BEFORE THE NORTH CAROLINA UTILITIES COMMISSION
DOCKET NO. E-2, SUB 1317
DOCKET NO. E-7, SUB 1290

In the Matter of Duke Energy Progress, LLC, and Duke Energy Carolinas, LLC, 2023 Solar Procurement Pursuant to Initial Carbon Plan	**JOINT INITIAL COMMENTS OF SOUTHERN ALLIANCE FOR CLEAN ENERGY, SIERRA CLUB, NATURAL RESOURCES DEFENSE COUNCIL, AND NORTH CAROLINA SUSTAINABLE ENERGY ASSOCIATION**

Pursuant to North Carolina Utilities Commission's (NCUC or Commission) April 21, 2023 *Order Establishing Procedures*, the Southern Alliance for Clean Energy (SACE), the Sierra Club, and the Natural Resources Defense Council (NRDC), jointly with the North Carolina Sustainable Energy Association (NCSEA) (collectively, SACE, et al.), respectfully submit the following Joint Initial Comments on the 2023 Solar Resource Procurement Request for Proposals for Solar and Solar Paired with Storage Resources (Proposal) filed by Duke Energy Carolinas, LLC (DEC) and Duke Energy Progress, LLC (DEP, and together with DEC, Duke).

Preliminarily, SACE, et al. address the scope of comments allowed under the Commission's April 21, 2023 *Order Establishing Procedures*. The Order explained:

> it would be helpful to hear from interested parties on the adequacy of Duke's proposed timeline and process as it is reflected in the Proposal. Based on the comments received, the Commission will determine whether any

> additional procedure, such as opportunity for parties to file substantive comments on Duke's RFP documents, is necessary.

April 21, 2023 *Order Establishing Procedures* at 2. The Commission's Order allows intervenors to submit comments on "the adequacy of Duke's proposed timeline and process as it is reflected in the Proposal." *Id.* The Joint Initial Comments that follow discuss high-level issues in the 2023 Solar Procurement Pre-Issuance Proposal (Pre-Issuance Proposal), filed as Attachment 1 to the Proposal. SACE, et al. believe these Joint Initial Comments are within the scope contemplated by the Commission in its April 21, 2023 *Order Establishing Procedures* for three reasons.

First, the timeline proposed by Duke will not allow for adequate Commission consideration of the issues discussed below between the conclusion of the stakeholder process that Duke has proposed in early June and the filing of the final RFP documents on July 14. There will not be sufficient time for stakeholders to alert the Commission to potential issues, potentially move for leave to file comments, and for all parties to comment in that timespan, particularly if Duke is to make any adjustments in response to stakeholder input at the final stakeholder meeting, requiring updated pre-final RFP documents to be circulated to stakeholders. Accordingly, these Joint Initial Comments address timeline and process.

Second, these Joint Initial Comments respond to the Pre-Issuance Proposal, which is not an RFP document as SACE, et al. understand the term. The Pre-Issuance Proposal "presents the Commission with an overview of the key

provisions of the Companies' planned 2023 Solar Resource Procurement request for proposals ('2023 RFP') and a roadmap for the Companies' plans to finalize the 2023 RFP . . . ." Pre-Issuance Proposal at 1. Comments addressing the content of the Pre-Issuance Proposal therefore are not the sort of detailed "substantive comments on Duke's RFP documents" that the Commission anticipated addressing later, if necessary. April 21, 2023 *Order Establishing Procedures* at 2. Accordingly, these Joint Initial Comments do not address issues the Commission forecast addressing later if necessary.

Third, because these Joint Initial Comments respond to high-level issues in the Pre-Issuance Proposal roadmap, they raise issues that it is more efficient to address earlier in the process, before input into the RFP documents themselves, since addressing these issues could result in downstream changes to the RFP documents. Accordingly, these Joint Initial Comments address issues that should be raised at this stage.

SACE, et al. believe these Joint Initial Comments to be within the scope contemplated by the Commission in its April 21, 2023 *Order Establishing Procedures.* SACE, et al. request that if the interpretation above is incorrect, the Commission consider the concerns about the timeline above and simply take the remainder of these Joint Initial Comments under advisement.

1. Target Procurement Volume

In the Pre-Issuance Proposal, Duke proposed a target procurement volume of 1,200 megawatts (MW), comprising 500 MW of solar-only and 700 MW of solar-plus-storage (SPS), with 260 MW of batteries included in the SPS procurement.

