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April 6, 2022

VIA ELECTRONIC FILING

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

Re: Reply Comments of Duke Energy Carolinas, LLC and Duke Energy Progress, LLC in Support of Expedited Commission Authorization of 2022 Solar Procurement Program
Docket Nos. E-2, Sub 1297 and E-7, Sub 1268

Dear Ms. Dunston:

Duke Energy Carolinas, LLC and Duke Energy Progress, LLC hereby file their Reply Comments in Support of Expedited Commission Authorization of 2022 Solar Procurement Program in the above-named proceedings.

If you have any questions, please do not hesitate to contact me. Thank you for your attention to this matter.

Sincerely,

Jack E. Jirak

Enclosure

cc: Parties of Record

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-2, SUB 1297
DOCKET NO. E-7, SUB 1268

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of Duke Energy Carolinas, LLC, and Duke Energy Progress, LLC 2022 Procurement Pursuant to Session Law 2021-165, Section 2(c)	)))))))	**REPLY COMMENTS OF DUKE ENERGY CAROLINAS, LLC AND DUKE ENERGY PROGRESS, LLC IN SUPPORT OF EXPEDITED COMMISSION AUTHORIZATION OF 2022 SOLAR PROCUREMENT PROGRAM**

NOW COME Duke Energy Carolinas, LLC ("DEC") and Duke Energy Progress, LLC ("DEP") (collectively, "Duke Energy" or the "Companies"), by and through counsel, and pursuant to the North Carolina Utilities Commission's ("Commission") March 11, 2022 *Order Opening Separate Dockets and Establishing Procedural Deadlines* and subsequent order granting extension of time, and hereby respectfully submit these reply comments in response to initial comments filed on March 28, 2022, by the Public Staff – North Carolina Utilities Commission ("Public Staff"), North Carolina Attorney General's Office ("AGO"), Carolina Utility Customers Association, Inc. ("CUCA"), Carolina Industrial Group for Fair Utility Rates II and III ("CIGFUR"), North Carolina Electric Membership Corporation ("NCEMC"), North Carolina Sustainable Energy Association ("NCSEA"), Walmart, Inc. ("Walmart"), Clean Power Suppliers Association, together with Carolinas Clean Energy Business Association ("CPSA/CCEBA"), and Southern Alliance for Clean Energy, together with Sierra Club and the Natural Resources Defense Council (collectively, "SACE, et al.") regarding the Companies' March 14, 2022 *Petition for Authorization of 2022 Solar Procurement Program* ("Petition").

The comments filed by the Public Staff, the AGO, numerous groups representing solar industry market participants and environmental interest, as well as customer groups all generally support the Companies' plans to expeditiously proceed with a 2022 Solar Procurement Program ("2022 SP Program") and to issue a system-wide solar procurement request for proposal ("2022 SP RFP") on the schedule proposed by the Companies in order to align the RFP with the upcoming 2022 Definitive Interconnection System Impact Study ("DISIS") cluster study. Numerous parties also provide constructive feedback on the Duke Energy-led stakeholder engagement process that preceded the Companies' Petition as well as support the Companies' request for the Commission to authorize Duke Energy to proceed with finalizing and issuing the 2022 SP Program in advance of determining a final "Carbon Plan-informed" volume of new solar resources to be procured. As further detailed in these Reply Comments, the Companies appreciate the broad interest and constructive comments on the 2022 SP Program and believe that many of the recommendations offered by various parties can be addressed in the upcoming 2022 SP RFP pre-solicitation engagement process or in the Carbon Plan proceeding itself and should not delay expedited Commission authorization of the 2022 SP Program.

Accordingly, the Companies reiterate their request for expedited Commission authorization of the 2022 SP Program targeting at least 700 MW of new solar resources across the Carolinas as well as their specific request for the Commission to establish the final 2022 SP Program target volume based on its review of the Companies' Carolinas Carbon Plan on or before November 1, 2022.

The Companies further respond to these parties' comments on the Petition as follows:

REPLY COMMENTS

I. All parties support or do not oppose Commission authorization of a 2022 solar procurement program.

The Companies' Petition requests expedited Commission authorization to commence a system-wide 2022 SP RFP targeting a minimum target volume of 700 megawatts ("MW") of utility-owned and third-party solar energy resources connected to DEC's and DEP's systems in North Carolina and South Carolina to serve customers' future energy needs as part of the 2022 Carolinas Carbon Plan. Authorization of the 2022 SP Program in advance of approval of the full Carbon Plan is specifically contemplated by Section 2.(c) of North Carolina Session Law 2021-165 ("HB 951"), is "needed" to achieve the resource planning and emission reduction goals established by HB 951 and is supported by the Companies as part of Duke Energy's system-wide integrated Carolinas energy transition.

The broad and significant interest in the Companies' plans for the 2022 SP Program is reflected in the numerous parties that have filed comments in this proceeding. All parties either expressly support or do not oppose the Companies' request in the Petition for Commission authorization to expeditiously commence the 2022 SP Program. For example, the Public Staff "supports procurement of solar resources in 2022 within the framework of [DISIS] and the use of an [Independent Evaluator ("IE")]."[1] The AGO "supports initiating a robust system-wide solar procurement as soon as possible."[2] CPSA/CCEBA "agree with most aspects of [the Companies'] proposed [2022 SP Program]…and agree…that a procurement of solar resources in 2022 will be needed…"[3] NCSEA also "supports an

[1] Public Staff Initial Comments at 3.
[2] AGO Initial Comments at 1.
[3] CPSA/CCEBA Initial Comments at 2-3.

expedited rollout of a 2022 solar procurement"[4] and SACE, et al. "support[s] [the Companies'] expedited request for consideration."[5] NCEMC "does not take issue with [the Companies'] request"[6] and Walmart[7], CIGFUR[8] and CUCA[9] either generally support or, at minimum, do not oppose the request.

