



TAG Meeting

March 15, 2023

Webinar



TAG Meeting Agenda

- 1. Administrative Items – Rich Wodyka**
- 2. 2023 Study Activities and Study Scope Update – Bill Quaintance**
- 3. NCTPC Planning Study Process Report – Sammy Roberts**
- 4. Regional Studies Update – Bob Pierce**
- 5. 2023 TAG Work Plan – Rich Wodyka**
- 6. TAG Open Forum – Rich Wodyka**



2023 Study Activities and Study Scope Update

Bill Quaintance
Duke Energy Progress



Studies Proposed for 2023

- **Annual Reliability Study**
 - Assess DEC and DEP transmission systems' reliability, and develop a single Collaborative Transmission Plan
- **Local Economic Studies / Public Policy Studies**
 - No Local Economic Study Requests Received
 - 2 Public Policy Requests Received
 - Currently being evaluated to develop a common scope for 2023
- **Resource Supply Options**
 - Power Transfers studied every other year. Last studied in 2022, next study in 2024.



2023 Reliability Study Scope

- **Base reliability case analysis – 2028 summer peak, 2028/29 winter peak, 2033 summer peak, 2033/34 winter peak (final selection informed by PP scope)**
 - “All Firm Transmission” cases will be developed which will consider all confirmed long term firm transmission reservations with roll-over rights applicable to the study years
 - DEC and DEP generation down cases will be created from the common Base Cases



2 Public Policy Study Requests

➤ NC Public Staff Request

- Study the retirement of coal generation and integration of new resources as outlined in the Carbon Plan**
- Solar additions, including solar + storage (locations informed by prior requests)**
- Stand alone storage**
- Onshore and offshore wind**
- Combined cycle**
- Perform similar to generator interconnection study**



2 Public Policy Study Requests

- **Clean Energy Stakeholders**
 - **Also focused on Carbon Plan - additional transmission needed to meet 2030 targets**
 - **Request 2 different volumes of solar addition (9.3 GW and 12.5 GW)**
 - **Request 3 different distributions (locations) of solar additions (queue-based, zone-based, procurement-based)**
 - **Start with Carbon Plan Near Term Expansion Plan**



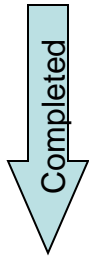
2 Public Policy Study Requests

Development of a single Public Policy Study

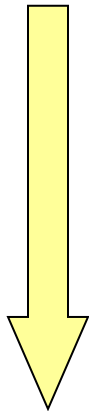
- **Had discussions with both study requestors**
- **Currently developing a single combined study scope to address both study requests**
- **Will continue discussions with both study requestors once the study scope is developed**
- **TAG will receive the final 2023 Study Scope of Work for review and comment once there is an agreement with the study requestors**



Study Process Steps



- 1. Assumptions Selected**
- 2. Study Criteria Established**
- 3. Study Methodologies Selected**
- 4. Models and Cases Developed**
- 5. Technical Analysis Performed**
- 6. Problems Identified and Solutions Developed**
- 7. Collaborative Plan Projects Selected**
- 8. Study Report Prepared**





Study Assumptions Selected

- **Study Years for reliability analyses, select from:**
 - **Near-term: 2028 Summer, 2028/29 Winter**
 - **Longer-term: 2033 Summer, 2033/34 Winter**
- **LSEs provided:**
 - **Input for load forecasts and resource supply assumptions**
 - **Dispatch order for their resources**
- **Adjustments may be made based on additional coordination with neighboring transmission systems**



Study Criteria Established

- **NERC Reliability Standards**
 - Current standards for base study screening
 - Current SERC Requirements
- **Individual company criteria**



Study Methodologies Selected

- **Thermal Power Flow Analysis**
- **Each system (DEC and DEP) will be tested for impact of other system's contingencies**



Models and Cases

- **Start with 2022 series MMWG cases**
- **Latest updates to detailed models for DEC and DEP systems will be included**
- **Planned transmission additions from updated 2022 Plan will be included in models**

Technical Analysis

- **Conduct thermal screenings of the cases**



Identify Problems and Develop Solutions

- **Identify limitations and develop potential alternative solutions for further testing and evaluation**
- **Estimate project costs and schedule**



Collaborative Plan Projects Selected

- **Compare all alternatives and select preferred solutions**

Study Report Prepared

- **Prepare draft report and distribute to TAG for review and comment**



Questions ?





NCTPC Planning Study Process Changes

Sammy Roberts
Duke Energy Progress



NCTPC Planning Study Process Changes

Track with FERC NOPR¹ and Other Regions' Local Transmission Planning Processes to enable least cost planning for resources and load

NCTPC Transmission Planning Process Changes to Consider...

- Attributes from FERC NOPR on Regional Transmission Planning Processes
 - Transparency and Coordination
 - Strategic transmission Planning
 - ❖ Long-term scenario planning that evaluates transmission needs based on changing resources and demands
- Clear decision-making paths for elevating transmission solution development to regional level

¹ Docket No. RM21-17-000 Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection (Issued April 21, 2022)



NCTPC Planning Study Process Changes

NCTPC Transmission Planning Process Changes to Consider...

Transparency and Coordination with the Local Transmission Planning Process

TAG Stakeholder Meetings

- **Assumptions Meeting** – NCTPC to review the criteria, assumptions, and methodology the PWG intends to use to identify needs and transmission solutions to include in the Local Transmission Plan
- **Needs Meeting** – NCTPC 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.
 - ❖ Models and sufficient information will be made available, subject to CEII and confidentiality restrictions, to enable TAG participants to replicate the results of planning studies reviewed at the Needs Meeting
- **Solutions Meeting** - NCTPC will review potential solutions and any alternatives considered as studied and identified by the PWG.



