BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

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

In the Matter of:
Duke Energy Progress, LLC, and
Duke Energy Carolinas, LLC,
2022 Solar Procurement Pursuant to
Session Law 2021-165, Section 2(c)

JOINT COMMENTS OF THE
SOUTHERN ALLIANCE FOR
CLEAN ENERGY, SIERRA CLUB,
NATURAL RESOURCES DEFENSE
COUNCIL, AND THE NORTH
CAROLINA SUSTAINABLE
ENERGY ASSOCIATION

Pursuant to the Order Requesting Comments issued by the North Carolina Utilities Commission (Commission) on September 23, 2022, intervenors Southern Alliance for Clean Energy, the Sierra Club, and the Natural Resources Defense Council (collectively, SACE, et al.) and the North Carolina Sustainable Energy Association (NCSEA) respectfully submit these Joint Comments on the solar resource procurement target for the 2022 solar procurement program pursuant to Session Law 2021-165, § 2.(c) (the 2022 Solar Procurement) as well as the request by Duke Energy Carolinas, LLC (DEC) and Duke Energy Progress, Inc. (DEP) (collectively, Duke Energy or Duke) to procure the Competitive Procurement of Renewable Energy (CPRE) Program capacity shortfall through the 2022 Solar Procurement, to extend the CPRE Program PPA term, and for waiver of certain provisions of Commission Rule R8-71 (the Petition).

I. 2022 SOLAR PROCUREMENT TARGET

Consistent with the need demonstrated in the various proposed Carbon Plans submitted by Duke Energy and intervenors in the Carbon Plan proceeding, the Commission should establish a target procurement amount of 1,800 MW.
A. The 2022 Solar Procurement target should be 1,800 MW.

SACE, et al. previously recommended that the Commission establish a minimum 2022 Solar Procurement amount of 1,150 MW.\footnote{Initial Comments of the Southern Alliance for Clean Energy, Sierra Club, and Natural Resources Defense Council, In the Matter of: Duke Energy Progress, LLC, and Duke Energy Carolinas, LLC, 2022 Solar Procurement Pursuant to Session Law 2021-165, Section 2.(c), Docket Nos. E-2, Sub 1297 and E-7, Sub 1268 (N.C.U.C. Mar. 28, 2022), https://starw1.nccuc.gov/NCUC/ViewFile.aspx?Id=443216a6-837b-4011-be57-3ad43a7ab3e8 [hereinafter SACE, et al. Initial Comments].} The 1,150 MW represented one quarter of the approximately 4,600 MW of new solar that Duke’s most recent integrated resources plan (IRP) portfolios anticipated would be needed in portfolios that achieved the H951 carbon-reduction requirement of 70% below 2005 levels by 2030, spreading the 4,600 MW evenly across the four solar procurement windows available before 2030.\footnote{Id. at 3-7.} The Commission ultimately chose a minimum procurement value of 700 MW, because Duke and the Public Staff asserted 700 MW would “be sufficient to incent reasonable participation and competitive bidding in the procurement.”\footnote{Order Authorizing a Competitive Procurement of Solar Resources Pursuant to House Bill 951 and Establishing Further Procedures at 4, In the Matter of: Duke Energy Progress, LLC, and Duke Energy Carolinas, LLC, 2022 Solar Procurement Pursuant to Session Law 2021-165, Section 2.(c), Docket Nos. E-2, Sub 1297 and E-7, Sub 1268 (N.C.U.C. May 26, 2022), https://starw1.nccuc.gov/NCUC/ViewFile.aspx?Id=11121958-bdf2-45a8-a66c-78befc2dd1be.} The Commission reiterated that it was a minimum “adopted solely to provide a level of certainty to market participants and encourage participation in the procurement.”\footnote{Id.}

The target, of course, must be based on the Commission’s determination that the solar will be needed in order to meet carbon-reduction requirements. Session Law 2021-165, Section 2.(c). Simple arithmetic generates a 2022 Solar Procurement target of 1,800 MW. The only portfolio that Duke proposed that both attempted to meet the 2030 carbon-
reduction requirement in Session Law 2021-65 on time, as required, and did not assume new unproven Appalachian gas transportation capacity, is Portfolio P1A. That portfolio included 7,200 MW of new solar by the beginning of 2030. Given the estimated four-year delay between procurement and operation, there are four procurement years available (2022, 2023, 2024, 2025). Dividing 7,200 MW by four procurement years yields 1,800 MW per year.