As evidenced by these initial comments, consensus exists amongst the parties that the 2022 SP Program should be authorized. Although certain limited differences exist amongst the parties as to the mechanics and logistics of the 2022 SP Program, as explained further below, many of these issues can be resolved following Commission authorization to commence the 2022 SP Program – whether that be through the 2022 SP RFP pre-solicitation process in consultation with the IE, through the upcoming Carolinas Carbon Plan proceeding, or through longer-term consideration in developing future procurements. Accordingly, based upon the uncontroverted support for the Companies commencing a 2022 SP Program that aligns with DISIS, DEC and DEP reiterate their request for expedited Commission authorization of the 2022 SP Program targeting at least 700 MW of new solar resources across the Carolinas as well as their specific request for the Commission to establish the final 2022 SP Program target volume based on its review of the Companies' Carolinas Carbon Plan on or before November 1, 2022.

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[4] NCSEA Initial Comments at 1.
[5] SACE, et al. Initial Comments at 2.
[6] NCEMC Initial Comments at 5.
[7] *See generally,* Walmart Initial Comments.
[8] *See generally,* CIGFUR Initial Comments.
[9] *See generally,* CUCA Initial Comments.

II. The stakeholder process successfully resulted in general consensus amongst the parties regarding the overall framework of the 2022 SP Program.

The Companies' Petition and multiple initial commenters explain how DEC and DEP engaged a broad range of North Carolina and South Carolina stakeholders to inform the development of the 2022 SP Program. As stated by the Public Staff, "the discussions among the stakeholders were constructive and insightful, leading to broad stakeholder consensus on some features of the 2022 [SP] RFP."[10] SACE et al. "believe[s] that the stakeholder process improved the Petition…."[11] and CPSA/CCEBA note their agreement "with the general consensus among stakeholders that a procurement of solar resources in 2022 will be needed…"[12] CIGFUR additionally noted their "appreciation" of the stakeholder process and the opportunity afforded to provide feedback to the Companies on the 2022 SP Program.[13]

As first noted in the Companies' Petition and now confirmed by initial commenters, the stakeholder process has resulted in consensus amongst the parties regarding the general framework of the 2022 SP Program, including aligning the 2022 SP RFP schedule with the upcoming 2022 DISIS process as well as the Companies' plans to engage Charles River Associates ("CRA") as the IE to oversee the RFP process.

<u>Expediting 2022 SP RFP to Align with DISIS</u>: Much of the discussion during the stakeholder process focused on the need to execute the 2022 SP Program on an expedited schedule that aligns with DISIS Cluster 1. Based on this discussion and feedback from stakeholders supporting this approach, the Companies' Petition requested expedited

[10] Public Staff Initial Comments at 4.
[11] SACE et al. Initial Comments at 4.
[12] CPSA/CCEBA Initial Comments at 2.
[13] CIGFUR Initial Comments at 3.

approval of the 2022 SP Program to ensure that alignment with the DISIS Cluster 1 timeline can be achieved. The Public Staff,[14] NCSEA,[15] CPSA/CCEBA,[16] and SACE et al.[17] each explicitly support the Companies' request for expedited approval and procurement of solar resources in 2022 within the framework of DISIS Cluster 1, and no other party opposes such alignment. Accordingly, the Companies plan to continue to move forward under the timeline and RFP framework identified in Figure 2: 2022 SP RFP Milestone Schedule[18] of the Petition pending Commission authorization of the 2022 SP Program.

Use of Independent Evaluator to Oversee 2022 SP Program: Throughout the stakeholder process, the Companies also discussed engagement of an IE to oversee and report on the 2022 SP RFP process. The Petition explains how stakeholders supported the Companies engaging an IE for the 2022 SP RFP, and how, based on this support, the Companies have engaged CRA to serve as the IE. The Petition also included an IE scope of work detailing the roles and responsibilities CRA will take on to manage the procurement and independently evaluate both Utility Ownership Track and PPA Track proposals (as defined in the Petition) that bid into the 2022 SP RFP. The Petition additionally detailed how the IE will provide written feedback to the Duke Energy evaluation team on the draft RFP and also develop a "Final RFP Assessment Report" at the conclusion of the RFP pre-solicitation process, as well as a "Post Solicitation Report" at the conclusion of the 2022 SP RFP providing an independent assessment and certification that the 2022 SP RFP solicitation and selection process was conducted in an

[14] Public Staff Initial Comments at 3.
[15] NCSEA Initial Comments at 2.
[16] CPSA/CCEBA Initial Comments at 2-3.
[17] SACE et al. Initial Comments at 2.
[18] Petition at 12. The Companies note that the specific dates in the timeline are subject to modification through engagement with the IE and discussion during the upcoming RFP pre-solicitation process.

open, transparent, and nondiscriminatory manner. Both IE reports will be filed with the Commission to ensure transparency and independent evaluation of the 2022 SP Program.

The Public Staff states that they "have no objection to the IE selection process or the IE's scope of work for the 2022 [SP] RFP…."[19] CPSA/CCEBA "do not oppose the use of an [IE]…for the 2022 SP Program and have no specific objection to [the Companies'] selection of [CRA]" specifically.[20] Walmart similarly "supports use of an [IE] to oversee the [2022 SP] RFP process."[21] No other party comments on use of an IE generally or otherwise objects to an IE or CRA specifically overseeing the 2022 SP RFP.

CPSA/CCEBA do, however, recommend an informational stakeholder meeting be held to discuss the role of the IE and how the IE's independent evaluation of proposals will ensure confidence in evaluation process.[22] The Companies agree with CPSA/CCEBA's recommendation and plan to hold both an initial RFP informational meeting in mid-April as well as a follow-up meeting in May with market participants to receive and discuss feedback on the 2022 SP RFP in advance of the RFP issuance on or about May 31. This planned schedule is addressed in Figure 2: 2022 SP RFP Milestone Schedule of the Companies' Petition for the 2022 SP Program and the Companies are now working with CRA to finalize workable dates for the meetings.

