North Carolina Transmission Planning Collaborative Oversight / Steering Committee (OSC) Meeting Highlights April 17, 2017 Webinar/Teleconference Meeting 10:00 AM - 11:15 AM ET

Edgar Bell, Chairman Sam Waters Bob Pierce Mark Byrd Bill Quaintance Nina McLaurin Luis Fondacci John Lemire Marty Berland Rich Wodyka

Duke Energy Carolinas Duke Energy Duke Energy Carolinas Duke Energy Progress Duke Energy Progress Duke Energy Progress NCEMC NCEMC ElectriCities Consultant Administrator

Administrative

• The March 14, 2017 OSC Meeting Minutes and Highlights were reviewed and approved.

Duke 10 year Grid Initiative

- The OSC discussed the Duke 10 year Grid Optimization Strategy Initiative that was recently announced. Edgar Bell reported that this strategy is about asset management along with resiliency and hardening of the grid. It is intended to identify additional projects for the replacement of aging infrastructure.
- Luis Fondacci raised the question on how this strategy would address the amount of renewables being developed on the system. Sam Waters noted that this strategy would likely address renewables through the investment of more equipment to better monitor and control these types of resources. He also noted that from a planning perspective, the majority of this investment in additional equipment is still handled through the interconnection process.
- As this initiative moves forward the Duke representatives will keep the OSC informed on various activities related to the NCTPC. Any new transmission

project developed through this initiative would be brought back through the NCTPC process.

Regional Updates

SERTP

• Edgar Bell reported that the SERTP group has selected the 5 Economic Study proposals, that were submitted by the stakeholders, to analyze in 2017. He noted that 4 out of the 5 studies may impact the NC system, and 1 of those 4 studies reflects a transaction that would cross the NC system. The planners have begun building the 2017 series of SERTP models.

PWG Items

2017 Study Scope

- Rich Wodyka reported that he did not receive any additional comments or questions from the TAG stakeholders by the March 31st deadline regarding the final draft of the 2017 Study Scope.
- One of the questions raised by the OSC regarding the 2017 Study Scope was the impact of the OSC discussions regarding the future challenges and opportunities facing the NCTPC. Rich Wodyka noted that if the OSC challenges and opportunities discussion raises questions that require additional technical analysis, the OSC can approve additional supplemental studies to be done this year or incorporate additional analysis into the 2018 Study Scope next year. The OSC agreed with that approach.
- The OSC reviewed and approved the final 2017 Study Scope. The OSC directed Rich to post the final 2017 Study Scope on the NCTPC website.

SERC LTSG Update

• No report

CTCA Studies Update

• Edgar Bell reported that the CTCA group is meeting on April 26th to discuss the activities for 2017. He will report back to the OSC next month on what studies this group will be doing in 2017.

EIPC Update

• Edgar Bell reported that the EIPC group held a workshop in Atlanta to present various planning criteria and processes used by the different EIPC planning organizations. This workshop provided an overview of the various systems planning criteria. Feedback from the workshop indicated that the EIPC stakeholders would be interested in receiving more details on the planning criteria and processes from the various planning organizations at future workshops. The EIPC Executive Committee will consider this request as this group is still considering on how EIPC activities can be more valuable for the stakeholders and useful for the industry going forward.

PWG Minutes

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

Challenges and Opportunities Discussion

Review of Priorities

- Rich Wodyka highlighted the results of the overall rankings for the review and discussion of the various challenges and opportunities facing the NCTPC. The OSC discussed the ranking results and agreed to continue with the previously agreed upon approach to review and discuss the items in the order of the overall rankings that resulted from the survey of all the companies.
- It was also discussed and agreed that for the discussion of the issues at the future OSC meetings that each company would prepare and distribute to the other OSC members a brief position summary paper on each issue in advance of the OSC discussion. This will facilitate the discussion of each issue at the OSC meetings.

Discussion of Changing Mix of Generation

• As agreed at the March OSC meeting, the OSC discussed the challenges associated with the changing mix of generation, specifically the impacts of distributed generation related to system operations and planning. Luis Fondacci highlighted the concerns of NCEMC regarding the impacts of distributed generation. He noted that NCEMC was concerned about the amount of renewables being developed affecting transmission flows and the

amount of renewables installed on one system affecting the flows on neighboring systems. One of the core issues related to the changing mix of generation is the lack of information / data exchange on renewables being exchanged between the companies.

- Edgar Bell agreed that the significant amount of renewables being developed in NC is changing the flows on the system. Bill Quaintance noted that as the amount of renewables continues to grow on the DEP system there needs to be better coordination between the companies.
- The OSC agreed that a first step in addressing this issue would be better coordination and more data exchange between the companies. In order to accomplish this, the OSC agreed that a process should be developed to better ensure that the wholesale customers provide the necessary information to the transmission planners and the transmission providers should provide more feedback to the customers on the potential impacts. From a NCTPC perspective, the goal is to get better overall information and data to develop better more accurate planning models.
- To address this issue, the OSC agreed to develop a scope of work to address the concerns identified today. Bill Quaintance, John Lemire, and Marty Berland volunteered to develop a scope of work for the OSC to consider at the next meeting.
- The OSC agreed to continue the discussion of challenges and opportunities at the next meeting. Based on the agreed upon rankings of the issues, the next issue for the OSC to discuss is the changing mix of generation with a focus on elements associated with new technologies regarding storage and energy management.

Future OSC Meeting Schedule

Date	Time	Location
May 15, 2017	1 pm - 3 pm	Conference Call
June 12, 2017	10 am - noon 1:30 pm - 3:30 pm	OSC / TAG Meetings

• The OSC reviewed and approved the meeting dates and times listed below.