NCTPC Planning Study Process Changes

NCTPC Transmission Planning Process Changes to Consider...

Four pathways with the Local Transmission Planning process...

- 1) Local Projects that are necessary to preserve reliability and comply with applicable reliability standards (“**Local Reliability Projects**”),
- 2) Local Projects that will increase transmission access to potential supply resources inside and outside the Control Areas of the Companies based on TAG participant requested economic studies (“**Local Economic Projects**”)
- 3) Local Projects to satisfy Public Policy Requirements¹ (“**Public Policy Projects**”); and/or
- 4) Local Projects that will integrate new generation resources and/or loads and provide other benefits in a least cost manner (“**Multi-value Strategic Transmission Projects**”).
 - ❖ NCTPC multi-value strategic transmission planning efforts to support ISOP’s linkage between the bulk power system and DERs

¹ Docket No. RM10-23-000: Order No 1000 – defines Public Policy Requirements on page 9



NCTPC Planning Study Process Changes

March 2023

June 2023

September 2023

October 2023

2024

Review and Collect
Input on Local
Transmission
Planning Process
Change High-level
Road Map with
PWG, OSC and TAG

Present and Collect
Input on Local
Transmission
Planning Process
Change Road Map
Proposal to PWG,
OSC and TAG

Incorporate
Descriptions of
Local Transmission
Planning Process
Changes into the
September Carbon
Plan Filing

File Changes to
Attachment N-1 of
the OATT with
FERC to Align with
Local Transmission
Plan Process
Changes

Implement Local
Transmission
Planning Process
Changes
Accepted by
FERC



Questions ?





Regional Studies Reports

Bob Pierce
Duke Energy Carolinas



SERC Long Term Working Group Update



SERC Long Term Working Group

- Have begun work on 2023 series of LTWG cases
- 2027 LTWG Summer Study to be made public with FERC 715 filings.
 - Transfer analysis between subregions showed nothing unexpected for DEC and DEP in the results
 - Large transfer from PJM to MISO to mimic extreme weather event
 - Scale load in subregion to identify limit to imports



SERTP



SERTP

- **1st Quarter Meeting was held virtually on March 14th.**
- **Determined Economic Planning Studies to be performed for 2023**
 - **Requests include one with DEP import from PJM to support generation retirement**
- **Training session topic – Transfer Analysis**



<http://www.southeasternrtp.com/>



NERC



NERC

TPL-001-5 Compliance begins 7/1/23

- **Study of protection system single points of failure**
- **Study of known outages in the NTPH**



Questions ?





2023 TAG Work Plan

Rich Wodyka
Administrator



2023 NCTPC Overview Schedule

Reliability Planning Process

- Evaluate current reliability problems and transmission upgrade plans
 - Perform analysis, identify problems, and develop solutions
 - Review Reliability Study Results

Local Economic Planning Process

- Propose and select Local Economic Studies and Public Policy Study scenarios
 - Perform analysis, identify problems, and develop solutions
 - Review Local Economic Study and Public Policy Results

Coordinated Plan Development

- Combine Reliability and Local Economic Study and Public Policy Results
 - OSC publishes DRAFT Plan
 - TAG review and comment

TAG Meetings





January - February – March

Fourth Quarter TAG Meeting – **January 18, 2023**

➤ **2022 Study Update**

- ✓ Receive Final DRAFT of 2022 Collaborative Transmission Plan Report

➤ **TAG is invited to provide any additional comments or questions to the OSC on the 2022 Collaborative Transmission Plan.**

- ✓ Provide input by **February 8, 2023** to Rich Wodyka (rich.wodyka@gmail.com)



January - February – March

➤ 2023 Study – Finalize Study Scope of Work

- ✓ Receive request from OSC to provide input on proposed Local Economic Study scenarios and interfaces for study (Request sent on January 3rd)
 - *TAG requested to provide input to the OSC on proposed Local Economic Study scenarios and interfaces for study*
 - Provide input by **February 8, 2023** to Rich Wodyka (rich.wodyka@gmail.com)
- ✓ Receive request from OSC to provide input in identifying any public policies that are driving the need for local transmission (Request sent on January 3rd)
 - *TAG requested to provide input to the OSC in identifying any public policies that are driving the need for local transmission for study*
 - Provide input by **February 8, 2023** to Rich Wodyka (rich.wodyka@gmail.com)
- Receive final 2023 Study Scope of Work for review and comment
 - *TAG review and provide comments to the OSC on the final 2023 Study Scope of Work*



January - February – March

- ***First Quarter TAG Meeting – March 15, 2023***

- **2023 Study Update**
 - ✓ **Receive a progress report on the 2023 Study Activities**
 - ✓ **Receive an update on the 2023 Study Scope of Work and any study scenarios that are driving the need for local transmission**



April - May – June

Second Quarter TAG Meeting – TBD

➤ 2023 Study Update

- **Receive a progress report on Study Activities**
- **Receive final 2023 Study Scope of Work for review and comment**
- **Receive update status of the upgrades in the 2022 Collaborative Plan**



July - August – September

Third Quarter TAG Meeting – TBD

➤ 2023 Study Update

- Receive a progress report on the Study Activities and Preliminary Study Results
- TAG is requested to provide feedback to the OSC on the technical analysis performed, the problems identified as well as proposing alternative solutions to the problems identified



October - November - December

Fourth Quarter TAG Meeting – TBD

➤ 2023 Study Update

- TAG will receive feedback from the OSC on any alternative solutions that were proposed by TAG members
- Receive and discuss Final DRAFT of the 2023 Collaborative Transmission Plan Report

➤ 2024 Study Scope

- Discuss potential Study Scope scenarios for 2024 studies



Questions ?





TAG
Open Forum Discussion

Comments or Questions?