This is consistent with the Carbon Plan modeling submitted by SACE, et al. jointly with NCSEA. SACE, et al. and NCSEA jointly commissioned Synapse Energy Economics, Inc. to prepare a report on pathways to meeting the carbon-reduction requirements in Session Law 2021-165, which was filed in the Carbon Plan docket, E-100, Sub 179 (the Synapse Report). The Synapse Report relied on robust modeling using the

---


EnCompass capacity expansion and production cost modeling software—the same used by Duke in this proceeding. Mr. Fitch also testified before the Commission about the Synapse Report in the Carbon Plan proceeding on Monday, September 26, 2022. Among the near-term actions recommended in the Synapse Report is procurement of 7,200 MW of new solar through 2030. Dividing those 7,200 MW of new solar divided by four procurement years (2022, 2023, 2024, and 2025) yields the same 1,800 MW procurement target per year. Recognizing that the 7,200 MW in the Synapse Report would be online by the end of 2030, potentially allowing five procurement years, SACE, et al. could support dividing the total required solar capacity by five procurement years if done as part of a near-term action plan substantially similar to the Short-Term Execution Plan included in the Synapse Report.

Even other Duke portfolios that delayed procurement or relied on unproven gas transportation capacity entail substantial 2022 procurements. Portfolio P1, which relied on unproven gas transportation capacity, would add 5,400 MW of new solar by the beginning of 2030, or 1,350 MW in each of the four available procurement years if spread evenly. And portfolios SP5 (no Appalachian gas) and SP5A (limited Appalachian gas), which would delay compliance with the 2030 requirement until 2032, each would add 8,600 MW of new solar by 2032, leaving six available procurement years (2022, 2023, 2024, 2025, 2026, 2027).
2026, and 2027), at 1,433 MW per year if spread evenly. These solar amounts from Duke’s portfolios do not include the CPRE Program remainder of 441 MW.\textsuperscript{10}

Accordingly, the 2022 Solar Procurement target should be 1,800 MW, consistent with Duke portfolio P1A and the Synapse Report. A target based on five procurement years could be acceptable, conditional on being part of a near-term action plan substantially similar to the Short-Term Execution Plan included in the Synapse Report.

\textbf{B. The Commission should set a target for 2022 that is consistent with meeting the 2030 interim requirement without relying on making up the difference in later years.}

The simplest, safest, and most reasonable way to determine the 2022 Solar Procurement target volume is to divide the capacity of new solar needed to meet the 2030 interim requirement evenly by the number of available procurement years, as above.

This approach is simplest not just arithmetically but also methodologically: it turns the solar volumes derived from modeling into annual targets directly, without making post hoc adjustments to the annual procurements based on various uncertain factors. For example, it is likely that the price of solar will continue its downward trend as it continues advancing down the experience curve. But it is also possible that this downward trend could be temporarily interrupted due to supply-chain issues or tariffs. Similarly, it is likely that interconnection delays will decrease as parties gain experience with the Definitive Interconnection System Impact Study (DISIS) process and as Red Zone Transmission Expansion Plan (RZEP) projects come online in 2024-27.\textsuperscript{11} But the degree of improvement

\textsuperscript{10} Duke Proposed Carbon Plan, App’x E at 25-26; Duke Modeling Panel Direct Testimony at 77.
is difficult to estimate, and overestimating future interconnection speed could put meeting the 2030 requirement at risk. Making post hoc adjustments to annual procurement volumes based on these or other uncertain factors would risk over-counting effects already accounted for in modeling.

This approach also presents less execution risk than the alternatives. The Commission should chart a straightforward course to the 2030 requirement. If the Commission instead were to set a low near-term target with an expectation that it could make up the difference in later years, it would be unnecessarily putting the 2030 requirement at risk. In other words, if the Commission plans to make up the difference in later years and something goes wrong, it will be difficult or impossible to meet the 2030 requirement. Such an approach would be inconsistent with taking “all reasonable steps” to meet the 2030 requirement. G.S. § 62-110.9.

