Energy Carolinas, LLC and
Duke Energy Progress, LLC
Docket Nos. E-100, Sub 101 and E-00, Sub 158*

Dear Ms. Dunston:

Enclosed for filing with the North Carolina Utilities Commission in the above-referenced proceedings is the *Reply Comments of Duke Energy Carolinas, LLC and Duke Energy Progress, LLC.*

Please feel free to contact me if you have any questions. Thank you for your assistance in this matter.

Very truly yours,

/s/E. Brett Breitschwerdt

EBB:sjg

Enclosures

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-100, SUB 101
DOCKET NO. E-100, SUB 158

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-100, SUB 101	)	
	)	
In the Matter of	)	
Petition for Approval of Revision to	)	REPLY COMMENTS OF DUKE
Generator Interconnection Standards	)	ENERGY CAROLINAS, LLC AND
	)	DUKE ENERGY PROGRESS, LLC
DOCKET NO. E-100, SUB 158	)	
	)	
In the Matter of	)	
Biennial Determination of Avoided Cost	)	
Rates for Electric Utility Purchases from	)	
Qualifying Facilities – 2018	)	

Pursuant to the North Carolina Utilities Commission's (the "Commission") August 17, 2021 *Order Approving SISC Avoidance Requirements and Addressing Solar-Plus-Storage Qualifying Facility Installations* ("Order") and October 15, 2021 *Order Granting Extension of Time* issued in the above-referenced proceedings, Duke Energy Carolinas, LLC ("DEC") and Duke Energy Progress, LLC ("DEP" and together with DEC, "Duke Energy" or the "Companies") provide the following reply comments ("Reply Comments") in response to the Public Staff—North Carolina Utilities Commission's ("Public Staff") and Carolinas Clean Energy Business Association's ("CCEBA") comments filed on October 21, 2021 regarding the Companies' September 29, 2021 Energy Storage System Retrofit ("ESS") Compliance Filing ("Compliance Filing").

REPLY COMMENTS

I. The Public Staff generally supports Duke Energy's Compliance Filing

The Commission's Order specifically directed Duke Energy to make a compliance filing including "1) a comprehensive waiver request reflecting all waivers that are needed from the North Carolina Interconnection Procedures, in order to comply with the Commission's directive to move ahead with an enrollment window for the ESS Retrofit Study Process; and 2) the procedure for how a QF establishes eligibility for the avoided cost rate or methodology applicable to the output of the energy storage addition."

With regard to directive 1), the Compliance Filing explained that the Companies had refined the original ESS Retrofit Expedited Study Process to align with the now-effective Definitive Interconnection Study Process while continuing to allow certain Interconnection Customers seeking to retrofit an operating QF generating facility with ESS to proceed under an expedited study process. Specifically, the Compliance Filing included two expedited study processes, one available for solar Interconnection Customers requesting interconnection service for ESS Export between 9:00 AM – 5:00 PM and another available to certain DC-Coupled transmission-interconnected Interconnection Customers indicating 24-hour ESS Export when entering in future Definitive Interconnection System Impact Studies ("DISIS"). To implement these processes, and in compliance with directive 1), the Compliance Filing requested the Commission "grant a waiver from the NCIP to allow the Companies to implement the ESS Retrofit Study Process in the manner described in Attachment A…and a waiver from NCIP Sections 4.4.7 and 4.5 to implement the expedited study of ESS retrofits for eligible DC-Coupled transmission-interconnected Interconnection Customers."

With regard to directive 2), the Compliance Filing included as Attachment C a procedure governing how an operating QF proposing to materially alter its generating facility to integrate an ESS would establish eligibility for the avoided cost rate or methodology applicable to the output of the energy storage addition ("New ESS retrofit avoided cost rate"). Attachment C detailed that to establish eligibility for New ESS retrofit avoided cost rates, a QF proposing to materially alter its generating facility to integrate an ESS must submit a Notice of Commitment ("NOC") form to establish a legally enforceable obligation ("LEO"). Attachment C further described that Interconnection Customers submitting a NOC Form prior to November 1, 2023, would be eligible to receive a published avoided cost rate for the term that remains on the QF Interconnection Customer's original power purchase agreement ("PPA") as of January 1, 2023. Additionally, the attachment explained that Interconnection Customers submitting a NOC form after November 1, 2023, would be eligible to receive a negotiated New ESS retrofit avoided cost rate consistent with the Commission-approved methodology at the time the QF commits to the ESS retrofit and obligates itself to sell the ESS' output to Duke Energy.

