MEMORANDUM

TO	Rich Wodyka, Carolinas Transmission Planning Collaborative
FROM	Carolinas Clean Energy Business Association
SUBJECT	**CCEBA Comments on CTPC August 2025 TAG Meeting on MVST Study**
DATE	September 16, 2025

Carolinas Clean Energy Business Association (CCEBA) appreciates the efforts that the Carolinas Transmission Planning Collaborative (CTPC) is making during the MVST study to present detailed information on its analytical approach and results, the opportunity to ask questions or make comments during the stakeholder meetings, and the ability to submit comments following each meeting.

We provide the following comments to the CTPC on behalf of CCEBA in response to the August 22, 2025 CTPC Transmission Advisory Group (TAG) meeting concerning the Multi-Value Strategic Transmission (MVST) study.

I. Changing Market Conditions and the MVST

Two key changes in the future power system were discussed during the call on which CCEBA would like to seek additional clarification: offshore wind (OFW) development and merging Duke Energy Carolinas, LLC (DEC) and Duke Energy Progress, LLC (DEP) (together with DEC, "Duke Energy") into one utility.

We understand from prior filings with the North Carolina Utilities Commission that Duke Energy is unlikely to include 2.4 GW of OFW in future 10-year Carbon Plan portfolios. In the August solutions meeting, the CTPC presented solutions for the Badin Tie and Wateree Tie regions, but did not provide solutions for the New Bern OFW and North Sutton OFW regions. It is our understanding that the CTPC did not present solutions for these regions due to the change in outlook for developing 2.4 GW (or more) of OFW in all 3 scenarios.

Please provide a more detailed explanation of the proposed approach to developing solutions for these regions given the uncertainty in OFW. Despite the change in planning for OFW resources, CCEBA believes it is important to continue to consider solutions that may affect the development of other energy resources in those regions.

CCEBA requests that the CTPC run additional sensitivity cases without 2.4 GW of OFW resources to demonstrate whether violations continue to occur.

In addition to areas affected by the change in analysis for OFW, several violations have been identified along the seam between DEC and DEP. **CCEBA requests that the CTPC run sensitivities in which DEC and DEP are operated and planned as a single utility to evaluate whether the violations between the two utilities persist through the planning horizon.**

II. High Scoring DEP Constraints

Based on previous information provided on solar siting, about 4-5 GW of solar or solar plus storage are located in the eastern and northern portions of the DEP territory near the New Bern OFW region and the North Sutton OFW region identified by the CTPC. About 60 constraints in these regions have scores between 5 and 11, demonstrating that resolving these constraints will support significant non-OFW resources in the region even without the development of OFW and that the constraints are appearing in multiple scenarios.

CCEBA requests that the CTPC continue to pursue solutions in these regions based on the current results or sensitivities without OFW, especially solutions to the west and north of the New Bern 230 kV substation and the Delco 230 kV substation that include some of the highest scoring constraints. This capacity in the near-term can help support solar and solar plus storage resources and also provide the optionality for supporting OFW in the future if it were to be developed. The following branches are located in-land of the New Bern 230 kV and Delco 230 kV substation and have the highest scores in this region and support 5 – 9 GW of new resources.

- New Bern OFW Region:
  - Lee – Milburnie 230 kV (Score: 10, 11)
  - Lee Plant – Selma 115 kV (Score: 10)
  - Clinton – Erwin 230 kV (Score: 9)
  - Selma – Wake 230 kV (Score: 7,9)
  - Lee – Wommack 234 kV South (Score: 8)

  - Erwin – Selma 230 kV (Score: 7)
  - Aurora SS – Greenville 230 kV (Score: 9)
  - Greenville – Wilson 230 kV (Score 9)
  - Aurora SS – New Bern 230 kV (Score: 9)
  - New Bern – Wommack 230 kV (Score 7,8)
- North Sutton OFW Region:
  - Cumberland – Delco 230 kV (Score: 8, 9)
  - Clinton – Wallace 230 kV (Score: 7, 8)
  - Sutton Plant – Delco 230 kV (Score: 8)
  - Sutton Plant – Wallace 230 kV (Score 8)
  - Cumberland – Whiteville 230 kV (Score: 7)