By contrast, there is little risk to setting the appropriate near-term procurement target of 1,800 MW per year. If the cost of solar declines, for example, as a result of the Inflation Reduction Act, customers will benefit from the downward-only bid refresh planned for April. Future procurements will also capture any cost declines that occur in the interim. The contrary argument—that customers could miss out on the potential savings from delaying procurement—contains multiple flaws. It contains no limiting principle, potentially justifying delaying all procurement until 2025 (for 2029), regardless of interconnection limits, and offering no justification for any lower procurement volume in interim years. Furthermore, the argument misses the more relevant comparison in interim years, which is not between present and future solar procurements but between present procurement of solar and present procurement of alternative resources. If solar
has earned its place among the various resources under consideration for procurement in 2022, as it most certainly has, then it should be procured. In this case, of course, the question under Session Law 2021-165 for the 2022 Solar Procurement is whether solar is needed for 2030 compliance. As discussed above, it most certainly is.

Similarly, setting a procurement target of 1,800 MW entails little interconnection risk. As noted above, it is likely that interconnection levels will improve by 2026, the year that 2022-procured solar likely would be coming online; Duke projects that 11 of the 18 RZEP projects will be online by the middle of 2026. Duke’s contrary estimate that a maximum of 750 MW of solar can be connected in 2026 is misguided. That limit was “[b]ased partially on the historic maximum of nine solar transmission interconnections in a year and an assumption of an average solar facility size of 80 MW.” It was also based on Duke’s estimates of the need for transmission upgrades, increasing complexity of interconnections, and historical annual interconnection data. This retrospectively focused analysis did not clearly take into account the expected completion of most of the RZEP projects by mid-2026 and does not appear to have taken into account the expected shift at the North Carolina Transmission Planning Collaborative (NCTPC) to a proactive planning paradigm focused on building transmission needed for new resources rather than merely reacting to generator interconnection requests. Even if it ultimately proves

---

12 CPSA Modeling Panel Direct Cross Exhibit 1.
13 See Duke Modeling Panel Direct Testimony at 78 (citing explanation in Appendix I).
15 Id. at 7-8.
impossible to interconnect the full volume of solar procured in 2022 in 2026, the risk is not
great because capacity that was not connected in 2026 could simply be connected in later
years.

Accordingly, dividing the amount of solar required to achieve the 2030 carbon-
reduction requirement on time by the available procurement years, resulting in a target of
1,800 MW, is the simplest, safest, and most reasonable way to determine the 2022 Solar
Procurement target volume.

II. PROCURING THE CPRE SHORTFALL

The Commission should grant Duke’s request to procure the 441 MW of CPRE
Program shortfall through the 2022 Solar Procurement, subject to certain protections
discussed below.

The potential benefits of procuring the 441 MW of CPRE Program shortfall through
the 2022 Solar Procurement are clear. Among other things, doing so would allow studying
the CPRE Program shortfall in the 2022 DISIS cluster study, potentially bringing capacity
online sooner. And it would be faster and more efficient than using a Resource Solicitation
Cluster (RSC) or waiting until the 2023 DISIS cluster study.17 The 64 projects totaling
approximately 5,000 MW participating in the 2022 Solar Procurement RFP are sufficient
to procure the 441 MW of unawarded CPRE Program capacity in addition to 1,800 MW
of Session Law 2021-165 2022 Solar Procurement capacity.18

---

17 See Duke Petition for Approval to Procure CPRE Program Remainder MW through 2022 Solar
Procurement; to Extend CPRE PPA Term; and for Waiver of Certain Provisions of NCUC Rule R8-71 at
Procurement Pursuant to Session Law 2021-165, Section 2.(c), Docket Nos. E-2, Sub 1297 and E-7, Sub
ae4c-2d4b946382a9.

18 See id. at 9-10.
A. Ensuring CPRE Program Integrity

Session Law 2021-165 did not convert the CPRE Program into part of the separately authorized 2022 Solar Procurement. Session Law 2021-165 deleted the provision at the end of G.S. § 62-110.8(a) that authorized the Commission to establish additional CPRE tranches indefinitely based on showings of need in future IRPs. Session Law 2021-165, Section 2.(a). In place of that provision, it established the 2022 Solar Procurement, based on a determination that additional solar would be needed to meet the 2030 carbon-reduction requirement. Session Law 2021-165, Section 2.(c). Session Law 2021-165 also repealed subsection (h)(5), which had allowed the Commission to modify or delay implementation of provisions in the Section if doing so would be in the public interest. Session Law 2021-165, Section 2.(b).