Having reviewed the Companies' filing, the Public Staff concludes that the Compliance Filing "[meets] both directives" requested in the Commission's Order as it "includes [] (1) a comprehensive waiver request that reflects all the waivers that are needed from the NCIP to establish an open enrollment window, and (2) a sufficient procedure, including the submission of a [NOC] form to establish a legally enforceable obligation prior to November 1, 2023, to allow a [Qualifying Facility ("QF")] to establish eligibility for the published avoided cost rate or, if submitted after November 1, 2023, a negotiated rate based upon the Commission approved avoided cost methodology, applicable to the output of the energy storage addition."[1] The Public Staff goes on to state that they "generally support[] the process outlined in the Compliance Filing."[2]

Based on the elements of the Compliance Filing and the Public Staff's comments, the Companies submit that the Compliance Filing adheres to the Commission's Order and should be approved, subject to the modification to Attachment C and clarifications explained below.

II. Expedited Study of ESS Retrofit Interconnection Requests

As explained above, the Compliance Filing proposes two expedited study processes available for solar Interconnection Customers requesting interconnection service for ESS Export between 9:00 AM – 5:00 PM and certain DC-Coupled transmission-interconnected Interconnection Customers indicating 24-hour ESS Export when entering in future DISISs. The Public Staff's comments state general support for the expedited study processes, and CCEBA's comments do not oppose or request any changes to such processes.

The Public Staff's comments do, however, request clarification regarding whether the Companies intend to allow for the study of retrofit storage additions in the first DISIS or for subsequent DISIS windows. The Public Staff's comments state that the "Public Staff believes that allowing ESS Retrofit applications during any future DISIS is appropriate and could provide benefits to ratepayers, particularly as energy storage costs are projected to continue falling over the next 10 years."[3] The Public Staff goes on to state that acceptance of ESS Retrofit applications during any future DISIS is "consistent with the [Commission's

[1] Public Staff Comments, at 8-9.
[2] Public Staff Comments, at 9.
[3] Public Staff Comments, at 11.

Order Granting Waiver and Requiring Report[4]]"[5] finding that Duke Energy's queue reform proposal…should more easily accommodate the addition of storage at existing Generating Facilities…."[6] Based on these conclusions, and if the Companies do intend to allow for the study of retrofit storage additions in subsequent DISIS windows, the Public Staff questions whether revisions to the NCIP may be more appropriate than waiver requests.[7]

The Companies generally agree with the Public Staff and have developed the expedited study process presented in Compliance Filing Attachment B to align with DISIS. The Companies do, however, believe that experience implementing DISIS as well as experience implementing the expedited ESS retrofit study process is needed before determining whether to make the expedited ESS study process a permanent part of DISIS. Accordingly, the Companies propose to file a report within 60 days of issuing the DISIS Cluster 1 Phase 1 study report providing an update on the expedited study processes available for solar Interconnection Customers requesting interconnection service for ESS Export between 9:00 AM – 5:00 PM and certain DC-Coupled transmission-interconnected Interconnection Customers indicating 24-hour ESS Export when entering in DISIS. This initial report can inform whether to (i) extend the requested waivers for DISIS Cluster 2, (ii) terminate the ESS retrofit process, or (iii) modify the NCIP to make the waiver for certain DC-Coupled transmission-interconnected Interconnection Customers indicating 24-hour ESS Export when entering in DISIS permanent.

Although CCEBA does not oppose or propose any changes to the Companies' expedited ESS retrofit study processes, CCEBA makes a recommendation regarding the

[4] Docket No. E-100, Sub 101 (Apr. 28, 2020).
[5] Public Staff Comments, at 11.
[6] *Order Granting Waiver and Requiring Report,* at 7, Docket No. E-100, Sub 101 (Apr. 28, 2020).
[7] Public Staff Comments, at 12.

study processes applicable to QFs indicating 24-hour ESS Export. For such QFs, CCEBA requests that Duke Energy "be transparent and involve stakeholders in the standards and parameters used in that study, particularly as to ESS dispatching outside the 9:00 am to 5:00 pm window."[8] CCEBA specifically questions whether Duke Energy will assume that the ESS will provide maximum output during all 24 hours of the day, or whether Duke Energy will model and evaluate such QFs over selected shorter periods.

In response to this comment and in the spirit of transparency, the Companies explain that ESS facilities (both transmission and distribution-interconnected) exporting outside of the 9:00 AM to 5:00 PM window will be studied for transmission impacts in the winter peak at their max export capability. The distribution impact review process will assess whether there are any different peak and valley points based on historical loads and voltages outside the daylight hours that were previously studied. If the daylight peak and valley points remain valid (i.e., occurred during daylight hours), then no further study will be needed. However, if either a different peak or different valley is identified outside of the daylight hours, then a power flow study will be conducted based on that condition. Additional information on the study process can also be obtained through the DISIS customer engagement window process prior to DISIS Phase 1 study.

