

Multi-Value Strategic Transmission Planning

Original Document - Effective (04/01/2024)

Overview

Proactive, forward-looking, strategic transmission planning that considers evolving supply and demand conditions more comprehensively can enable the identification and resolution of potential reliability problems and economic constraints before they affect the transmission system, which can facilitate the selection of more efficient or cost-effective transmission facilities to meet transmission needs. The CTPC incorporates this type of strategic transmission planning process for identifying local transmission projects as the Multi-Value Strategic Transmission (MVST) planning process. The MVST process 1) adopts a forward-looking/ proactive approach, 2) uses a scenario-based approach to account for different possible futures, 3) accounts for multiple benefits, 4) avoids line-specific assessments and piecemeal planning, and 5) allows for meaningful stakeholder input into the process. If an MVST scenario being proposed by a TAG stakeholder is more Regional in nature, a TAG Participant can submit a study request to SERTP.

The following sections describe the MVST process, however, are not meant to circumvent any of the requirements set forth in Attachment N-1 of the DEC/DEP Joint Open Access Transmission Tariff (OATT). The STRATEGIC PLANNING SCENARIO PROPOSAL FORM can be found at the end of this document.

Multi-Value Strategic Transmission

Study Process for MVST Projects

On at least a triennial basis, the study process for MVST Projects allows the OSC and TAG participants to propose different scenarios for evaluation of new resource supply options, changing load dynamics, transmission solutions requiring longer lead times, generator retirements, and/or economic development opportunities (“Strategic Planning Scenarios”). Strategic Planning Scenarios may consider, but are not limited to considering, (1) federal and state laws and regulations that affect the future resource mix and demand; (2) federal and state laws and regulations that affect decarbonization and electrification; (3) utility integrated resource plans approved pursuant to either N.C. G.S. § 62-110.1 or S.C. Code Ann. § 58-37-40 and long-term expected supply obligations for load serving entities; (4) trends in technology and fuel costs within and outside of the electricity supply industry, including shifts toward electrification of buildings and transportation; (5) resource retirements and replacements or expiration of power purchase agreements; (6) generator interconnection requests and withdrawals, and/or (7) the need for transmission during high-impact, low frequency events.

At the beginning of each annual planning cycle, the PWG will recommend to the OSC and the OSC will decide whether or not to initiate a MVST Project Study process more frequently than according to the minimum triennial basis.

Scenario Development

At least 30 calendar days prior to a scheduled Assumptions Meeting the OSC will seek input from TAG participants on Strategic Planning Scenarios to evaluate. The form to propose a Strategic Planning Scenario is included at the end of this document. Proposed Strategic Planning Scenarios must specifically identify models, assumptions, and data proposed to be used in the study process. Proposed Strategic Planning Scenarios must also identify an appropriate planning horizon for the proposed scenario(s) to be studied.

The OSC may itself also identify Strategic Planning Scenarios to be presented at an Assumptions Meeting.

The PWG will determine if it would be efficient to combine and/or cluster any of the proposed Strategic Planning Scenarios and will also determine if any of the proposed Strategic Planning Scenarios are of a Regional nature. If the proposed Strategic Planning Scenario is Regional in nature, the OSC will direct the TAG participants to submit the regional study requests to the SERTP.

The OSC will review the PWG analysis of the proposed Strategic Planning Scenarios to be studied, approve the compiled study list, and provide the study list, including study criteria, assumptions, and methodology to the TAG at the Assumptions Meeting(s) applicable to the MVST Study Process. If there are more than three proposed Strategic Planning Scenarios proposed by TAG participants that impact the CTPC footprint, and are not Regional in nature presented at the Assumptions Meeting, the TAG participants will select within 14 calendar days of the Assumptions Meeting a maximum of three proposed Strategic Planning Scenarios proposed by TAG participants that will be studied within a single CTPC planning cycle. If consensus cannot be reached as to which scenarios to study within 14 calendar days of the Assumptions Meeting, the choice will be resolved through the TAG Sector Voting Process. The TAG participants may request that the three scenarios be combined or clustered. A minimum of three Strategic Planning Scenarios will be evaluated for each Multi-Value Strategic Transmission Project study process.