Pre-Issuance Proposal at 4. This 1,200 MW procurement will include 200 MW of solar-only left over from the amount of solar to be procured through the Competitive Procurement of Renewable Energy (CPRE) program under House Bill 589. CPRE solar has been included in the baseline procurement across all scenarios in Carbon Plan modeling. Accordingly, Duke has proposed to procure 1,000 MW of Carbon Plan-derived solar.

The Commission has directed Duke to procure 2,350 MW of solar across 2023 and 2024. Order Adopting Initial Carbon Plan and Providing Direction for Future Planning at 132-33, *In the Matter of Duke Energy Progress, LLC, and Duke Energy Carolinas, LLC, 2022 Biennial Integrated Resource Plans and Carbon Plan*, Docket No. E-100, Sub 179 (N.C.U.C. Dec. 30, 2022) (2022 Carbon Plan Order). Duke's Pre-Issuance Proposal therefore leaves 1,350 MW to procure in 2024. The Commission directed Duke to bring both the 2023 and 2024 procurements online by 2028. *Id.* at 133.

Red Zone Transmission Expansion Plan (RZEP) projects will come online in 2024-27. CPSA Modeling Panel Direct Cross Exhibit 1 at 17, Item No. 3-19, *In the Matter of: Duke Energy Progress, LLC, and Duke Energy Carolinas, LLC, 2022 Biennial Integrated Resource Plan and Carbon Plan*, Docket No. E-100, Sub 179 (N.C.U.C. Sept. 20, 2022) (providing projected completion dates for RZEP projects). Accordingly, all RZEP projects are scheduled to be online before the solar capacity procured through the 2023 and 2024 procurements must come online. In addition, Duke and all other interested parties will have multiple years of additional experience with the new Definitive Interconnection System Impact Study

(DISIS) process by the time the facilities procured through the 2023 and 2024 procurements are interconnecting. As a result, Duke's ability to interconnect new solar resources should be significantly greater in the 2027-28 timeframe, when resources procured in 2023-24 likely begin commercial operation, and there should be no need to delay procuring the majority of the new solar resources required under the 2022 Carbon Plan Order until 2024.

For these reasons, Duke's proposal to back-load procurement of the new solar resources required under the 2022 Carbon Plan Order, procuring only 1,000 MW of Carbon Plan solar in 2023 and 1,350 MW in 2024, is concerning and the Commission should direct Duke to increase its solar procurement in 2023. In addition, as discussed below, the procurement amount should be allowed to increase further through a modification to the Volume Adjustment Mechanism (VAM).

2. Volume Adjustment Mechanism (VAM)

SACE, et al. recommend revising the proposed VAM to make least-cost compliance with the House Bill 951 (H951) carbon-reduction requirement more likely. In essence, the proposed change to the VAM would be to allow the amount of solar procured to increase up to a maximum of 1,800 MW so long as the cost of the solar procured is below an appropriate reference cost. This proposed maximum is in line with the maximum amount of solar that Duke forecast, in its initial proposed 2022 Carbon Plan filings, that it would be able to connect annually in the near future. Furthermore, as noted above, there are good reasons to expect interconnection capacity to increase in the years between these procurements and

their commercial operation dates. In addition, compliance with the 2030 carbon-reduction requirement in H951 all but requires upward adjustments to solar procurements through the VAM. SACE, et al. supported this proposed revision in a stakeholder letter from the Carolinas Clean Energy Business Association (CCEBA) to Duke and continue to support any substantially similar revision to the VAM proposed by CCEBA in its initial comments.

SACE, et al. support Duke's proposal in the Pre-Issuance Proposal to base the VAM on only the solar-only bids, rather than the entire procurement. Pre-Issuance Proposal at 6. Because the basis will be the entire proposed 500 MW of solar-only procurement, SACE, et al. understand the basis to include the 200 MW of CPRE procurement. Furthermore, because CPRE-derived solar must be procured below avoided cost, whereas Carbon Plan-derived solar must simply be part of the least-cost path to the carbon-reduction requirements in H951, excluding CPRE-derived solar from the basis for the VAM would have artificially inflated the cost of Carbon Plan-derived solar and made it more likely that the VAM would adjust the final solar procurement downward. This issue was discussed in the 2022 solar procurement stakeholder process and SACE, et al. appreciate Duke's apparent advance consideration of the issue in its Pre-Issuance Proposal.