In addition, **please explain why the Lilesville – DPC Oakboro 230 kV branches with selection criteria scores of 18-19 that support 16 GW of resources and Lilesville – Rockingham 230 kV branches with scores of 6 that support 6 GW of resources were not addressed in the solutions meeting as a part of the Badin Tie cluster.**

III. High Scoring DEC Constraints

For the 500 kV to 230 kV region, please explain why the violations on the Parr BL 230 kV line with score of 14 was not explicitly addressed. Will this violation be resolved by the proposed solution of a new 500/230 kV Cliffside Bank?

Please explain why the constraints in the western portion of South Carolina, including Akens 230 kV line, Fisher 230 kV line, Flint 230 kV line, Broadway 230 kV line, Toxaway 230 kV line, Jocassee 230 kV line, and Jocassee tie, have not been addressed in the Solutions meeting? These constraints have scores of 7-11 and support 3 – 9 GW of new resources.

The violations in this region are along existing 500 kV lines that connect DEC with Georgia Power. Did the CTPC not include solutions to these violations due to the impacts they may have on the neighboring GPC system? If so, would these violations be better addressed through the CTPC MVST process or the Southeastern Regional Transmission Planning (SERTP) process?

IV. MVST Needs Maps

CCEBA appreciates the transparency of the MVST needs maps provided by the CTPC. For identifying priorities for MVST needs and potential solutions, it would be helpful to include in these maps the existing high voltage (230 kV and 500 kV) lines as the violations to better understand the issues that exist and the interaction between transmission facilities. **Can CTPC provide that additional detail on the maps?**

V. Proposed Solutions

CCEBA appreciates the number of alternatives that CTPC has considered for resolving the high-priority reliability violations and the explanation provided during the presentation. To allow CCEBA and its members more information and more time to review and understand the results presented in the TAG meeting slides, **CCEBA requests that the CTPC provide additional information in the slides on the primary reason that each of the alternatives was not selected and why the proposed solutions was selected.**

Similarly, it would be helpful to provide more information within each cluster about why the draft solution was selected and why other solutions identified in the previous slide did not make it to the draft solution. For example, for the "DEC 500 kV to 230 kV" cluster on slides 15-17, several traditional solutions and alternative solutions are listed as being considered (slide 15) and then two solutions are shown for resolving specific violations (slide 16), including a series reactor and a new 500 kV line, but then on the solutions description it is unclear why the 500/230 kV Cliffside Bank project was selected and why the project does not include the new 500 kV line.

Providing more clarity on the analysis of alternative solutions and the progression from identifying potential solutions to proposing a draft solution will help stakeholders learn more about how the CTPC applies its criteria and weighs certain tradeoffs and assist stakeholders in providing more concrete recommendations to the CTPC for identifying alternative solutions.

CCEBA recommends that CTPC consider in its analysis the option value of building double circuit towers for new transmission lines even if just a single circuit is required at this time. Installing double circuit towers in most cases comes at a limited incremental cost, but provides significant value for further upgrading the transmission system at a later date, as needed. For example, the CREZ lines in ERCOT were all built as double circuit towers with a single line installed initially. Every line has since added a second circuit to increase transfer capability. We request that the CTPC consider a similar approach when installing new towers.

VI. Solutions Benefits Analysis

To accurately account for production cost savings benefits of the proposed solutions, the CTPC will need to utilize production cost simulation models that are sufficiently detailed such that the upgrades proposed can be accounted for in the model. For example, if the solutions proposed for the Woodruff Tie are all within the same zone in the EnCompass zonal production cost model, then the zonal simulations will be unable to account for these upgrades and show no benefits for building this solution. A nodal production cost model that includes a detailed representation of the physical transmission and accounts for contingency constraints that are applied to the system during system dispatch will best capture the value of these upgrades.

CCEBA requests that the CTPC provide an update on 1) the development of the necessary analytical tools and methods for the benefits analysis and 2) the ability of those tools and methods to accurately capture the cost savings and other benefits of the solutions proposed to date.

Respectfully submitted this 16th day of September, 2025.

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