Accordingly, the Companies believe the stakeholder process successfully resulted in consensus amongst the parties regarding the overall framework of the 2022 SP Program and the Companies plan to work with CRA to expeditiously move forward under this framework to issue the 2022 SP RFP to align with DISIS.

[19] Public Staff Initial Comments at 6.
[20] CPSA/CCEBA Initial Comments at 11.
[21] Walmart Initial Comments at 3.
[22] CPSA/CCEBA Initial Comments at 11-12.

III. The Companies' proposal to establish a 700 MW minimum procurement target and later determine a "Carbon Plan-informed" 2022 SP Program need-based target is responsive to stakeholder feedback, reasonable, and consistent with HB 951's directives.

a. No party opposes a "Carbon Plan-informed" target volume.

Section 2.(c) of HB 951 authorizes the Commission to direct the Companies to procure solar energy facilities in 2022 "if, after stakeholder participation and review of preliminary analysis developed in preparation of the initial Carbon Plan, the Commission finds that such solar energy facilities will be needed in accordance with the criteria and requirements set forth in Section 1 of [HB 951] to achieve the authorized carbon reduction goals."

As addressed in the Petition, and in accordance with HB 951's directives, the Companies performed a preliminary analysis to determine whether a 2022 solar procurement was in fact "needed." As explained during the stakeholder engagement process and described in the Petition, the Companies' preliminary analysis was based upon DEC's and DEP's most recent 2020 integrated resource plans ("IRPs") and indicates that at least 4,500 MW of new solar energy resources are needed to meet HB 951's resource planning goals by 2030. The Petition goes on to explain that although the Companies are proposing a 700 MW minimum target volume, the final procurement volume will be a "Carbon Plan-informed" volume whereby the actual targeted procurement amount is based upon the solar cost inputs, inclusive of transmission cost estimates, and the resource planning results of the Carolinas Carbon Plan. Due to the Companies' proposal to use a Carbon Plan-informed volume, the Petition requests that the Commission determine the final RFP target volume by November 1, 2022 (in advance of selecting the initial shortlist for detailed evaluation in DISIS Phase 2), following evaluation of the Carolinas Carbon Plan.

The proposed 2022 SP Program framework achieves HB 951's requirements for stakeholder engagement, preliminary analysis of future solar resource needs, and, ultimately, is designed to rely upon the yet-to-be completed modeling and analysis presented in the initial Carolinas Carbon Plan to most accurately determine the necessary final procurement target volume. Importantly, no party opposes the Companies' "Carbon Plan-informed" RFP target framework or argues that the Companies' "Carbon Plan-informed" proposal in and of itself is inconsistent with HB 951's directives. The Public Staff specifically supports the Companies' proposal for the Commission to determine the final 2022 SP RFP capacity based upon the amount of solar resources modeled in a Commission-approved Carbon Plan,[23] and no parties oppose establishing a target volume after the Carolinas Carbon Plan is filed and reviewed by interested parties.

CPSA/CCEBA, SACE et al. and certain other intervenors do, however, advocate that the 2022 SP Program should seek a significantly larger target volume than the proposed 700 MW minimum target volume requested to be approved at this time. Duke Energy disagrees. As described in the Petition, the Companies are not proposing that the final RFP target volume be determined based upon the preliminary analysis developed in advance of the actual Carolinas Carbon Plan. Instead, the actual procurement target will be based upon the Commission's review of the Companies' full and complete Carolinas Carbon Plan analysis that more fully and accurately evaluates the Companies' 2022 solar procurement needs. By utilizing the Carolinas Carbon Plan to inform the final 2022 SP

[23] Public Staff Initial Comments at 4.

Program target volume, parties will have the opportunity to review and comment on the Companies' analysis informing the target volume. Notably, this approach will meet SACE et. al's recommendation that the Commission require the Companies to "produce its solar forecast for review and comment prior to finalizing the 2022 procurement volume,"[24] and also address NCSEA's and CUCA's concerns that additional evidence be provided supporting the 2022 SP Program target volume. Moreover, this approach allows the Commission to expeditiously authorize the Companies to begin implementing the 2022 SP Program, thereby ensuring that the solar procurement can align with upcoming DISIS Cluster study deadlines. A robust 2022 SP Program aligned with DISIS best ensures that the Companies do not miss this important opportunity to connect needed new solar resources, while, at the same time, allowing parties additional time to evaluate and comment on the volume of solar resources to be procured in 2022 as part of the least cost resource planning pathway that the Commission determines best achieves HB 951's resource planning and carbon reduction goals. Therefore, issues concerning the exact target need for the 2022 SP Program can be addressed at a later date through the Carbon Plan process and need not be determined prior to authorization of the 2022 SP Program generally.

b. The 700 MW minimum target volume sets a reasonable floor for the 2022 SP Program and should be approved.

As evidenced by the Companies' 2022 Solar Procurement Stakeholder Engagement Meeting Updates,[25] there was much discussion during the stakeholder process regarding the need to establish a minimum target volume for a potential 2022 solar procurement to

[24] SACE et al. Initial Comments at 9.
[25] *See, e.g.,* 2022 Solar Procurement Stakeholder Engagement Meeting 3 Update and Plans for 2022 Solar Procurement Plan Filing, Docket No. E-100, Sub 179 (filed Mar. 8, 2022).

maximize its chances for success. Discussion focused on the fact that (1) the Carolinas Carbon Plan would not be reviewed until Quarter Four of 2022 while the deadline for entering the DISIS Cluster is in late June, (2) the Companies need to send market signals to solar industry market participants that DEC and DEP were seeking to procure significant amounts of solar resources through the RFP, in order to ensure robust market participation, and (3) the Companies need to ensure they procure the "least cost" amount of solar resources through the RFP in accordance with HB 951. As a result of these discussions, and specifically in response to stakeholder feedback, the Companies determined and stakeholders generally supported establishing a minimum target volume, as the most practical and efficient solution to ensure a robust 2022 SP RFP to procure least cost solar resources.