There is a risk that basing the VAM only on the 500 MW of solar-only bids, rather than the entire 1,200 MW procurement including SPS bids, could distort the effect of the VAM. For example, as the solar industry increasingly shifts to SPS and when markets and regulators compensate SPS facilities for the full value they provide, solar developers could come to require relatively higher profit margins on

solar-only facilities to make them worthwhile. In that case, basing the VAM only on solar-only bids could cause the VAM artificially to reduce the procurement amount. However, SACE, et al. recognize Duke's rationale that it is more difficult to find or develop a SPS reference cost at present, Pre-Issuance Proposal at 6, and find the solar-only approach acceptable for the 2023 solar procurement. It could be advisable in the 2024 solar procurement to develop two VAMs, one for solar-only bids and one for SPS bids, drawing on the results of the 2023 solar procurement for an SPS reference cost.

3. Utility Ownership Track & Controllable PPA Track

SACE, et al. have two concerns with the discussion of the utility ownership track and controllable PPA track in the Pre-Issuance Proposal. First, in the Pre-Issuance Proposal Duke anticipated that projects proceeding on the PPA track must be certified as "qualifying facilities" (QFs) under the Public Utility Regulatory Policies Act (PURPA). This seems unnecessary. The 2023 solar procurement is a directed resource procurement pursuant to the 2022 Carbon Plan Order and the solar resources procured through the 2023 solar procurement will be procured pursuant to that state law requirement, rather than as independent power producers under PURPA. As noted above, the 2023 solar procurement is not subject to a PURPA avoided-cost cap, but rather the mandate to achieve the H951 carbon-reduction requirements at least cost. And unlike independent power producers selling at will under PURPA, the solar procured through the 2023 solar procurement will be fully controlled by Duke. N.C. Gen. Stat. § 62-110.9(2)b. While

most, if not all, facilities will qualify and may attain QF status, because the facilities are not selling through PURPA it is not clear why it should be required.

Furthermore, making QF status a requirement could be burdensome for developers and could conflict with the least-cost requirement in H951. Making QF status a requirement by its nature adds paperwork and the associated administrative burden, not just in the first instance but throughout the life of the project as it must update its filings with the Federal Energy Regulatory Commission (FERC) as necessary to maintain its QF status, such as if there are changes requiring updates to its Form 556. Some requirements of QF status limit solar development in ways that H951 and the Commission's 2022 Carbon Plan Order do not. For example, under FERC Order No. 872, FERC's new PURPA implementation rule, two QFs owned by the same entity and using the same energy resource (e.g., solar) must not be too close to one another or they will be considered to be at the "same site" for the purpose of PURPA's 80 MW cap on the size of "small power production facilities," the subcategory that solar QFs rely on. Facilities within one mile of one another are irrebuttably at the same site; facilities between one and ten miles from one another are *rebuttably* presumed to be at separate sites, depending on a wide variety of factors unrelated to geography and determined on a case-by-case basis by FERC; and only facilities ten or more miles apart are irrebuttably presumed to be at separate sites. Qualifying Facility Rates & Requirements Implementation Issues Under the Pub. Util. Regul. Pol. Act of 1978, 172 FERC ¶ 61,041, 61,260 (2020) (Order No. 872 PP 479-80). Due to the uncertainty between one and ten miles, solar developers are likely to need to

assume that facilities within ten miles of one another will be deemed to be at the "same site." *See* Qualifying Facility Rates & Requirements Implementation Issues Under the Pub. Util. Regul. Pol'ys Act of 1978, 173 FERC ¶ 61,158, 61,992 (2020) (Order No. 872-A P 244) (describing this "less clear, grey zone" between one and ten miles). However, as the "red zones" show, low-cost sites for new solar facilities, in terms of land cost, terrain, insolation, interconnection capacity, and other factors, tend to be near one another. Accordingly, this feature of Order No. 872, as applied to the 2023 solar procurement, will reduce competition by limiting the number of developers who can compete with one another for projects within a region because each developer will avoid siting new projects within ten miles of its other existing or planned projects, taking that developer out of the pool to compete for those sites. This reduction in competition risks increasing costs, particularly given the potential economies of scale offered by siting projects near one another. Other QF requirements could also reduce competition. In short, the requirement that projects be QFs imports a whole body of PURPA regulation that adds burdens and can limit competition, all without apparent benefit.