The Companies note that the planned ESS transmission impacts evaluation is consistent with the process described in Duke Energy's January 17, 2020 Petition for Waiver to Implement Expedited ESS Retrofit Study Process filed in Docket No. E-100, Sub 101 and previous stakeholder engagements held on such initial ESS Retrofit Study Process

[8] CCEBA Comments, at 8.

proposal. The Companies therefore submit that this process is both transparent and based on stakeholder engagement, as requested by CCEBA.

III. Avoided Cost Rates for New ESS Retrofit Additions

a. Eligibility for New ESS retrofit avoided cost rates

Attachment C to the Companies' Compliance Filing proposed that eligibility for a New ESS retrofit avoided cost rate[9] shall be limited to existing QFs that established either a LEO or entered into a PPA with the Companies under rates and terms approved by the Commission on or before November 15, 2016, and shall extend only for the term of the QF's PPA, whether currently existing or executed pursuant to an existing LEO established prior to November 15, 2016. Attachment C further stated that the published New ESS retrofit avoided cost rates would remain available until the earlier of November 1, 2023 or when 100 MW of incremental ESS retrofit additions have submitted Notice of Commitment forms under the new rates.

Regarding the November 15, 2016 or earlier eligibility date, the Companies proposed to limit eligibility for New ESS retrofit avoided cost rates to QFs having established an LEO in the E-100, Sub 140 docket, or earlier biennial avoided cost dockets. The Public Staff's comments question whether the Companies' November 15, 2016 eligibility date for the New ESS Retrofit rates is appropriate, and requests Duke Energy "clarify the rationale for this cutoff ad explain why all existing generators with Sub 148 rates or later with an interconnection agreement and otherwise meeting the eligibility requirements would not now be eligible for [a New ESS retrofit avoided cost rate]."[10]

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[9] "New ESS retrofit avoided cost rate" is defined in the Compliance filing as the avoided cost rate or methodology applicable to the output of an energy storage addition to an operating QF that has proposed to materially alter its generating facility to integrate an ESS.

[10] Public Staff Comments, at 13-14.

The Companies developed these eligibility requirements to reasonably align with the practical and legal considerations under North Carolina's implementation of the Public Utilities Regulatory Policies Act ("PURPA"). To clarify, the pre-November 15, 2016 LEO eligibility date aligns with HB 589's changes to North Carolina's PURPA implementation in N.C. Gen. Stat § 62-156.[11] Qualifying facilities with LEOs established after that date are limited to either a 10-year term if eligible for the standard offer or, more likely, a five-year term if the project is greater than one megawatt ("MW") in size. In other words, the Companies chose the pre-November 15, 2016 LEO eligibility requirement to recognize the State's changes in PURPA implementation and transition towards more competitive procurement programs and so as not to exacerbate the overpayment burden imposed on customers by QFs with stale avoided cost rates. In addition, QFs having established a LEO in the 2018 Sub 158 and later biennial avoided cost dockets are already on notice that they can include an ESS with their initial QF interconnection request. Further, this eligibility date was included so as not to continue this administratively burdensome bifurcated rate and PPA amendment process indefinitely, thereby incentivizing QFs to initially propose ESS with their generating facilities and allowing Duke Energy to achieve administrative efficiencies and non-discrimination within the interconnection process. Thus, the Companies' targeted application of the ESS retrofit process and eligibility for New ESS retrofit avoided cost rates and amended PPAs is reasonable and consistent with the Commission's intent to provide an amended PPA and current avoided cost rates for legacy Sub 140 and earlier QFs seeking to add storage. The Companies also note that CCEBA—

[11] *See* N.C. Gen. Stat. 62-156(b)(1) (differentiating between small power producer QFs that established LEOs prior to November 15, 2016 for purposes of standard offer eligibility); *see also* Session Law 2017-192, Part I, Sect. 1.(c) (extending legacy Sub 140 avoided cost rates for QFs with LEOs prior to November 15, 2016that meet certain requirements).

whose members will actually be subject to the eligibility limitation—does not oppose limiting New ESS retrofit cost eligibility in this manner.[12]