There will be no charge to the TAG participants for the three proposed Strategic Planning Scenarios studies selected by the TAG participants. However, if a particular TAG participant wants the CTPC to evaluate a scenario that was not chosen by the TAG participants, then the TAG participant can request to have the CTPC conduct the study. The CTPC Participants will evaluate this request and will conduct the study if the study can be reasonably accommodated, however the cost of conducting this additional study will be allocated to that specific TAG participant.

Study Criteria, Assumptions, and Methodology

The Companies will develop the necessary Change Case models as required to evaluate scenarios directed by the Study Scope Document for MVST Projects. Such Change Case models will also be reviewed with the PWG to ensure that they represent the study criteria, assumptions, and methodology approved by the OSC in the Study Scope Document. Upon request, TAG participants will be provided the Change Case models, subject to CEII and confidentiality requirements. For MVST Projects, TAG participants may provide input to the PWG regarding whether the models accurately represent the Study Scope Document approved by the OSC during the Needs Meeting.

MVST Study Identified Transmission Needs

Results from the technical analysis are reported to identify transmission elements approaching their limits such that all NCTPC Participants are made aware of potential issues and appropriate steps can be identified to correct these issues, including the potential of identifying previously undetected problems.

The Companies shall schedule and facilitate a minimum of one TAG meeting in the planning cycle where a MVST study is performed to review the identified criteria violations, transmission elements approaching their limits, and resulting system needs, if any, that may drive the need for a Local Project (Needs Meeting). The Needs Meeting may be scheduled no fewer than 25 calendar days after the Assumptions Meeting. At the Needs Meeting, the Companies will review the identified system needs and the drivers of those needs, based on the application of its criteria, assumptions, and methodology in the Study Scope Document. The Companies shall share with the Administrator for posting to the CTPC website the identified criteria violations and drivers no fewer than 14 calendar days in advance of the Needs Meeting. TAG participants may provide comments on the criteria violations and drivers to the PWG for consideration prior to, at, or following the Needs Meeting. The Companies shall review and consider comments that are received within 14 calendar days of the Needs Meeting and may respond or provide feedback as appropriate.

Sufficient information will be made available, subject to CEII and confidentiality restrictions, to enable TAG participants to replicate the results of MVST studies. Study results are made available to the TAG participants for review and comment.

MVST Study Proposed Solutions to Identified Transmission Needs

After the Companies have considered comments on the system needs, the Companies will develop potential solutions to address the needs. The system needs will be evaluated against the Non-Traditional Solution (NTS) screen. This screen considers any bulk benefits (capacity, energy, and ancillaries) that an NTS may be able to provide. In addition, Grid Enhancing Technologies (GETs) will be considered as potential alternative solutions for each system need, as appropriate.

No fewer than 25 calendar days after the Needs Meeting, the Companies shall schedule and facilitate a minimum of one TAG meeting (Solutions Meeting) per planning cycle where a MVST study is performed to review potential solutions identified by the PWG. The Companies shall share with the Administrator and post their potential solutions, as well as any alternatives, including non-wire alternatives, identified by the PWG or TAG participants, no fewer than 14 calendar days in advance of the Solutions Meeting. TAG participants may provide comments on the potential solutions to the PWG for consideration either prior to or following the Solutions Meeting, including but not limited to proposals for alternative transmission or non-wire alternative solutions to address the identified need, as well as other reliability, economic and/or public policy transmission needs. To the extent TAG participants propose alternative solutions, they shall provide to the PWG the necessary information (cost, performance, lead time to install, etc.) for the alternative solutions to be compared with other alternatives. The PWG shall review and consider comments and alternative solutions that are received within 14 calendar days of the Solutions Meeting and may respond or provide feedback as appropriate. To the extent a TAG participant proposes an alternative solution that is not selected by the PWG for the preferred Local Transmission Plan, the draft "Local Transmission Plan Report" will explain why the alternative was not selected.

All solution options that satisfactorily resolve an identified transmission problem need shall be given consideration on a comparable basis.