Second, in the Pre-Issuance Proposal Duke proposed to limit the PPA for batteries to 15 years. Pre-Issuance Proposal at 7, 9. During stakeholder discussions, solar developers asserted that 20-year contracts are common, or even standard. A longer-duration contract for batteries likely will make competition among bidders more robust, because the shorter 15-year term seems to raise significant risk. At the end of a 15-year term, the developer will have a battery later in its useful life but a solar field only about halfway through its useful life. This

would require augmentation of the battery in order to execute a new PPA and get the remaining value from its solar panels, or possibly risk having more solar panels than its inverter or the point of interconnection can accommodate, requiring significant wasteful curtailment. A reasonable response to this situation would be to adjust costs to recoup the full cost of the solar PV as well as the battery within the 15-year timeframe. It seems better to reduce this risk by matching the term of the battery more closely to its full expected life and/or the expected life of the solar PV, allowing developers to choose how to meet contract requirements for the batteries, whether through over-building up-front or augmentation as the battery capacity declines over time.

4. Pricing Structure for Proposals

SACE, et al. are concerned about Duke's proposed pricing structure for SPS bids under the PPA Track. In the Pre-Issuance Proposal Duke anticipated using a fixed energy price determined by Duke in advance, "derived from the weighted average of all winning solar-only controllable PPA bids of the 2022 SP." Pre-Issuance Proposal at 9. Bids would then compete entirely on the capacity price. Duke offered two rationales for this structure. First, it would make comparison between solar-only and SPS bids easier. However, it is not clear why that is necessary. Second, it reduces the risk that an SPS bidder could game the system by bidding low energy and high capacity to get higher guaranteed payments which would disincentivize solar production. However, because these are controllable PPAs and Duke would control the facility, it is not clear how this is a risk. To the contrary, if a facility bid a high-capacity cost and low energy cost it

seems Duke would have an incentive to produce more energy from the facility. SACE, et al. recognize the challenges inherent in the new SPS bidding process and ensuring fairness and competition but are concerned that this structure sets a floor for energy costs—and therefore for bids—while potentially making bids more complicated for developers by requiring them to push all project costs above a certain threshold into capacity, all without necessarily achieving the intended results. Furthermore, the accounting challenges involved in this PPA Track compare unfavorably to the simple all-in fixed price that Duke's proposal anticipated for utility ownership track (UOT) projects, both market-developed and self-developed. *See* Pre-Issuance Proposal at 10.

5. RZEP Allocation Mechanism

SACE, et al. strongly support Duke's proposal *not* to include the "shadow costs" in bids that account for Red Zone [Transmission] Expansion Plan (RZEP) upgrades in the VAM calculation. Pre-Issuance Proposal at 11. Because the RZEP projects are necessary for compliance with the carbon-reduction requirements in H951 and are part of the "baseline" transmission expansion in coming years, the RZEP projects will be built regardless of the bid price of particular projects in the 2023 solar procurement. As a result, allocating RZEP costs to those projects for the VAM calculation would artificially increase their apparent costs, potentially decreasing procurement under the VAM, in conflict with the least-cost requirement in H951.

6. 2023 Resource Solicitation Cluster (RSC)

SACE, et al. commend Duke for responding to stakeholder feedback and incorporating "limited optionality" for solar that does not win the RFP to proceed to RSC Phase 2 if it can demonstrate "definitive commercial readiness" through either a 1) Green Source Advantage PPA or 2) executed Green Source Advantage term sheet and application (plus execution within 90d). Pre-Issuance Proposal at 14-15.

7. Grid Locational Guidance for Market Participants

SACE, et al. have two concerns about grid locational guidance. The Pre-Issuance Proposal states that Duke "will post" grid locational guidance for market participants but does not say where or how. Pre-Issuance Proposal at 15. It also states that the locational guidance will indicate "known transmission limitations resulting from the amount of existing or proposed renewable energy facilities in a particular area." *Id.* SACE, et al. assume that this guidance will also include grid constraints resulting from factors other than proposed renewable energy facilities in an area, but the language does not make that clear. Transparency about transmission and distribution hosting capacity is essential to achieving least-cost carbon reductions.

Conclusion

SACE, et al. thank the Commission for considering these Joint Initial Comments and look forward to continuing to work with Duke and other stakeholders towards robust solar procurements and least-cost compliance with the carbon-reduction requirements in state law.

Respectfully submitted, this the 28th day of April, 2023.

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CERTIFICATE OF SERVICE

I certify that a copy of the foregoing Joint Initial Comments on behalf Southern Alliance for Clean Energy, Sierra Club, Natural Resources Defense Council, and North Carolina Sustainable Energy Association as filed today in Docket Nos. E-2, Sub 1317 and E-7, Sub 1290 have been served on all parties of record by electronic mail or by deposit in the U.S. Mail, first-class, postage prepaid.

This 28th day of April, 2023.

/s/ Nick Jimenez