



Carolinas Transmission Planning Collaborative

Solutions Meeting Supplemental Information Request

In reference to the statement on p. 2 of the presentation that “[t]he solutions selected focused on lower costs and development risks,” please provide:

- a. The planning-level cost estimates for the selected solutions and alternatives considered;
 - For planning-level cost estimates, an average of recent cost estimates is used to create a \$/mile for re-building lines. Anywhere from \$3-5M/mile based on voltage level and single or double-circuit.
 - Where available, estimates from recent CTPC and DISIS studies were leveraged.
- b. Any constructability criteria used to compare solutions;
 - ROW Optimization - Anything that could utilize existing Right-of-Way was given priority to lower risks. This includes existing rights, de-commissioned lines, raising the voltage of existing lines, double-circuit of existing lines, etc.
 - Miles of new ROW
 - How developed is ROW? Are there encroachments on ROW?
 - Land topology (i.e. hills, mountains, floodplains)
 - Outage coordination impact on construction timeline
- c. The constructability analysis for the selected solutions and alternatives considered.

Tab will be added to “MVST Needs by Cluster rev2” Spreadsheet

2. Please provide a breakdown of the scoring by category for each of the overloads selected and those not selected.

A “MVST Needs by Cluster rev1” spreadsheet was uploaded to the SFTP. This spreadsheet will be expanded based on the TAG feedback and distributed as “rev2.”



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3. Please also discuss whether any needs identified in the sensitivities were used in any way to prioritize clusters or develop solutions.

Yes, sensitivities were used to help identify drivers for Needs and all cases were referenced to right-size solutions. However, that does not mean that every proposed solution will resolve all overloads in that cluster for all cases.

4. Please describe the methodology for prioritization of clusters for which the CTPC proposed solutions. In particular, please describe:

- a. The omission of any solutions for the New Bern OFW and North Sutton OFW clusters;
- b. The prioritization of clusters in DEC, which do not appear to capture many of the violations identified.

Many overloads and some clusters were dependent on resource siting decisions.

For example, the Buck cluster has some overloads that were not previously identified that only show up in cases with a Combined Cycle at Buck but not in the cases with 2 Combustion Turbines. When we exclude the overloads associated with the combined cycle, the remaining upgrades in the Buck cluster are already being addressed through the interconnection process.

For the New Bern OFW and North Sutton OFW, 500kV greenfield solutions were tested and will inform transmission and resource plans. However, the offshore wind generation is the only driver for building 500kV solutions in this study.

Future offshore wind development activities are pending both the results of the ARFI and how those ARFI results have informed the 2025 Carolinas Resource Plan. Therefore, until North Carolina Utilities Commission has had the opportunity to review and provide the Companies direction regarding both the ARFI results and the 2025 Carolinas Resource Plan, it would be premature to conduct additional evaluation of transmission solutions beyond the MVST preliminary recommendations and related sensitivities. Until additional guidance is received, we will continue to maintain the ROW option to enable a future Craven – Lenoir – Wake 500 kV line (from New Bern to Wake).



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5. Please provide any benefit quantification conducted for the selected solutions and alternatives considered.
 - a. If it has not already conducted such analysis, please indicate whether the CTPC plans to provide an estimate of the benefits attributable to the various alternatives considered for comparison.

Very limited benefit analysis has been carried out at this time. The preliminary analysis performed was in preparation for the next phase of the MVST study where a detailed cost-benefit analysis is performed for the preferred alternative solutions and the reference solutions (i.e. upgrading each overloaded facility in that cluster).

6. In previous comments, SELC, SACE, Sierra Club, and NCSEA had suggested specific solutions to be considered as a part of the CTPC MVST (i.e. a greenfield Durham - Parkwood 500-kV line). Is the CTPC still planning to consider those previously proposed projects?

Several solutions were initially evaluated but are not listed as alternatives in the presentation for any cluster. These options originated from previous studies and were not specifically designed for MVST Needs or any cluster. However, the most effective solutions were selected for further analysis and compared with additional alternatives developed from the results of the initial tests.

This list of initial solutions tested includes the Parkwood - Durham 500kV line, which only had a minor impact on reducing the loading of facilities identified in the MVST Needs so it is not being proposed as an MVST Solution. A complete list of solutions tested will be included in the "MVST Needs by Cluster rev2" spreadsheet.