



# North Carolina Transmission Planning Collaborative

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## I. Transmission Planning Process

### A. Overview of the NCTPC Process

The NCTPC Process was established by the Participants to:

- 1) provide the Participants (Duke Energy Carolinas (DEC), Duke Energy Progress (DEP), North Carolina Electric Membership Corporation (NCEMC), and ElectriCities of North Carolina) and other stakeholders an opportunity to participate in the Transmission Planning Process for the areas of North Carolina and South Carolina served by the Participants;
- 2) preserve the integrity of the current reliability and least-cost planning processes;
- 3) expand the Transmission Planning Process to include analysis of increasing transmission access to supply resources inside and outside the Balancing Authority Areas of DEC and DEP; and
- 4) develop a single coordinated transmission plan for the Participants that includes reliability and economic considerations while appropriately balancing costs, benefits and risks associated with the use of transmission and generation resources.

The NCTPC Process is a coordinated Local Transmission Planning Process conducted on an annual basis. The entire, iterative process ultimately results in a single Local Transmission Plan that appropriately balances the costs, benefits and risks associated with the use of transmission, generation, and demand-side resources. The Local Transmission Plan will identify local transmission projects (Local Projects). A Local Project is defined as a transmission facility that is (1)

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located solely within the combined DEC-DEP transmission system footprint and (2) not selected in the regional transmission plan for purposes of regional cost allocation.

The Local Planning Process addresses transmission upgrades needed to maintain reliability and to integrate new generation resources and/or loads. The overall Local Planning Process includes several components:

- Reliability Planning Process
- Resource Supply Options Process
- Local Economic Study Process
- Local Public Policy Process

The Reliability Planning Process (base reliability study) evaluates each Transmission System's ability to meet projected load with a defined set of resources as well as the needs of firm point-to-point customers, whose needs are reflected in their transmission contracts and reservations. The Resource Supply Options Process is conducted to evaluate transmission system impacts for other potential resource supply options to meet future load requirements.

The overall Local Planning Process is designed such that there will be considerable feedback and iteration between the Reliability Planning Process and the Resource Supply Options Process. This is necessary as the alternative solutions from one process affect the alternative solutions in the other process.

The Local Economic Study Process allows the TAG participants to propose economic upgrades to be studied as part of the Local Planning Process. This process evaluates the means to increase transmission access to potential supply resources inside and outside the Balancing Authority Areas of the Companies. This economic analysis also provides the opportunity to study what transmission upgrades would be required to reliably integrate new resources.

The Local Public Policy Process identifies if there are any public policies that are driving the need for local projects. The OSC could identify itself or with input from TAG public policies that may drive the need for local transmission.

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The Oversight Steering Committee (“OSC”) manages the overall NCTPC Local Planning Process to develop the annual Local Transmission Plan. The Planning Working Group (“PWG”) supports the development of the NCTPC Process and coordinates the study development. The Transmission Advisory Group (“TAG”) provides advice and makes recommendations regarding the development of the NCTPC Process and the study results.

The final results of the Local Planning Process include summaries of the estimated costs and schedules to provide any transmission upgrades and/or additions needed to maintain a sufficient level of reliability necessary to serve customers. Throughout the Local Planning Process, TAG participants (including TAG participants representing transmission solutions, generation solutions, and solutions utilizing demand resources) may participate.

The purpose of the NCTPC Process is more fully described in the current Participation Agreement which is posted at <http://www.nctpc.org/nctpc/>.

### ***B. Reliability Planning and Resource Supply Options Processes***

The Reliability Planning Process is the Transmission Planning Process that has traditionally been used by the transmission owners to provide safe and reliable transmission service at the lowest reasonable cost. Through the NCTPC, this Transmission Planning Process was expanded to include the active participation of the Participants and input from other stakeholders through the TAG.

The Reliability Planning Process is designed to follow the steps outlined below and is initiated at the beginning of each calendar year. The OSC approves the scope of the reliability study, oversees the study analysis being performed by the PWG, evaluates the study results, and approves the final reliability study results. The Reliability Planning Process begins with the incumbent transmission owners’ most recent reliability planning studies and planned transmission upgrade projects.