Regarding the 100 MW cap on eligibility for New ESS retrofit avoided cost rates, as stated in the Public Staff's comments, the Companies' intent was to either update the published rates once that cap was reached to offer more accurate rates or to offer calculated rates under a negotiated rate process, not to limit eligibility for a New ESS retrofit avoided cost rate generally to only 100 MW of ESS capacity. To further explain, and similar to the pre-November 15, 2016 LEO eligibility requirement, the purpose of the 100 MW cap proposal was to mitigate overpayment risk for customers. The Companies' (and Public Staff's) position in the underlying Sub 158 avoided cost docket was that QFs co-locating storage should be limited to avoided cost rates calculated based upon a 5-year term, consistent with N.C. Gen. Stat. § 62-156(c). However, the risk of longer-term fixed rates being available to approximately 560 QFs totaling over 4,000 MW of capacity was not specifically considered or raised in that Sub 158 docket or considered in the Commission's Order. The Companies therefore proposed the 100 MW eligibility limit in its Compliance Filing.

After discussions with the Public Staff, and as indicated in the Public Staff's comments, the Companies are agreeable to removing the 100 MW cap. Included with these reply comments is an <u>Amended Attachment C</u> to the Companies' Compliance Filing removing the 100 MW cap to allow New ESS Retrofit Rates to remain available until November 1, 2023. The Companies hereby request approval of its <u>Amended Attachment C</u>.

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[12] CCEBA Comments, at 4.

Additionally regarding eligibility for New ESS retrofit avoided cost rates, the Public Staff's comments note that several projects have recently come online or are in the process of coming online that were selected through the Competitive Procurement of Renewable Energy ("CPRE") program.[13] The Public Staff states that "[g]iven the fact that many of these facilities are either already operating or have an executed [Interconnection Agreement], they may be eligible for the ESS Retrofit process but not for Rate Eligibility Date[14] established in the Compliance Filing."[15] The Public Staff therefore requests that the Companies' reply comments "clarify whether [certain CPRE projects] will be eligible for the ESS Retrofit Study Process and elaborate on the basis and mechanism for excluding or including them."[16]

In response to the Public Staff's request for clarification, CPRE Sellers are subject to the terms of the CPRE PPA, which does not contemplate material alterations to CPRE facilities to add an ESS. Further, the Companies do not support CPRE projects being eligible for the new ESS retrofit study processes or New ESS avoided cost rates. As articulated by the Public Staff[17], CPRE projects were selected through a rigorous evaluation process, and the Companies agree that retrofitting ESS to these facilities would invalidate the evaluation results and potentially distort the economic value CPRE projects provide customers.

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[13] Public Staff Comments, at 14.
[14] The Public Staff's comments define "Rate Eligibility Date" as the November 15, 2016 cutoff date for New ESS retrofit avoided cost rates.
[15] Public Staff Comments, at 14.
[16] *Id.*
[17] *Id.* at 14-15.

b. Methodology for calculating New ESS retrofit avoided cost rates

As addressed in the Compliance Filing, the Companies filed the initial, published New ESS retrofit avoided cost rates on November 1, 2021 in Docket No. E-100, Sub 175, and such rates are subject to adjustment if the Commission approves avoided cost rates different than those initially filed. For negotiated New ESS retrofit avoided cost rates available after November 1, 2023, the Compliance Filing explains that such rates will be calculated based on "the Commission-approved methodology at the time the QF commits to the ESS retrofit and obligates itself to sell the ESS' output." The Compliance filing further explains that the methodology used to calculate these negotiated avoided cost rates will be the same as negotiated rates calculated for new Interconnection Customers proposing to interconnect a new QF.

CCEBA "does not object in principle" to the Companies calculating negotiated New ESS retrofit avoided cost rates available after November 1, 2023 based on the then-current Commission approved methodology, but "requests clarification from [the Companies] regarding the methodology it will use to calculate the New ESS retrofit avoided cost rates, including for energy delivered outside the 9am-5pm solar window, and whether they propose that this methodology will be different than the methodology used to calculate the negotiated avoided cost rate after the expiration of the initial New ESS retrofit rates."[18] CCEBA additionally requests clarification from the Companies "that the negotiated rates available to ESS retrofits will be based on the Commission-approved ESS rates."

[18] CCEBA Comments, at 5.

