



TAG Meeting

March 14, 2016

Webinar



TAG Meeting Agenda

- 1. Administrative Items – Rich Wodyka**
- 2. Joint Inter-Regional Study Follow up Report – Sam Waters**
- 3. 2016 Study Activities and Study Scope Update – James Manning**
- 4. Regional Studies Update – Bob Pierce**
- 5. 2016 TAG Work Plan Update – Rich Wodyka**
- 6. TAG Open Forum – Rich Wodyka**



**Status Report on the
Joint NCTPC/MISO/PJM Study of the
PJM 2016/17 Base Residual Capacity
Auction Results**

Presented at the NCTPC Transmission Advisory Group

by

Sam Waters

General Manager, Transmission Planning

Duke Energy

March 14, 2016



Joint Study

Current Status

- **The study was completed and results presented to the TAG on October 9, 2015.**
- **The operating guide agreed to by PJM and Duke Energy was finalized and signed, and will become effective June 1, 2016.**
- **A letter was sent to the North Carolina Commission on December 14, 2015 informing the Commission of the completion of the operating guide and providing a copy of the letter from PJM (dated November 20, 2015) agreeing to work with the NCTPC on future capacity import limit calculations and provide information on capacity auction results.**
- **The NCUC responded to the notification on February 8, 2016 acknowledging completion of the studies, and requesting that Duke inform the Commission and Public Staff if the operating guide is exercised beyond curtailment of non-firm transactions.**



Questions ?





2016 Study Activities and Study Scope Update

**James Manning
NCEMC**

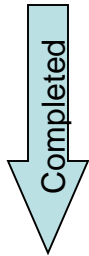


Studies for 2016

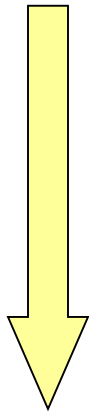
- **Annual Reliability Study**
 - **Assess DEC and DEP transmission systems' reliability and develop a single Collaborative Transmission Plan**
- **Additional stress tests as part of Reliability Planning Process**
 - **More details to follow**
- **No Local Economic Study nor Public Policy Study**



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:**
 - Near-term: 2021 Summer, 2021/2022 Winter
 - Longer-term: 2026 Summer
- **LSEs provided:**
 - Input for load forecasts and resource supply assumptions
 - Dispatch order for their resources
- **Interchange coordinated between Participants and neighboring systems**



Study Assumptions (Cont'd)

DEP Western Area study assumptions:

- **The OATT LGIA request System Impact Study is currently underway for the two proposed 1x1 combined cycle generating units at Asheville Plant**
- **Transmission:**
Transmission required for the proposed new units is not in the scope of this study. No new transmission upgrades associated with the proposed new generation from either DEP or DEC systems is included.



Study Assumptions (Cont'd)

DEP Western Area study assumptions:

➤ Firm imports:

- Total of 436 MW firm interchange being imported:
 - 400 MW from CPLE
 - 22 MW from SCPSA for Waynesville
 - 14 MW from TVA

➤ Planned generation

- Asheville 1 and 2 coal units shut down for all cases
- Resource dispatch order:
 - Walters (112 MW)
 - Marshall (4 MW)
 - Asheville CTs (370 MW)
 - Asheville 230kV hypothetical generation (280 MW)
 - Asheville 115 kV hypothetical generation (TBD)



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**



Past Studies' Alternate Scenarios

- **Two years ago**
 - **Special Interregional Joint Study requested by NCUC involving NCTPC, PJM and MISO assessing the congestion and reliability impacts on the transmission grid in NC from about 7500 MW of external generation clearing in PJM's capacity auction for 2016/2017 delivery year**
- **Last year**
 - **Hypothetical 1000 MW import/export scenarios**
 - **Coordination with PJM for modeling transfers**



Past Economic Study Requests

- **Two years ago**
 - **250 MW transfer from TVA to CPLW was studied**
- **Last year**
 - **661 MW transfer from TVA Shelby 500 kV Sub to DEC/DEP control areas**
 - **Forced outage(s) of multiple nuclear units on DEC and DEP systems of Westinghouse 1980's vintage**