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In addition, the PWG solicits input from the Participants for different scenarios on where to include alternative supply resources to meet their load demand forecasts in the study; this is known as the Resource Supply Options Process. This step provides an opportunity for the Participants to propose the evaluation of other resource supply options to meet future load demand due to load growth, generation retirements, or the expiration of purchase power agreements. The PWG analyzes the proposed interchange transactions and/or location of generators to determine if those transactions or generators create any reliability criteria violations. Based on this analysis, the PWG provides feedback to the Participants on the viability of the proposed interchange transactions or generator locations for meeting future load requirements. The PWG coordinates the development of the reliability study and the resource supply option study based upon the OSC-approved scope and prepares a report with the recommended transmission reliability solutions.

The overall Local Planning Process is designed such that there will be considerable feedback and iteration between the Reliability Planning Process and the Resource Supply Options Process. This is necessary as the alternative solutions from one process may affect the alternative solutions in the other process.

The results of the Reliability Planning Process include summaries of the estimated costs and schedules to provide any transmission upgrades and/or additions: (i) needed to maintain a sufficient level of reliability necessary to serve the native load of all Participants and (ii) needed to reliably support the resource supply options studied. The reliability study results are reviewed with the TAG, and the TAG participants are given an opportunity to provide comments on the results. All TAG feedback is reviewed by the OSC for consideration for incorporation into the final Local Transmission Plan.

### ***C. Local Economic Study Process***

The Local Economic Study Process allows the TAG participants to propose

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economic hypothetical transfers to be studied as part of the Local Planning Process. The Local Economic Study Process provides the means to evaluate the impact of potential supply resources inside and outside the BAAs of the Transmission Providers. This local economic analysis provides the opportunity to study what transmission upgrades would be required to reliably integrate new resources.

The Local Economic Study Process begins with the TAG members proposing scenarios and interfaces to be studied. The proposed scenarios and interfaces are compiled by the PWG and then evaluated by the OSC to determine which scenarios impact the NCTPC footprint, but are not regional in nature. The TAG participants will then select a maximum of three scenarios that will be studied within the current NCTPC planning cycle.

The OSC approves the scope of the local economic study scenarios (including any changes in the assumptions and study from those used in the reliability analysis), oversees the study analysis being coordinated by the PWG, evaluates the study results, and approves the final local economic study results.

The PWG coordinates the development of the local economic studies based upon the OSC-approved scope and prepares a report which identifies recommended transmission solutions that could increase transmission access.

The results of the Local Economic Study Process include the estimated costs and schedules to provide the increased transmission capabilities. The local economic study results are reviewed with the TAG, and the TAG participants are given an opportunity to provide comments on the results. All TAG feedback is reviewed by the OSC for consideration for incorporation into the final Local Transmission Plan.

While the overall NCTPC Process includes both a Reliability Planning Process and the Local Economic Study Process, some planning cycles may only focus on the Reliability Planning Process if stakeholders do not request any economic study scenarios for a particular planning cycle.

### ***D. Local Public Policy Process***

Each year, the OSC will determine if there are any public policies driving the need for local transmission upgrades. Through this process, the OSC will seek input from TAG participants to identify any public policy impacts to be evaluated as part of the Local Planning Process. The OSC may itself identify public policies to be evaluated. The OSC will use the criteria below to determine if there are any public policies driving the need for local transmission as follows:

- The public policy must be reflected in state, federal, or local law or regulation (including order of a state, federal, or local agency).
- There must be the existence of facts showing that the identified need cannot be met absent the construction of additional transmission facilities.

### ***E. Local Transmission Plan***

Once the reliability and local economic studies are completed, including any evaluations due to public policies, the OSC evaluates the results and the PWG recommendations to determine if any proposed economic projects and/or resource supply option projects will be incorporated into the final Local Transmission Plan. If so, the initial plan developed based on the results of the reliability studies is modified accordingly. This process results in the development of a single Local Transmission Plan that appropriately balances the costs, benefits and risks associated with the use of transmission and generation resources. This plan is reviewed with the TAG, and the TAG participants are given an opportunity to provide comments. All TAG feedback is reviewed by the OSC for consideration for incorporation into the final Local Transmission Plan.

The annual Local Transmission Plan information is available to Participants for identification of any alternative least cost resources for potential inclusion in their respective Integrated Resource Plans. Other stakeholders can similarly use this information for their resource planning purposes.