Importantly, the Public Staff agrees with the Companies' 700 MW minimum target volume, stating that the "minimum capacity target of 700 MW proposed by [the Companies] is appropriate even in the absence of an approved Carbon Plan."[26] As explained by the Public Staff, this 700 MW minimum target is based on analysis of the Companies' 2020 IRPs and projections of future interconnection capabilities, and is "a reasonable initial target for the 2022 [SP] RFP."[27]

Other parties including the AGO, NCSEA, SACE et al., and CUCA first suggest that additional analysis is needed to support the 700 MW minimum target volume to provide the Commission with "preliminary analysis developed in preparation of the Carbon Plan" as contemplated by HB 951. Again, the Companies disagree. HB 951 specifically directs the Companies to base the volume on a "preliminary" analysis. The 2020 IRPs are

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[26] Public Staff Initial Comments at 4.
[27] *Id.*

the most current integrated resource planning analysis available, and the Companies believe the review of the those plans satisfies the "preliminary analysis" requirement in the statute as the 2020 IRPs can be thought of as a starting point for the Carbon Plan analysis, particularly considering that several of the portfolios presented resource plans that achieved 70% carbon reduction by 2030. The Companies developed the 700 MW minimum target volume—with stakeholder input—based upon the 2020 IRPs and in advance of the Carbon Plan analysis being available. There is no requirement in the law requiring the Companies perform an in-depth analysis regarding a *minimum* target volume for the 2022 SP Program when the Companies will be fully analyzing the solar resource needs identified through the Carolinas Carbon Plan to establish the final 2022 SP Program target.

The Companies also disagree with the parties' second concern that "enough" solar resources will not be procured because the 2022 SP is designed based on a 700 MW minimum target volume. As discussed during the stakeholder engagement process and explained in the Petition, the actual final target volume will ultimately be determined by the Commission based on the Carolinas Carbon Plan. These parties fail to recognize that the intent of the minimum target volume is to set a "volume floor" and to provide proper market signals to participants to ensure a robust RFP. As SACE et al. seems to recognize, a "700 MW [initial target] may be approximately the minimum volume for a solicitation to encourage robust participation."[28] The Companies believe that a 700 MW minimum target is sufficient to promote robust participation and competitive bidding in the 2022 SP Program.

[28] SACE et al. Initial Comments at 6.

Regarding the specific 700 MW amount, as the Public Staff recognizes, in all scenarios, the Companies' 2020 IRPs projected a minimum of 2,400 MW of new solar being needed between 2026 and 2030, and the carbon-constrained scenarios identified 4,500 MW of incremental solar as needed by the 2030s. As recognized by SACE et al.'s comments, SACE et al., NCSEA, and CCEBA comments during the stakeholder process specifically advocated for a minimum target volume.[29] The 700 MW minimum target volume is directly responsive to stakeholders' and market participants' interests and aligns with the above three goals discussed with stakeholders during the stakeholder engagement process.

Additionally, the specific 700 MW minimum target is reasonable when viewed based upon Duke Energy's historical solar procurement and interconnection experience in the Carolinas. First, this volume is reasonable when compared to the Competitive Procurement of Renewable Energy ("CPRE") Program Tranche 1-3 procurement targets. 700 MW is larger than any procurement volume sought in any CPRE tranche. Second, it aligns with the largest volume of solar resources the Companies have interconnected within a year's time, that being 746 MW in the year 2017.

The Companies also disagree with arguments by parties such as NCSEA,[30] SACE et al.,[31] and the AGO[32] that a more robust minimum target volume is needed to ensure robust participation. Even with the smaller CPRE Program targets, in Tranches 1 and 2 the Companies received approximately three to four times the procurement target in DEC[33]

[29] SACE et al. Initial Comments at Attachment 1, pgs. 2-3.
[30] NCSEA Initial Comments at 4.
[31] SACE et al. Initial Comments at 5-6.
[32] AGO Initial Comments at 3-4.
[33] Tranches 1 and 2 targets were each 600 MW in DEC, and 2,733 MW were bid in Tranche 1 and 1,710 MW were bid in Tranche 2.

and five to fifteen times the procurement target in DEP,[34] evidencing that even a smaller target can result in robust market participation. A higher minimum target value is therefore not necessary to achieve a robust RFP and promote competitive bidding to procure least cost resources.

The Companies, the Public Staff, and other stakeholders have also designed the 2022 SP final procurement volume to potentially ratchet up by 20% more than the Commission approved target if the weighted average cost of the procurement is less than or equal to 90% of the Carbon Plan Solar Reference Cost used in developing the Carolinas Carbon Plan.[35] The combination of the minimum target volume and the potential to increase the procurement target to capture additional lower-cost bids relative to the assumed Carbon Plan Solar Reference Cost should also promote more competitive bids and help the Companies achieve the least cost pathway to the initial 2030 target, as supported by the AGO, SACE, and other parties.[36] In other words, the potential to increase the procurement target both signals to the market and incents a robust RFP as well as achieves the Companies' least cost planning goals.