But Session Law 2021-165 did not alter other provisions of the CPRE statute, G.S. § 62-110.8. The Commission should ensure that the integrity of the CPRE Program is maintained even as it is procured through the 2022 Solar Procurement. Four criteria are centrally important.

First, the 441 MW CPRE Program shortfall is not subject to adjustment. While Session Law 2021-165 might have removed the Commission’s authority to establish additional CPRE tranches based on Duke’s IRPs, it did not remove the requirement to procure additional unawarded capacity through competitive procurement. G.S. § 62-110.8(a). This additional capacity remains a requirement of the CPRE statute after Session Law 2021-165 and is not lawfully subject to the “volume adjustment mechanism” proposed for the 2022 Solar Procurement. Reading G.S. § 62-110.8 and Session Law 2021-165 together, they establish two procurements, one for CPRE unawarded capacity and one for the 2022 Solar Procurement.
Second, CPRE Program capacity must be third-party owned. Session Law 2021-165 did not delete the requirement in the CPRE statute that no more than 30% of the procurement may be satisfied by development by the utility or its affiliates, G.S. § 62-110.8(b)(4), in contrast to the provision in Session Law 2021-165 that 55% of the new solar selected by the Commission be owned by Duke, Session Law 2021-165, Section 1(2)b. In its Petition, Duke appropriately resolved this conflict by committing to procuring “100% of the CPRE Program Unawarded MW as Controllable PPA projects.”19 The Commission must hold Duke to this commitment and, further, should ensure that procuring the CPRE Program shortfall through the 2022 Solar Procurement does not improperly alter the ownership split in the 2022 Solar Procurement (e.g., if the CPRE Program shortfall MW were counted towards the 45% third-party ownership share of the 2022 Solar Procurement).

Third, CPRE Program procurement must be below avoided cost. Session Law 2021-165 did not delete the requirement in the CPRE statute that projects come in below administratively determined avoided cost, G.S. § 62-110.8(b)(2), in contrast with the requirement in Session Law 2021-165 that the Commission develop the “least cost path to compliance with the authorized carbon reduction goals,” Session Law 2021-165, Section 1(4) (emphasis added). In its Petition, Duke proposed to “assign” the lowest-cost MW in the Controllable PPA Track as CPRE Program Unawarded MW, targeting procuring proposals that are below then-current avoided cost.20 This approach is reasonable, although if not guarded against it could have detrimental effects on the 2022 Solar Procurement, as discussed below.

19 Id. at 15 n.6.
20 Id. at 12.
Fourth, CPRE Program procurement must be independently administered. Session Law 2021-165 did not delete the requirement in the CPRE statute that CPRE procurement be “independently administered by a third-party entity to be approved by the Commission,” G.S. § 62-110.8(d) (emphasis added), in contrast with Duke’s proposal to use an independent evaluator for the 2022 Solar Procurement.\(^{21}\) In its Petition, Duke proposes to use the same independent evaluator for the CPRE Program shortfall.\(^{22}\) However, Duke also has committed that no Duke Energy affiliates will be participating in the 2022 Solar Procurement.\(^{23}\) On that condition, and so long as members of the solar industry who might participate in the 2022 Solar Procurement do not object, the proposal is reasonable.

Accordingly, in its Petition Duke reasonably resolved tensions between the CPRE statute and Session Law 2021-165, though the Commission must ensure that the integrity of the CPRE Program is maintained, as described above. Duke’s proposed waiver of certain provisions of Commission Rule R8-71 relating to requirements for administering CPRE procurements is reasonable as well. And particularly in light of the limited success of CPRE Tranche 3, SACE, et al. support Duke’s proposal that the Commission exercise its authority under G.S. § 62-110.8(b)(3) to align contract terms by establishing a CPRE pro forma contract term of 25 years.