To clarify for CCEBA, New ESS retrofit avoided cost rates filed on November 1, 2021 were based on the same methodology utilized to develop avoided energy and capacity rates for new QFs requesting interconnection under standard avoided cost rates, as further detailed in Section IX of the Companies' Joint Initial Statement. These rates and the methodology used to develop them are now before the Commission in Docket No. E-100 Sub 175. Avoided cost rates for ESS retrofit additions operating outside of the 9:00 AM – 5:00 PM will also be based upon this same Commission-approved methodology.

c. 10-year term for New ESS retrofit avoided cost rates

The Compliance Filing proposes that New ESS retrofit avoided cost rates be available to an existing QF for the amount of time left on the QF's pre-existing PPA as of January 1, 2023. The Compliance Filing further explains that in the rare case an ESS retrofit Interconnection Customer has more than 10 years left on its existing PPA as of January 1, 2023, that Interconnection Customer will receive the 10-year published New ESS retrofit avoided cost rate but will secure the 10-year rate for the remaining term of the existing PPA.

CCEBA argues that the Companies' proposal to limit the ESS Retrofit avoided cost rate to the 10-year rate for Interconnection Customers retrofitting ESS with greater than 10 years remaining on their existing PPA term is "inconsistent" with the Commission's Order stating that "the Commission agrees with NCCEBA, NCSEA, and SACE that offering storage the term that remains on the PPA is reasonable at this time."[19] CCEBA states that NCCEBA, NCSEA, and SACE recommended that "the term offered for the energy storage output should be the remainder of the PPA term, such that the fixed-

[19] CCEBA Comments, at 7 (*citing* Order, at 10).

price term available to the retrofit storage would be available for as long as the term remaining available to the generating facility."[20] CCEBA therefore requests that in the event that a QF with greater than 10 years on its existing PPA seeks to add storage, the Companies provide the QF with a New ESS retrofit avoided cost rate that corresponds to the remaining duration of the PPA, *i.e.* a New ESS retrofit avoided cost rate longer than 10 years.

The Companies disagree with CCEBA's proposal. As an initial matter, based upon the passage of time, the Companies expect there to be very few QFs having terms longer than ten years remaining on their PPAs that seek to retrofit ESS, meaning calculation of New ESS retrofit avoided cost rates beyond 10 years is likely to be unnecessary. This is because HB 589 eliminated avoided cost contracts for longer than 10 years for QFs establishing LEOs after November 15, 2016 and mandated that all remaining Sub 140 agreements' terms must commence to run by no later than September 10, 2018.[21] The Companies proposal also would provide any QF that may have more than 10 years remaining on a legacy QF contract the option of a 10-year avoided cost rate for ESS Retrofit Storage for the remaining term of their contract. The Companies believe this is a reasonable and standardized approach to implementing the Commission's directive and appropriately balances QF developer interests with customer interests.[22] The Companies therefore request the Commission reject CCEBA's proposal, find the Companies' 2, 3, 4, 5, 6, 7, 8, 9, and 10-year New ESS retrofit avoided cost rates reasonable, and accept the

[20] *Id.*
[21] Session Law 2017-192, Part I, Sect. 1.(c).
[22] *See* N.C. Gen. Stat. 62-156(C) (providing that for all QFs above 1 MW the "utility shall design rates consistent with the most recent Commission-approved avoided cost methodology for a fixed five-year term")

Companies' Compliance Filing subject to the modifications and clarifications described herein.

IV. House Bill 951

As first explained in the Public Staff's comments, Section 6.(a) of House Bill 951, S.L. 2021-165 provides certain existing QFs a one-time option to modify their PPAs to receive a longer term at updated avoided cost rates. The Public Staff's comments state that "[w]hether facilities that opt into longer contracts should also be able to retrofit their facilities with storage for the extended term under this section of the legislation should be considered in the new docket opened pursuant to Section 6.(a) of the legislation."[23] Duke Energy agrees that this issue is most appropriately considered in the new "blend and extend" docket to be opened pursuant to Section 6.(a) of HB 951, and plans to address this issue in such docket once opened.

WHEREFORE, based on the foregoing, the Companies request that the Commission accept these reply comments, approve the Companies' Compliance Filing with the requested modification to Amended Attachment C and clarifications included herein, and grant any other relief that the Commission deems appropriate.

[23] Public Staff Comments, at 15.

Respectfully submitted, this the 5th day of November, 2021.