Finally, the Companies appreciate the AGO's interest in "take[ing] aggressive steps to ensure that HB 951's goals are achieved" and also appreciates the AGO's recognition that the 700 MW minimum target has been designed to provide market assurance of a robust 2022 SP while minimizing risk for customers.[37] Based upon the Companies' 2022 IRPs, engagement with stakeholders, and the objectives and design of the 2022 SP

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[34] Tranches 1 and 2 targets were each 80 MW in DEP and 1,231 MW were bid in Tranche 1 and 441 MW were bid in Tranche 2
[35] Petition at 15.
[36] AGO Initial Comments at 3-5; SACE et al. Initial Comments at 6.
[37] AGO Initial Comments at 6.

Program, the Companies continue to believe that the 700 MW minimum target volume is reasonable and strikes the right balance between opportunity and risk for this initial 2022 SP Program and should be approved by the Commission. The risk of setting a very high minimum quantity for a 2022 procurement is that solar prices are forecasted to come down over time, and customers would be committed to paying for more solar at higher 2022 prices, hence leading to customers paying more for solar due to a high 2022 minimum requirement.

In sum, the Companies continue to support Commission authorization of the 700 MW minimum target volume as reasonable and appropriate for purposes of achieving a robust market response to the 2022 SP Program and in advance of a final Commission-determined procurement volume to be informed by the Carolinas Carbon Plan.

IV. Other recommendations are more appropriately considered in the 2022 SP Pre-Solicitation Process and do not need to be addressed at this time to authorize the 2022 SP Program.

As explained in the Petition and highlighted by the Public Staff and certain other parties, the mechanics and provisions of the 2022 SP RFP were a topic of significant discussion during the stakeholder engagement process. Assuming the Commission authorizes the 2022 SP Program, as requested in the Petition and herein, a number of comments and proposals presented by the Public Staff and intervenors can be reserved for discussion amongst the Companies, the IE, the Public Staff, and market participants during the upcoming 2022 SP pre-solicitation process. The Companies identify these topics and provide preliminary responses for further discussion in the 2022 SP pre-solicitation process as follows.

a. The Public Staff's additional customer protection mechanism can be determined and incorporated into the 2022 SP RFP during the Pre-Solicitation Process.

A key component of 2022 SP Program framework discussed with stakeholders was designing an RFP that achieves a reasonable balance between the near-term opportunity to procure low cost solar resources that are needed under the Carbon Plan against the risks of unknown interconnection project costs resulting in a portfolio of solar resources at costs either below (creating more opportunity) or above (creating more risk) the Companies' assumed Carbon Plan Solar Reference Cost. As noted by the Public Staff, the Companies and the Public Staff achieved alignment on a "Volume Adjustment Mechanism"[38] and limited termination right customer protection mechanisms that are designed to balance these opportunities and risks and enable the Companies to competitively procure low cost solar resources over time to meet HB 951's resource planning and carbon reduction goals.[39]

In initial comments, the Public Staff proposed an additional customer protection mechanism that if the projected solar transmission costs for 2022 SP projects to be selected in DISIS Phase 1 are greater than 150 percent of the transmission cost adders used for solar resources in the Carolinas Carbon Plan, the Companies would re-model the Carolinas Carbon Plan base case using the actual DISIS Phase 1 transmission cost adder, which will produce a revised capacity expansion plan.[40] If the projected solar transmission costs from DISIS Phase 1 are less than 150% of the transmission cost adder used for solar capacity in the Carbon Plan, the final procurement volume should be determined based upon the Volume Adjustment Mechanism.

[38] The Companies' Petition does not use this term. However, the Companies adopt it here as it reasonably describes the customer protection mechanism addressed at page 16 of the Petition.
[39] Public Staff Initial Comments at 5, 8.
[40] Public Staff Initial Comments at 10.

The Companies have further discussed the proposal with the Public Staff and understand its goal in proposing this re-modeling approach. The Companies are aligned with the Public Staff that projected transmission costs to interconnect solar resources present a material cost risk that should be discussed and managed in designing the 2022 SP RFP. However, the Companies are concerned that remodeling the transmission cost included in the Carbon Plan Solar Reference Cost to establish an adjusted target procurement volume could cause delays and incongruence with the 2022 DISIS Cluster.[41] Therefore, the Companies plan to further discuss this issue with the Public Staff and will consider incorporating this additional customer protection mechanism in the 2022 SP RFP with input and evaluation from the Public Staff, the IE, and market participants through the pre-solicitation process.

b. The Companies, the IE, the Public Staff, and market participants can address the Public Staff's recommendation to identify "green zones" in the RFP during the Pre-Solicitation Process.

To assist with the siting of least-cost solar resources, the Public Staff recommends that the Companies identify "green zones" and develop a map and list of substations and transmission lines 100kV and above that have significant amounts of interconnection capacity or "headroom" for market participants.[42] The Companies agree such "green zone" identification is a good idea in theory, but it is very difficult to determine what constitutes a green zone in terms of how much interconnection capacity is available and the term over which such capacity is available. For example, is the minimum Green Zone capacity

[41] The Public Staff also proposed that the Companies should utilize the actual transmission system upgrade costs determined in the recent Transitional Cluster Phase 1 reports as the transmission cost adder to establish the Carbon Plan Solar Reference Cost. The Companies are not planning to use this level of cost adder for modelling the Carbon Plan. This issue can be further addressed in the Carbon Plan proceeding.
[42] Public Staff Initial Comments at 11-12.