B. Ensuring 2022 Solar Procurement Integrity

Procuring the CPRE Program shortfall through the 2022 Solar Procurement raises certain risks to the integrity of the 2022 Solar Procurement. Procuring the CPRE Program shortfall by selecting the lowest-cost MW in the Controllable PPA Track within the 2022

\(^{21}\) See id. at 7.
\(^{22}\) Id. at 13.
\(^{23}\) Id. at 19.
Solar Procurement\textsuperscript{24} could artificially trigger the “volume adjustment mechanism” (VAM).\textsuperscript{25} As discussed above, CPRE Program shortfall capacity cannot be adjusted in that way and therefore is not subject to the VAM. However, procuring the CPRE Program shortfall from the lowest-cost bids into the Controllable PPA track also could artificially increase the cost of the 2022 Solar Procurement, making it more likely to trigger the VAM. If this were to happen, the CPRE Program MW effectively would have reduced the 2022 Solar Procurement target volume. This would put the 2030 reduction requirement at risk. The target for the 2022 Solar Procurement will be set at a level designed to ensure compliance with the 2030 reduction requirement. And the target should be derived from the new solar additions in modeling that achieved the 2030 reduction requirement on time. But as noted above, that modeling \textit{assumed} that the CPRE Program MW would be procured. Accordingly, if the CPRE Program shortfall effectively reduces the 2022 Solar Program target then the target will be too low.

To resolve this, the Commission could simply direct Duke not to apply the VAM to the 2022 Solar Procurement. Understanding that it provides ratepayer protection, however, SACE, et al. and NCSEA propose in the alternative that the Commission ensure that the low-cost CPRE Program shortfall MW are properly accounted for in the VAM. The best way to do so would be to direct Duke to use the lowest-cost 1,800 MW, or the

\textsuperscript{24} \textit{Id.} at 12.
\textsuperscript{25} For the 2022 Solar Procurement, Duke proposed that if the weighted average cost of the total portfolio of Utility Ownership Track and PPA Track resources is 10% or more above the “solar reference price” Duke developed in its proposed Carbon Plan then the target volume for the 2022 Solar Procurement “may be decreased by as much as twenty percent” and vice versa. Duke Petition for Authorization of 2022 Solar Procurement Program at 16, \textit{In the Matter of: Duke Energy Progress, LLC, and Duke Energy Carolinas, LLC, 2022 Solar Procurement Pursuant to Session Law 2021-165, Section 2.(c), Docket Nos. E-2, Sub 1297 and E-7, Sub 1268} (N.C.U.C. Mar. 14, 2022), \url{https://starw1.ncuc.gov/NCUC/ViewFile.aspx?Id=72ee098-9802-44ca-8f53-7bac44f476d7}. This has been referred to as the “volume adjustment mechanism.”
equivalent of the target procurement volume, when it calculates the weighted average cost of the total portfolio of Utility Ownership Track and PPA Track resources to determine whether the VAM applies. For example, with a 2022 Solar Procurement target volume of 1,800 MW and the CPRE Program shortfall of 441 MW, the “total portfolio” used to calculate the weighted average cost would be the lowest-cost 1,800 MW—even though those 1,800 MW would include 441 MW designated as CPRE Program shortfall—and not the lowest-cost 2,241 MW. This would ensure that the integrity of the 1,800 MW target was maintained and not artificially adjusted downward.

**CONCLUSION**

To summarize, the Commission should adopt a 2022 Solar Procurement target volume of 1,800 MW and should grant Duke’s petition to procure the 441 MW of CPRE Program shortfall through the 2022 Solar Procurement, subject to certain protections detailed above. SACE, et al. and NCSEA thank the Commission for considering these Joint Comments and look forward to a robust 2022 Solar Procurement.
Respectfully submitted this the 4th day of October, 2022.

/s/ Nick Jimenez
Nicholas R.G. Jimenez
N.C. State Bar No. 53708
Southern Environmental Law Center
601 West Rosemary St., Ste. 220
Chapel Hill, NC 27516
919-967-1450
njimenez@selnc.org
Attorney for SACE, et al.

/s/ Taylor M. Jones
Taylor M. Jones
N.C. State Bar No. 58831
Counsel for NCSEA
4800 Six Forks Road, Suite 300
Raleigh, NC 27609
919-832-7601
taylor@energync.org
Attorney for NCSEA
CERTIFICATE OF SERVICE

I hereby certify that all persons on the docket service list have been served true and accurate copies of the foregoing filing by hand delivery, first class mail deposited in the U.S. mail, postage pre-paid, or by email transmission with the party’s consent.

This the 4th day of October, 2022.

/s/ Nick Jimenez
Nicholas R.G. Jimenez
N.C. State Bar No. 53708
Southern Environmental Law Center
601 West Rosemary St., Ste. 220
Chapel Hill, NC 27516
919-967-1450
njimenez@selnc.org
Attorney for SACE, et al.