

**North Carolina Transmission Planning Collaborative
Oversight / Steering Committee (OSC)
Meeting Highlights
July 13, 2017
Webinar/Teleconference Meeting
10:00 AM - 11:30 AM ET**

John Lemire, Chairman	NCEMC
Edgar Bell	Duke Energy Carolinas
Bob Pierce	Duke Energy Carolinas
Orvane Piper	Duke Energy Carolinas
Mark Byrd	Duke Energy Progress
Bill Quaintance	Duke Energy Progress
Luis Fondacci	NCEMC
Marty Berland	ElectriCities
Kevin Josupait	ElectriCities
Rich Wodyka	Consultant Administrator

Administrative

OSC Meeting Minutes and Highlights

- The June 12, 2017 OSC Meeting Minutes and Highlights were reviewed and approved.

TAG Meeting Presentations

- Rich Wodyka led the OSC review and discussion of the proposed TAG meeting presentations for later in the afternoon.

2017 Study Activities Update

- Orvane Piper reported that Duke and Progress have completed the three base case study models and they have begun running the various study scenarios for the analysis identified in the approved 2017 study scope of work. Orvane highlighted the 2017 study scope which includes the annual reliability assessment along with the evaluation of 16 hypothetical resource supply scenarios. He noted that for this year's study the resource supply options will be evaluated on a winter peaking case (2027) versus a summer peaking case. Finally, Orvane reported that he would expect to be able to present the

2017 preliminary study results at the next TAG meeting, likely in September.

NCTPC 2016 Collaborative Transmission Plan Update

- Mark Byrd reviewed the 2017 mid-year update to the 2016 Collaborative Transmission Plan. He highlighted the following changes: one DEP project was completed in early 2017; seven DEP project cost estimates increased and one DEC project decreased (net change of + \$68M); one DEC project was accelerated by 6 months; and the total reliability project cost estimates changed from \$214M to \$282M. Mark noted that some of the DEC project cost estimate increases reflect a correction on the way the project costs were previously reported (not fully loaded) versus how the costs should have been reported (fully loaded). All future project cost estimates will be reported as fully loaded costs.

Regional Updates

SERC LTSG Update

- Bob Pierce reported that the SERC long term study group has completed building their 2017 LTSG series of cases and the study analysis has begun. LTSG has also started building their 2017 series of MMWG cases. The Firm Flow Task force activities have been completed.

SERTP

- Bob Pierce reported on the SERTP activities. The SERTP group 2nd Quarter Meeting was held on June 20th. The group has selected the following list of 5 economic transfer studies for this year:
 - Santee Cooper Border to PJM Border – 300 MW
 - Southern Company to Santee Cooper Border – 500 MW
 - TVA to FRCC Border – 500 MW
 - TVA to PJM Border – 500 MW
 - TVA to Duke Energy Carolinas – 300 MW

CTCA Studies Update

- Bob Pierce reported that the 2016 CTCA Study Report has been distributed and posted on the Duke Energy OASIS and the NCTPC website. He noted that the study evaluated the 2018/19 winter peak and the 2022 summer peak that includes the VC Summer 2-3 units. The study results indicated that the

Participants current transmission plans are simultaneously feasible for both study periods.

- Bob highlighted the importance of sharing the 20 generation down cases across the CTCA footprint. These generation down cases enabled all the Participants to better evaluate the impact of the neighboring generation on their respective transmission systems reliability. As a result of this positive sharing of more information, the CTCA Powerflow Study Group created a framework for increased coordination to exchange more information and data in future CTCA study activities.

NERC Update

- Bob Pierce reported on the recent NERC report involving the California PV Resource Interruption. He highlighted the triggering events (the loss of 2 500kV transmission lines) and the significant impacts (loss of more than 1,00MWs of solar generation). This report is getting a lot of attention from the industry to understand the impact of the inverters used in these solar operations and their corresponding capabilities, as well as to determine how to properly assess their impact on grid reliability.
- Bob also noted that there are two industry standards related to inverter operation: NERC Reliability Standard PRC-024-2 and IEE Standard 1547. These current standards are being reviewed to identify how they need to be updated so that they work together to eliminate any ambiguity that currently exists and minimize the impact of these types on interruptions to the grid in the future. NERC is establishing a Solar Resource Performance Joint Task Force to oversee activities related to this effort.

TAG 2017 Work Plan

- Rich Wodyka reviewed the updated work plan for the 2017 TAG activities. He highlighted the minor modifications to the plan from changes in the study schedule activities. Rich noted that the tentative date for the next TAG meeting is September 19th and the tentative date for the 4th quarter TAG meeting is set for December 13th.

PWG Items and Regional Updates

- All PWG study activity items and Regional Updates were covered by the OSC under the discussions of the TAG meeting presentations.

PWG Minutes

- The OSC had no comments or questions regarding the July 6th PWG minutes that were distributed to them for their information and review.

Challenges and Opportunities Discussion

Changing Mix of Generation

- The OSC continued to discuss the draft scope of work that was developed to address the issues associated with the changing mix of generation. Edgar Bell reported that he is awaiting feedback from other Duke and Progress staff on the proposed scope of work. It was noted that the scope of work list of deliverables needs to be more specific so those working on these activities clearly understand what needs to be done. Edgar will continue to work with those likely to be involved in this activity on how they will be able to best support this work. Edgar will report back to the OSC on this activity at the next OSC meeting.

Inter-dependency of neighboring systems: impact of loop flows

- Based on the agreed upon rankings of the issues, the next issue for the OSC to discuss is the inter-dependency of neighboring systems: loop flows due to short-term capacity acquisition, e.g., flows through NC caused by PJM acquisition of resources located in MISO.
- The OSC discussed this issue. As a result of the discussion the OSC agreed that there currently are process and procedures in place to manage and monitor the potential impacts of loop flows on the NC transmission system. No further action on this item is required at this time.
- The OSC agreed to continue the discussion of challenges and opportunities at the next meeting. The next item to review and discuss is inter-dependency of neighboring systems: large new units near borders, e.g. Dominion, SCANA, Southern.

Future OSC Meeting Schedule

- The OSC reviewed and approved the meeting date and time listed below. The OSC will decide on the format (Webinar or face-to-face) of the September OSC / TAG meetings on the August 14th OSC teleconference meeting.

Date	Time	Location
August 14, 2017	1:00 pm - 3:00 pm	Teleconference
September 19, 2017 OSC / TAG	10 am - noon 1:30 pm - 3:00 pm	TBD Webinar/ Face-to-face
October 17, 2017	1:00 pm - 3:00 pm	Teleconference