/s/E. Brett Breitschwerdt

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Procedure for Energy Storage System Retrofit at an Existing QF Generation Site to Establish Eligibility for Avoided Cost Rates

Pursuant to Ordering Paragraph 6 of the August 17, 2021 *Order Approving SISC Avoidance Requirements and Addressing Solar-Plus-Storage Qualifying Facility Installations* ("Order"), Duke Energy Carolinas, LLC ("DEC") and Duke Energy Progress, LLC ("DEP" and together with DEC, "Duke Energy" or the "Companies") have developed the following procedure to govern how an operating qualifying facility ("QF") proposing to materially alter its generating facility to integrate an energy storage system ("ESS") would establish eligibility for the avoided cost rate or methodology applicable to the output of the energy storage addition ("New ESS retrofit avoided cost rate"). The Companies have developed a process that is intended to meet the requirements of the Order and to align with the interconnection study process for ESS retrofit additions. Recognizing that approximately 560 QF solar facilities above 1 MW are selling under power purchase agreements ("PPA") and are eligible to retrofit their QF generator to integrate ESS under the Order, the Companies' process is also designed to be administratively efficient. Eligibility for a New ESS retrofit avoided cost rate shall be limited to existing QFs that established either a legally enforceable obligation ("LEO") or entered into a PPA with the Companies under rates and terms approved by the Commission on or before November 15, 2016, and shall extend only for the term of the QF's PPA, whether currently existing or executed pursuant to an existing LEO established prior to November 15, 2016.

I. Notice of Commitment Form

To establish eligibility for a New ESS retrofit avoided cost rate, a QF must first complete a new Notice of Commitment Form proposing to materially alter its existing QF by adding an ESS. Prior to submitting the Notice of Commitment Form, the QF must update its Form 556 filed with the Federal Energy Regulatory Commission ("FERC") to identify the ESS being integrated as well as provide notice of the ESS retrofit to the Commission in the docket where the QF's initial certificate of public convenience and necessity was issued attesting to the fact that the QF still meets the requirements of a small power production facility as defined by FERC regulations. The QF will also need to meet all commercial viability requirements, including submitting a new interconnection request to enter the interconnection study process, in order to demonstrate its commitment to install the retrofit ESS and sell power to Duke Energy under an amended PPA.[1]

The Notice of Commitment Form will serve as a form of legally enforceable obligation for the QF Interconnection Customer proposing to retrofit an ESS at an existing generation site. The Notice of Commitment Form can be submitted to DEC or DEP before, during or after the ESS expedited interconnection process or the Definitive Interconnection Study process, as applicable, but must be received by DEC or DEP prior to execution of an amended PPA or new PPA, subject to a qualifying existing LEO, which includes a new ESS. Additionally, to receive a published New ESS retrofit avoided cost rate versus a negotiated New ESS retrofit avoided cost rate, as further discussed in Section II.a, a QF must submit a Notice of Commitment Form prior to November 1,

[1] The Companies are in the process of updating their Notice of Commitment Form to address queue reform and new requirements established by Order No. 872, and will be filing that updated Notice of Commitment Form as part of the Companies' November 1, 2021 Joint Initial Statement in Docket No. E-100, Sub 175. The Companies are also evaluating whether a more targeted Notice of Commitment Form for retrofit ESS should be developed.

2023, the time at which published New ESS retrofit avoided cost rates are no longer available for retrofit ESS QF Interconnection Customers.

II. New ESS Retrofit Avoided Cost Rates

a. Initial Published New ESS Retrofit Avoided Cost Rates Available Until November 1, 2023

Due to the administrative burden of a potentially large volume of existing solar QF Interconnection Customers seeking to retrofit an ESS at an existing generation site in the near future, DEC and DEP plan to publish multiple, initial New ESS Retrofit avoided cost rates for retrofit ESS QF Interconnection Customers. As part of the Companies' November 1, 2021, initial filing in Docket No. E-100, Sub 175, DEC and DEP will each publish 2, 3, 4, 5, 6, 7, 8, 9, and 10-year New ESS retrofit avoided cost rates available until November 1, 2023 for Interconnection Customers proposing to retrofit an ESS at an existing generation site. These published rates will remain available until November 1, 2023. After November 1, 2023, any further eligible ESS retrofits will be provided a negotiated rate commensurate with their LEO as further discussed in Section II.b.[2]

The forecast data used to calculate each published levelized New ESS Retrofit avoided cost rate will begin January 1, 2023 and span the length of time specified for the particular year term of the New ESS Retrofit avoided cost rate. For example, the 8-year published New ESS Retrofit avoided cost rate will represent levelized rates based on forecasts from January 1, 2023 through December 31, 2030. Note the January 1, 2023 date is selected in coordination with the Definitive Interconnection Study Process; because the DISIS Phase 1 interconnection process will conclude at the end of November, 2022, the earliest possible date that a retrofit ESS could come online is likely to be on or after January 1, 2023.