A solution that is seeking regional cost allocation must be submitted in accordance with the procedures set forth in Part II – Regional Transmission Planning of Attachment N-1 of the DEC/DEP Joint OATT. and will be evaluated through the SERTP Process.

The Companies will estimate the costs for each of the proposed local solutions (e.g., cost, cash flow, present value) and develop a rough schedule estimate to implement the solution. Additionally, the Companies will quantify the benefits of the proposed local solutions based on each solution's impact on production costs, reliability, capacity, losses, and alignment with policy goals. This information is reviewed and discussed by the PWG and during Solutions Meeting.

MVST Projects and the Local Transmission Plan Report

The PWG compares all of the alternatives and selects the preferred solution by balancing the solutions' costs, benefits, and associated risks. Competing solutions will

be evaluated against each other based on a comparison of their relative economics, timing, feasibility, and effectiveness of performance.

The PWG selects a preferred set of solutions that provides the most reliable and cost-effective solution while prudently managing the associated risks. The PWG provides the OSC and the TAG participants with their recommendations based on this selection process to obtain their input.

After the Solutions Meeting, the PWG prepares a draft "Local Transmission Plan Report" based on the study results and the recommended solutions and provides the draft to the OSC for review. The draft Report describes the plan in a manner that is understandable to the TAG participants (e.g., describing any needs, the underlying assumptions, applicable planning criteria, and methodology used to determine the need), rather than simply reporting engineering results. The report includes a comprehensive summary of all the study activities as well as the recommended solutions including estimates of costs and construction schedules and a summary of the PWG's selection evaluation. The benefits evaluated for the recommended MVST solutions will be described in the draft Local Transmission Plan Report.

After review and approval by the OSC, the Administrator forwards the draft Local Transmission Plan Report to the TAG participants and posts the draft Local Transmission Plan Report on the CTPC website for their review and discussion. The Companies shall schedule and facilitate a meeting to review the draft Local Transmission Plan Report. TAG participants may provide comments to the PWG on the draft Local Transmission Plan Report. TAG participants shall have at least 14 calendar days after it is posted on the CTPC website to comment on the draft Local Transmission Plan Report. The PWG members are the technical points of contact that can respond to questions regarding modeling criteria, assumptions, and data underlying the Report. The TAG participants may discuss, question, or propose alternatives for any upgrades identified by the draft Report. The PWG shall review and consider comments that are received on or before the 14th calendar day after the draft Local Transmission Plan Report is posted on the CTPC website.

The OSC evaluates the results and draft Local Transmission Plan Report, the PWG recommendations, and the TAG participants' input. No fewer than 14 calendar days after the draft Local Transmission Plan Report is posted on the CTPC website, the OSC approves the final Local Transmission Plan for posting on the NCTPC Website. The Plan also is posted on the Companies' OASIS and distributed to the TAG participants.

Only MVST Projects approved pursuant to Attachment N-1 Section 5.6 of the DEC/DEP Joint OATT, are included in the Local Transmission Plan.

STRATEGIC PLANNING SCENARIO PROPOSAL FORM

Date of Proposal: _____

TAG Participant Sponsor(s) of Proposal: _____

Contact Information for Proposal Sponsors:

Name: _____

Phone: _____

Email: _____

Completed forms must be emailed to the CTPC Administrator at least 30 days prior to the Assumptions Meeting

1. GENERAL DESCRIPTION OF PROPOSED STRATEGIC PLANNING SCENARIO

2. PROPOSED MODELS TO BE USED AND REASON FOR INCLUSION

3. PROPOSED ASSUMPTIONS TO BE USED AND WHY

4. PROPOSED DATA SOURCES TO BE USED

(Include data sources to support assumptions proposed in #3. For example, include proposals such as a reference to an IRP portfolio, a load forecast, an external dataset, etc.)

5. PROPOSED PLANNING HORIZON TO BE USED FOR SCENARIO AND WHY

6. (Optional) SUGGESTED BENEFIT METRICS AND ASSOCIATED
METHODOLOGY FOR CONSIDERATION IN EVALUATING POTENTIAL
SOLUTIONS