Local Economic Study Requests

- **Propose economic hypothetical scenarios to be studied as part of the transmission planning process**
- **Requests can include in, out and through transmission service**
- **Official TAG request was distributed in January 2016**
- **No requests received from stakeholders**



Public Policy Study Requests

- **Provide input on public policies that are driving the need for local transmission for study**
- **Official TAG request was distributed in January 2016**
- **No requests received from stakeholders**



2016 Alternate Scenarios Selected

- **Simultaneous outage of both units at Brunswick Nuclear Plant on DEP system**
- **Identify permanent transmission upgrades to possibly eliminate selected operating procedures currently in effect on DEC and DEP systems for mitigating reliability violations under peak operating conditions**



Base Case Model Development

- **Start with 2015 series MMWG cases**
- **Latest updates to detailed models for DEC and DEP systems will be included**
- **Adjustments will be made based on additional coordination with neighboring transmission systems**
- **Planned transmission additions from updated 2015 Plan will be included in models**



Technical Analysis

- **Conduct thermal screenings of the 2021S, 2021/22W and 2026S base cases**
- **Conduct thermal screenings for additional scenarios for 2021S, 2021/22W and 2026S base cases**



Problems Identified and Solutions Developed

- **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 ?





Regional Studies Reports

Bob Pierce
Duke Energy Carolinas



Questions ?





2016 TAG Work Plan Update

Rich Wodyka
Administrator



2016 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

- No Local Economic Studies or Public Policy Studies were proposed by Stakeholders

Coordinated Plan Development

- Reliability Study Results
 - OSC publishes DRAFT Plan
 - TAG review and comment

TAG Meetings





2016 TAG Work Plan

January – February - March

- **2016 Study – Finalize Study Scope of Work**
 - **Receive final 2016 Reliability Study Scope for comment**
 - *Review and provide comments to the OSC on the final 2016 Study Scope – **Provide Comments by March 31st***
 - ✓ **Receive request from OSC to provide input on proposed Local Economic Study scenarios and interfaces for study**
 - *Provide input to the OSC on proposed Local Economic Study scenarios and interfaces for study – **No Requests***
 - ✓ **Receive request from OSC to provide input in identifying any**
 - *Provide input to the OSC in identifying any public policies that are driving the need for local transmission for study – **No Requests***



January – February - March

First Quarter TAG Meeting – March 14th Webinar

➤ **2016 Study Update**

- ✓ **Receive a progress report on the Reliability Planning study activities and 2016 Study Scope**
- ***Provide comments on the final 2016 Study Scope to Rich Wodyka at rawodyka@aol.com by March 31st.***



April - May - June

Second Quarter TAG Meeting – TBD

➤ 2016 Study Update

- **Receive a progress report on the Reliability Planning study activities**
- **Receive update status of the upgrades in the 2015 Collaborative Plan**



July – August – September

➤ 2016 Study Update

- **Receive a progress report on the Reliability Planning study activities and preliminary results**
- **TAG will be requested to provide input to the OSC and PWG on the technical analysis performed, the problems identified as well as proposing alternative solutions to the problems identified**

➤ 2016 Selection of Solutions

- **TAG will receive feedback from the OSC on any alternative solutions that were proposed by TAG members**



July – August – September

Third Quarter TAG Meeting – TBD

➤ 2016 Study Update

- **Receive a progress report on the Reliability Planning study activities and preliminary results**



October - November - December

➤ 2016 Study Update

- **Receive and comment on final draft of the 2016 Collaborative Transmission Plan report**
- **Discuss potential study scope for 2017 studies**



October - November - December

Fourth Quarter TAG Meeting – December TBD

➤ 2016 Study Update

- Receive presentation on the final draft report of 2016 Collaborative Transmission Plan**
- Discuss potential study scope for 2017 studies**



Questions ?





TAG
Open Forum Discussion

Comments or Questions?