The published New ESS retrofit avoided cost rate available to a retrofit ESS QF Interconnection Customer will correspond to the amount of time left on the QF Interconnection Customer's generation site's current PPA as of January 1, 2023. For example, an Interconnection Customer who signed a fifteen-year PPA in 2015 and is planning to retrofit an ESS at an existing generation site will receive an 8-year published New ESS retrofit avoided cost rate. Note that in the rare case that an ESS retrofit Interconnection Customer has more than 10 years left on its existing PPA as of January 1, 2023, that Interconnection Customer will receive the 10-year published New ESS retrofit avoided cost rate but will secure the 10-year rate for the remaining life of the existing PPA. The initial, published New ESS retrofit avoided cost rates will be filed on November 1, 2021 in Docket No. E-100, Sub 175 in the DEC and DEP biennial avoided cost filing, and will be subject to adjustment if the North Carolina Utilities Commission approves avoided cost rates different than those filed November 1, 2021.

[2] If the volume of negotiated New ESS avoided cost rate requests becomes administratively burdensome, DEC and DEP reserve the right to make available additional published New ESS retrofit avoided cost rates.

b. Negotiated New ESS Retrofit Avoided Cost Rates Available After November 1, 2023

On November 1, 2023, DEC and DEP will no longer make available published New ESS retrofit avoided cost rates due to the decreasing number of QF Interconnection Customers eligible to retrofit an ESS at an existing generation site as of that date. Instead, DEC and DEP will offer QF Interconnection Customers seeking to retrofit an ESS at existing generation sites after November 1, 2023 negotiated New ESS retrofit avoided cost rates consistent with the Commission-approved methodology at the time the QF commits to the ESS retrofit and obligates itself to sell the ESS' output. The methodology used to calculate these negotiated rates will be the same as negotiated rates calculated for new Interconnection Customers proposing to interconnect a new QF.

Procedure for Energy Storage System Retrofit at an Existing QF Generation Site to Establish Eligibility for Avoided Cost Rates

Pursuant to Ordering Paragraph 6 of the August 17, 2021 *Order Approving SISC Avoidance Requirements and Addressing Solar-Plus-Storage Qualifying Facility Installations* ("Order"), Duke Energy Carolinas, LLC ("DEC") and Duke Energy Progress, LLC ("DEP" and together with DEC, "Duke Energy" or the "Companies") have developed the following procedure to govern how an operating qualifying facility ("QF") proposing to materially alter its generating facility to integrate an energy storage system ("ESS") would establish eligibility for the avoided cost rate or methodology applicable to the output of the energy storage addition ("New ESS retrofit avoided cost rate"). The Companies have developed a process that is intended to meet the requirements of the Order and to align with the interconnection study process for ESS retrofit additions. Recognizing that approximately 560 QF solar facilities above 1 MW are selling under power purchase agreements ("PPA") and are eligible to retrofit their QF generator to integrate ESS under the Order, the Companies' process is also designed to be administratively efficient. Eligibility for a New ESS retrofit avoided cost rate shall be limited to existing QFs that established either a legally enforceable obligation ("LEO") or entered into a PPA with the Companies under rates and terms approved by the Commission on or before November 15, 2016, and shall extend only for the term of the QF's PPA, whether currently existing or executed pursuant to an existing LEO established prior to November 15, 2016.

I. Notice of Commitment Form

To establish eligibility for a New ESS retrofit avoided cost rate, a QF must first complete a new Notice of Commitment Form proposing to materially alter its existing QF by adding an ESS. Prior to submitting the Notice of Commitment Form, the QF must update its Form 556 filed with the Federal Energy Regulatory Commission ("FERC") to identify the ESS being integrated as well as provide notice of the ESS retrofit to the Commission in the docket where the QF's initial certificate of public convenience and necessity was issued attesting to the fact that the QF still meets the requirements of a small power production facility as defined by FERC regulations. The QF will also need to meet all commercial viability requirements, including submitting a new interconnection request to enter the interconnection study process, in order to demonstrate its commitment to install the retrofit ESS and sell power to Duke Energy under an amended PPA.[1]

The Notice of Commitment Form will serve as a form of legally enforceable obligation for the QF Interconnection Customer proposing to retrofit an ESS at an existing generation site. The Notice of Commitment Form can be submitted to DEC or DEP before, during or after the ESS expedited interconnection process or the Definitive Interconnection Study process, as applicable, but must be received by DEC or DEP prior to execution of an amended PPA or new PPA, subject to a qualifying existing LEO, which includes a new ESS. Additionally, to receive a published New ESS retrofit avoided cost rate versus a negotiated New ESS retrofit avoided cost rate, as further discussed in Section II.a, a QF must submit a Notice of Commitment Form prior to November 1,

[1] The Companies are in the process of updating their Notice of Commitment Form to address queue reform and new requirements established by Order No. 872, and will be filing that updated Notice of Commitment Form as part of the Companies' November 1, 2021 Joint Initial Statement in Docket No. E-100, Sub 175. The Companies are also evaluating whether a more targeted Notice of Commitment Form for retrofit ESS should be developed.

