Collaborative Transmission Plan identifies 17 major reliability projects

RALEIGH, N.C. -- Participants in the North Carolina Transmission Planning Collaborative (NCTPC), made up of representatives from the state’s electric utilities, have identified 17 major projects that will improve North Carolina’s electric transmission infrastructure as part of the 2020-2030 Collaborative Transmission Plan (“2020 plan”). The projects represent more than $804 million in investments during the next decade.

The major transmission projects identified in the 2020 plan are expected to be implemented during the next 10 years by the transmission owners to preserve system reliability and resiliency, support the growth of cleaner energy options, and improve economic electricity transfers across the transmission network. Major projects are defined as those requiring transmission investments of more than $10 million.

The 2020 plan report can be viewed on the NCTPC website under the Reference Documents section at nctpc.org/nctpc/home.jsp.

The 2020 plan includes one new Duke Energy Carolinas project and five new Duke Energy Progress projects. Appendices B and C in the 2020 report contain the specific details on each of the 17 major reliability projects identified in the plan.

In-service dates and cost estimates for some 2020 projects that are planned or underway have been revised from the previous plan report.

The NCTPC was formed in 2005 to develop a shared plan for electric transmission system enhancements in the state. Participants include Duke Energy Carolinas, Duke Energy Progress, ElectriCities of North Carolina, which serves public power communities across the state, and the North Carolina Electric Membership Corporation (NCEMC), which serves as the power supplier for most of the state’s electric cooperatives.

Since its inception in 2005, transmission projects totaling more than $1.98 billion have been identified in the NCTPC plans. More than $1.10 billion in projects have been placed in service through the end of 2020, $529 million are still in the planning stage and another $350 million were deferred until after 2030 or cancelled as a result of changing transmission system requirements. The plan is updated annually.

The NCTPC was established to provide participants and other stakeholders an opportunity to participate in the electric transmission planning process for North Carolina and develop a single coordinated transmission plan that includes reliability and local economic study transmission planning considerations. The group’s priority is to appropriately balance costs, benefits and risks associated with the use of transmission and generation resources.
Another goal of the NCTPC is to study the strength of North Carolina’s transmission infrastructure. The scope of the 2020 NCTPC study included a base reliability analysis for transmission needs to meet load growth between 2020 and 2030. For a variety of reasons, such as load growth, generation retirements, or power purchase agreements expiring, some load-serving entities (LSE) may wish to evaluate other resource supply options to meet future load demand. These resource supply options can be either in the form of transactions or some hypothetical generators added to meet resource adequacy requirements for this study. In 2020, the NCTPC also examined a Local Economic High Load Study scenario and a Public Policy Offshore Wind Study scenario.

The Local Economic High Load Study evaluated the impact of assumed high load growth in the Union and Cabarrus County areas of North Carolina. This study scenario analyzed the effect of a high load growth case (5-6% growth) on the transmission system in the 2025 and 2030 summer models. There are two 100-kV line issues identified by this study. Duke Energy is discussing alternative solutions with affected stakeholders that may resolve the issues, and have the potential to be included in a future base reliability plan depending on actual system load growth.

The Public Policy Offshore Wind Study evaluated the potential impact of offshore wind development in the state and the impact on the transmission system. It evaluated the following two scenarios:

- Scenario 1. Evaluate the potential for 2,400 MW of offshore wind generation injecting into Dominion's Landstown 230kV area and wheeled into Duke Energy Carolinas/Duke Energy Progress
- Scenario 2. Determine three least-cost injection points somewhere along the North Carolina coast and determine the transmission cost breakpoints for varying amounts of offshore wind generation injection at those sites up to 5,000 MW.

The analysis of the offshore wind study scenarios is still being performed. The study results are expected to be completed by the end of the first quarter of 2021 and will be published in a separate report.

“Through ongoing collaboration between Duke Energy, NCEMC, and ElectriCities, the North Carolina Transmission Planning Collaborative (NCTPC) and its stakeholders have produced a comprehensive 10-year transmission plan that will support the reliable and economic delivery of electric power across the Carolinas," said Mark Byrd, Duke Energy representative and chair of the NCTPC OSC. “The NCTPC also continues to provide a valuable forum for regulators and other stakeholders to remain informed on a variety of transmission-related topics.”

The NCTPC process includes active participation of other market participants and stakeholders through a Transmission Advisory Group (TAG), which is open to all interested parties. Stakeholders interested in joining the TAG or receiving information about the NCTPC process can sign up at nctpc.org/nctpc/home.jsp.
During the NCTPC process, an administrative consultant serves as a facilitator who chairs the TAG and solicits input from other stakeholders through the open TAG meetings. Richard Wodyka, the current NCTPC consultant, can be reached at rich.wodyka@gmail.com. If you have any comments or questions on the NCTPC process or the 2020-2030 Collaborative Transmission Plan Study Report, contact Mark Byrd at mark.byrd@duke-energy.com or 919-546-7937.

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