50 MW, 100 MW or 150 MW? How long will that amount be available? The power flow dynamics of the grid can change dramatically over time and it would be challenging to accurately portray these dynamics in simple communication materials. Additionally, the Companies do not believe that such "green zone" maps will be particularly effective for a cluster study process. For example, by deliberately highlighting an area with ample interconnection capacity, multiple bidders may propose to site their projects in that single area. These developers may utilize all available capacity in that area, potentially to the point where Network Upgrades are then required, undermining the point of providing the "green zones" to market participants in the first place. Further, the dynamic nature of the grid makes it difficult to confidently state which areas are in fact "green zones" for market participants, because other projects in a cluster study (even if geographically diverse) may easily turn what was once considered a "green zone" into a transmission-constrained region. Lastly, flagging specific geographies of preference could cause land prices to escalate in that region, thereby leading to higher solar costs for developers that are ultimately passed on to customers. Notably, the Companies agree with CUCA's comments that procurements should incent bidders to develop least-cost projects that avoid transmission upgrades where feasible and commit to discuss this topic in the 2022 SP RFP pre-solicitation process.[43] As detailed in the Petition, the Companies will continue to provide "red zone" maps to market participants and a list of substations identifying areas of known constraint on the DEC and DEP transmission systems.[44] The pre-solicitation process will also provide a forum for the Public Staff, the IE, or market participants to

[43] CUCA Initial Comments at 4.
[44] Petition at 24.

make recommendations regarding the format and useability of red zone constraint maps to make this information as useful as possible.

c. HB 951 supports a single portfolio of both utility-owned and third-party resources for purposes of the adjusted procurement volume.

In the Petition, CPSA/CCEBA support the Companies' Volume Adjustment Mechanism proposal to adjust the target procurement volume of based on the aggregate price of shortlisted bids as compared to the Carbon Plan Solar Reference Cost assumed in Carbon Plan modeling).[45] However, CPSA/CCEBA argue that there is no basis for combining the PPA Track and Utility Track RFP results into a single portfolio weighted average cost for any RFP volumetric adjustment and suggest that doing so is likely to distort the volume adjustment mechanism.[46]

The basis for the Companies' proposed portfolio approach is specifically spelled out in Section 1.(2)b of HB 951, which requires a 55%/45% utility ownership/power purchase agreement target weighting for all solar resources determined to be needed by the Commission through the Carolinas Carbon Plan. The Companies therefore believe the proposed weighted portfolio pricing approach aligns directly with and is based upon this HB 951 requirement. Moreover, it is unclear that deviating from the 55%/45% portfolio because market prices are lower than the modeled price on one of the two tracks (either utility-owned resources or third-party owned resources) would be beneficial for customers over the horizon of the Carbon Plan as that depends upon future pricing and availability of projects, which is quite uncertain. In fact, deviating now may require the Companies to

[45] CPSA/CCEBA Initial Comments at 7.
[46] *Id*.

pay higher prices in future procurements for the underweighted portion of the portfolio simply to get back to the required portfolio prescribed by HB 951.

d. CPSA/CCEBA's additional recommendations on the structure of the 2022 SP RFP can be addressed in the Pre-Solicitation Process.

CPSA/CCEBA make a limited number of recommendations to modify the planned structure of the 2022 SP RFP regarding the timing of PPA awards, eliminating asset-transfer proposals as a bid option, and around the framework for uncompensated curtailment of controllable PPA bids. The Companies appreciate this continued stakeholder feedback and are agreeable to discussing these topics with CPSA/CCEBA, the IE, the Public Staff, and market participants in the upcoming RFP pre-solicitation process. However, the Companies generally do not support these changes to the 2022 SP RFP framework and offer the following preliminary comments on CPSA/CCEBA's proposals.

Regarding the timing of PPA awards, CPSA/CCEBA recommend that a cost-competitive bid that is determined in DISIS Phase 1 to be free of interdependencies should be awarded a PPA before the DISIS Phase 2 study is performed. The Companies understand the reason why project sponsors would like to execute the contract earlier in the procurement schedule and in advance of proceeding to DISIS Phase 2. However, without fully completing Phases 1 and 2 for all proposals initially offered and evaluated in Step 1 and then short-listed in Step 2 of the RFP, it is not certain that a project with low upgrades and no interdependency will remain in the competitive tier as some other projects may have their standing improved. This could happen if non-RFP projects causing or contributing to shared upgrades withdraw and the shared upgrades are no longer required, thereby improving the competitive position of the remaining projects. Accordingly, the value proposition of this proposal for the RFP and for the customer would need to be further defined in order to justify the additional complexity to introducing this proposal in the 2022 SP RFP.

As to offering the asset-transfer bid option, CPSA/CCEBA notes that such option was unsuccessful in the prior CPRE Program and contends that this option may be inefficient and/or infeasible for purposes of the 2022 SP RFP. The Companies are inclined to retain this option to enable project developers who specialize in early-stage project development but whose business model does not include construction of the project to participate in the Utility Ownership track portion of the RFP. This would allow broader participation than solely relying on EPC or Build Own Transfer bids and would enable these developers to participate in the 2022 Procurement as the PPA bid track will not be available to them. However, the Companies are willing to delete this bid option if during the RFP pre-solicitation stakeholder engagement process there is overwhelming support from project developers to delete.

Last, CPSA/CCEBA propose that in order to collect market information relevant to determining the economic significance of uncompensated curtailment, the 2022 SP RFP could allow for two bid price options for Controllable Track PPAs: one with the CPRE curtailment schedule of 5% (DEC) and 10% (DEP) curtailment without compensation and one with no compensated curtailment. The Companies generally agree that developers must factor the foregone revenue from uncompensated curtailment into their bids so requiring those compensated curtailment bids seems unnecessary for purposes of collecting market information. Moreover, ensuring the Companies have rights to control third-party owned resources in the same manner as utility-owned generating facilities is required by HB 951, so eliminating contracted-for curtailment rights would not be appropriate.

Notwithstanding these considerations, the Companies have agreed in the Petition for the current protocol of requiring uncompensated curtailment needs to be vetted in advance of future procurements.