2023, the time at which published New ESS retrofit avoided cost rates are no longer available for retrofit ESS QF Interconnection Customers.

II. New ESS Retrofit Avoided Cost Rates

a. Initial Published New ESS Retrofit Avoided Cost Rates Available Until November 1, 2023

Due to the administrative burden of a potentially large volume of existing solar QF Interconnection Customers seeking to retrofit an ESS at an existing generation site in the near future, DEC and DEP plan to publish multiple, initial New ESS Retrofit avoided cost rates for retrofit ESS QF Interconnection Customers. As part of the Companies' November 1, 2021, initial filing in Docket No. E-100, Sub 175, DEC and DEP will each publish 2, 3, 4, 5, 6, 7, 8, 9, and 10-year New ESS retrofit avoided cost rates available until November 1, 2023 for Interconnection Customers proposing to retrofit an ESS at an existing generation site. These published rates will remain available until ~~the earlier of~~ November 1, 2023 ~~or when 100 MW of incremental ESS retrofit additions have submitted Notice of Commitment Forms under the new rates~~. After November 1, 2023 ~~or after 100 MW of incremental ESS retrofit additions have been submitted~~, any further eligible ESS retrofits will be provided a negotiated rate commensurate with their LEO as further discussed in Section II.b.[2]

The forecast data used to calculate each published levelized New ESS Retrofit avoided cost rate will begin January 1, 2023 and span the length of time specified for the particular year term of the New ESS Retrofit avoided cost rate. For example, the 8-year published New ESS Retrofit avoided cost rate will represent levelized rates based on forecasts from January 1, 2023 through December 31, 2030. Note the January 1, 2023 date is selected in coordination with the Definitive Interconnection Study Process; because the DISIS Phase 1 interconnection process will conclude at the end of November, 2022, the earliest possible date that a retrofit ESS could come online is likely to be on or after January 1, 2023.

The published New ESS retrofit avoided cost rate available to a retrofit ESS QF Interconnection Customer will correspond to the amount of time left on the QF Interconnection Customer's generation site's current PPA as of January 1, 2023. For example, an Interconnection Customer who signed a fifteen-year PPA in 2015 and is planning to retrofit an ESS at an existing generation site will receive an 8-year published New ESS retrofit avoided cost rate. Note that in the rare case that an ESS retrofit Interconnection Customer has more than 10 years left on its existing PPA as of January 1, 2023, that Interconnection Customer will receive the 10-year published New ESS retrofit avoided cost rate but will secure the 10-year rate for the remaining life of the existing PPA. The initial, published New ESS retrofit avoided cost rates will be filed on November 1, 2021 in Docket No. E-100, Sub 175 in the DEC and DEP biennial avoided cost filing, and will be subject to adjustment if the North Carolina Utilities Commission approves avoided cost rates different than those filed November 1, 2021.

[2] If the volume of negotiated New ESS avoided cost rate requests becomes administratively burdensome, DEC and DEP reserve the right to make available additional published New ESS retrofit avoided cost rates.

b. Negotiated New ESS Retrofit Avoided Cost Rates Available After November 1, 2023

On ~~the earlier of~~ November 1, 2023 ~~or the date that 100 MW of ESS retrofit additions have submitted Notice of Commitment Forms under the published New ESS retrofit avoided cost rates~~, DEC and DEP will no longer make available published New ESS retrofit avoided cost rates due to the decreasing number of QF Interconnection Customers eligible to retrofit an ESS at an existing generation site as of that date. Instead, DEC and DEP will offer QF Interconnection Customers seeking to retrofit an ESS at existing generation sites after November 1, 2023 negotiated New ESS retrofit avoided cost rates consistent with the Commission-approved methodology at the time the QF commits to the ESS retrofit and obligates itself to sell the ESS' output. The methodology used to calculate these negotiated rates will be the same as negotiated rates calculated for new Interconnection Customers proposing to interconnect a new QF.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing *Reply Comments of Duke Energy Carolinas, LLC and Duke Energy Progress, LLC* as filed in Docket Nos. E-100, Sub 101 and E-100, Sub 158, was served via electronic delivery or mailed, first-class, postage prepaid, upon all parties of record.

This, the 5th day of November, 2021.

/s/E. Brett Breitschwerdt

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