CPSA/CCEBA also oppose the Companies' alternative proposal in the Petition to potentially require Controllable PPA Track short list proposals to provide a separate bid for the project under the assumption that the bidder will be required to directly fund the now-known System Upgrade costs. As discussed in the Petition, the Companies continue to believe that this approach could be utilized to ensure that customers pay the lowest overall cost for the combined portfolio of Controllable PPA resource contracts, inclusive of System Upgrades. However, and as noted in the Petition, before deciding whether to require the alternative "second bid including System Upgrades" approach, the Companies will engage with the IE, the Public Staff, CPSA/CCEBA, and other interested stakeholders during the pre-solicitation process to determine if the additional work and time required to evaluate the second bids is manageable, does not overly complicate the procurement process, and is in the best interest of customers.

V. Recommendations regarding procurement volumes are more appropriately addressed in the Carolinas Carbon Plan proceeding.

As first explained in the Petition and reiterated above, the Companies are proposing to determine the final 2022 SP Program procurement amount based on the forthcoming Carolinas Carbon Plan. Several comments and recommendations regarding the procurement volume relate to this final Carbon Plan-informed target, and do not relate to the 700 MW minimum target volume. For example, CPSA/CCEBA,[47] SACE et al.,[48]

[47] CPSA/CCEBA Initial Comments at 4-8.
[48] SACE et al. Initial Comments at 6.

NCSEA,[49] and the AGO[50] all argue that a higher minimum target volume should be established for the 2022 SP RFP. SACE et al. specifically recommends a 1,150 MW minimum target value, or one fourth of the current estimated volume needed by 2030.[51] As stated previously, the purpose of the minimum target volume is to ensure a robust and competitive procurement. The Companies believe a minimum which is the largest solar procurement undertaken to date in the Carolinas reasonably achieves that goal.

Beyond considering the appropriateness of the 700 MW minimum target volume as addressed herein, the Companies believe arguments regarding the final target volume to be procured in the 2022 SP Program are most appropriately addressed in the Carolinas Carbon Plan proceeding. The Companies see no advantage in determining the final target quantity at this time given the robust 700 MW minimum threshold provided (as supported above), and instead believe this decision to be best informed by the Carolinas Carbon Plan and established in the coming months. The Companies recognize that this will be an important topic as the Commission reviews the Carolinas Carbon Plan, and parties will have ample opportunity through the Commission-established comment process to provide feedback on the final target volume and the Carolinas Carbon Plan generally in Docket No. E-100 Sub 179.

In sum, the Commission should accept the 700 MW minimum target volume for the upcoming RFP and allow the arguments for a higher approved target to be considered later in the Carbon Plan process with a Commission decision on this issue requested by November 1, 2022.

[49] NCSEA Initial Comments at 4.
[50] AGO Initial Comments at 3.
[51] SACE et al. Initial Comments at 6.

VI. Walmart's comments regarding PPA structure and pricing escalators may be addressed in future procurements.

Walmart's comments recommend flexibility in contract length for the 2022 SP PPA, as opposed to a specified, single 25-year term. In doing so, Walmart highlights the risk that PPAs of the same duration that commence service over generally the same timeframe will expire at the same time, suggesting that it "may prove difficult and/or incredibly costly for the Companies to renegotiate such a large volume of contracts simultaneously."[52] Based on this risk, Walmart suggests that various PPA terms be offered to 2022 SP Program bid winners.

Notably, the Companies and stakeholders extensively discussed PPA term throughout the stakeholder engagement process. A 25-year PPA term was specifically agreed upon by stakeholders for the purposes of an initial procurement to lock in assets through 2050. In Stakeholder Meeting 1, the Companies requested feedback from market participants on whether bidders should be required to submit 15, 20, and 25-year contract bids (1 bid for each term) or if only one contract length is offered, which of those three should be selected. The feedback received from stakeholders and presented in Stakeholder Meeting 2 was that allowing "multiple contract terms may be unnecessarily complicated for the first RFP" and the Companies confirmed their intent to use single 25-year controllable PPA term in Stakeholder Meeting 3 to ensure the Companies have control over the solar procured through 2050. The Companies continue to agree with this consensus around a 25-year PPA term for the 2022 SP Program. However, the Companies are open to discussing more flexible PPA term options for future procurements.

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[52] Walmart Initial Comments at 2.

Walmart also opposes any requirement in the RFP process that bidders be required to include a mandatory price escalator in their bids and cites to a recent Virginia RFP to argue that such price escalators are unnecessary and inflate bid prices.[53] The Companies can confirm at this time that no mandatory price escalators will be utilized for the 2022 SP Program for controllable PPAs.

VII. The Companies are open to establishing future customer programs for C&I customers sourced from the 2022 SP Program.

CIGFUR, with support from CUCA, advocates that C&I customers have significant interest in new customer-directed voluntary solar procurement programs under HB 951.[54] CIGFUR and CUCA therefore recommend a new solar procurement program similar to the Companies' Green Source Advantage ("GSA") program be established as a "temporary solution" with certain limited modifications to reflect HB 951's ownership allocation (55% utility ownership / 45% controllable PPAs) and to allow the customer to determine whether the new solar facility that the customer will contract with to deliver renewable energy will be utility-owned or IPP-owned.[55] Specific to this proceeding, CIGFUR and CUCA request that some volume of capacity be procured in the 2022 SP Program and "set-aside" for such new C&I program.[56]

The Companies appreciate the comments submitted by CIGFUR and CUCA regarding customer-directed renewable energy procurement programs and share these parties' goal of providing customers with renewable energy program options designed to meet such goals as expressly supported and provided for in HB 951. The Companies have

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[53] Walmart Initial Comments at 2.
[54] CIFGUR Initial Comments at 3-6.
[55] CIGFUR Initial Comments at 4-5; CUCA Initial Comments at 2.
[56] CIGFUR Initial Comments at 3-5; CUCA Initial Comments at 2.

also received feedback from customers and others on similar customer program options. The Companies plan to begin a formal engagement process in the near future to solicit input from customers and other interested stakeholders on what types of voluntary renewable energy programs would be attractive. Stakeholder feedback will inform the programs that the Companies ultimately plan to propose.

In its comments, CIGFUR requests that the Commission direct the Companies to "set aside a portion of the 2022 for a new C&I customer renewable program"[57] in the 2022 SP Program. However, CIGUFR does not spell out exactly how this set aside will be determined. The Companies believe a formal "set aside" is unnecessary and could cause confusion as the renewable attributes of both the utility-owned and third-party solar resources remain available to support voluntary customer renewable programs without any set aside. Therefore, the Companies believe that the renewable attributes sourced through the 2022 SP RFP can be made available to customers through a future Commission-approved customer program without any stipulated set aside.

VIII. Cost allocation issues raised by the Public Staff and CIGFUR should be addressed in the Carbon Plan proceeding or future rate cases.

The Public Staff raises concerns that "if Duke files a plan that allows solar capacity to be selected in DEP's territory in order to satisfy DEC's portion of the Carbon Plan goals, it may result in ratepayers in one Balancing Authority/utility receiving disproportionate increases in base rates caused by the new solar resources and transmission upgrades to support the build-out of sufficient carbon-free capacity to serve both utilities and also satisfy individual utility reserve margin requirements."[58] The Companies agree that this is

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[57] CIGFUR Initial Comments at 5.
[58] Public Staff Initial Comments at 7.

an important topic that is broader than just solar procurement and can be further considered in the Carbon Plan proceeding. However, for purposes of 2022 SP Program, the Companies are not proposing that projects interconnected in DEP should be assigned to DEC or vice versa.[59] As stated in the Companies' Petition, "DEC and DEP will separately contract with winning bids and seek recovery of utility-owned resources located within each utility's assigned Balancing Authority Area. Each utility will be independently responsible for the full cost of renewable energy resources procured within its service territory."[60] The Companies continue to support this strategy, to be further evaluated in the Carolinas Carbon Plan analysis.

Similarly, CIGFUR raises concerns about jurisdictional cost allocation issues related to implementing the 2022 SP Program.[61] While the Companies believe that facilities procured through the 2022 SP Program are needed to meet DEC's and DEP's future system-wide resource needs, and that solar resources procured through the 2022 SP RFP will provide system-wide benefits by serving all customers within the Companies' Balancing Authority Areas, this issue is also more appropriately addressed in the Carbon Plan and other, future cost-recovery proceedings. Additionally, this issue does not need to be addressed by the Commission now to authorize the 2022 SP Program and RFP. Accordingly, the Companies request these issues be evaluated and determined in the Carbon Plan and future cost-recovery proceedings.

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[59] Petition at 13.
[60] *Id.* at 13-14.
[61] CIGFUR Initial Comments at 6-7.

IX. The Companies agree with NCSEA that determining whether procurements should evolve beyond the CPRE model are best addressed in future procurements.

NCSEA's comments highlight how the 2022 SP Program "repeatedly follows logistical pathways established in the CPRE Program" and generally supports this approach for this particular procurement.[62] However, NCSEA also cautions against repeatedly following the CPRE model in future clean energy procurements designed to achieve HB 951's policy goals and specifically points to the fact that few solar plus storage projects were successfully procured through the CPRE Program.[63] NCSEA goes on to comment that it is "imperative for the procurement marketplace to include storage projects as the carbon plan evolves to avoid the need to otherwise adjust for intermittent power."[64]

The Companies generally agree with NCSEA on these points and noted in their Petition, for example, that stakeholders expressed interest in evaluating new controllable PPA contract structures for future procurements.[65] Recognizing the new needs and requirements of HB 951, the Companies are generally supportive of evaluating with stakeholders and potentially developing new procurement frameworks that move beyond CPRE to achieve HB 951's goals in 2023 and beyond, as suggested by NCSEA. Accordingly, the Companies plan to address issues such as those raised by NCSEA in future procurements but need to expeditiously proceed with the 2022 SP Program based on a CPRE-like framework at this time.

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[62] NCSEA Initial Comments at 5.
[63] *Id.*
[64] *Id.*
[65] Petition at 20.

X. The Companies agree to further evaluate NCEMC's interest in developing solar projects in cooperative territories for future procurements.

NCEMC "does not take issue with [the Companies] proposed 2022 solar procurement request"[66] or propose any changes to the Companies' 2022 SP Program. However, NCEMC requests the Companies and the Commission consider locating procured solar resources in future procurements in cooperative territories as well as exploring additional contractual and technological arrangements allowing for enhanced control and optimization of procured resources.[67] The Companies are agreeable to further engagement with NCEMC on this issue in developing future procurements to accomplish HB 951 goals for future procurements. However, the Companies do have operational and logistical concerns that DEC and DEP would not be able to control the solicited solar energy facilities in the same manner as the utility's own generating resources, as provided for in HB 951. Such issues would need to be resolved to allow solar projects not directly connected to the DEC and DEP systems to participate in future procurements.

CONCLUSION

WHEREFORE, Duke Energy Carolinas, LLC and Duke Energy Progress, LLC respectfully request the Commission consider the foregoing reply comments and expeditiously issue an Order (i) authorizing the Companies to commence the 2022 Solar Procurement Program; (ii) approving an minimum target volume of 700 MW to be procured through the 2022 SP RFP subject to adjustment as described in the Petition; (iii) establish any further procedures or proceedings the Commission determines may be needed to review and to approve the final solar resource procurement target as part of the

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[66] NCEMC Initial Comments at 5.
[67] *Id.* at 6-8.

Commission's review of the Companies' Carolinas Carbon Plan by no later than November 1, 2022, and (iv) grant such other and further relief as the Commission deems just and reasonable and in furtherance of the public interest.

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