



Eastern Interconnection Planning Collaborative

SSC Meeting by Webinar

June 15, 2012

10:00-11:30 a.m ET/9:00-10:30 a.m. CT

Draft Agenda

SSC Members In Attendance (by sector)

End Users: Ryan Kind, Sonny Popowsky

Generation Owners: Steve Gaw, Mark Volpe

NGOs: Mark Brownstein, Beth Sohlt

Public Power/TDUs: Tim Noeldner, Maryam Sharif

States: David Boyd, Garry Brown, Eric Callisto, Ed Finley, Lib Fleming, Doug Nazarian, Marya White

Transmission Owners: Will Kaul, Paul Napoli, Stuart Nachmias

Other Suppliers: Chris Lyons

Chair: Roy Thilly

EIPC: John Buechler, Flora Flygt, Jared Moll, David Whiteley

Objectives:

- Review the Scenario 1 and Scenario 3 results produced by the TOTF
- Learn about the Phase II Production Cost Modeling
- Discuss the Phase II report outline and stakeholder input process

Action Item:

- **Review Scenario 1 and Scenario 3 Results**

1. Scenario 1 and Scenario 3 Transmission Results - Jerrod Moll, Southern Company

Jerrod Moll provided a presentation on the Transmission Options Task Force (TOTF) work and results related to Scenario 1 (Future 8, Combined Federal Climate and Energy Policy Future) and Scenario 3 (Future 1, Business As Usual). The key points the presentation and discussion included the following:

- The SSC was reminded that their role involved reviewing the build-out results, providing comments, and identifying any significant concerns for the TOTF's consideration.
- Jerrod reviewed the steps that were taken to build the load flow model for each of the scenarios. He then described that the next task of the TOTF was to develop transmission fixes for any overloads that were present in the system, either with zero contingencies or one contingency (known as the N-1 reliability test).
- In Scenario 1, because there is so much transmission needed to move power from the Midwest to the East, it became clear that HVDC lines would be needed. Ultimately, the TOTF settled on six DC lines, from MISO and SPP to PJM. There were also some additions to strengthen the transmission systems within SPP, PJM and MISO.
 - The transmission fixes consisted of roughly 290 generation interconnection projects (of all sizes) and 325 constraint-relief projects to address overloads.

- In an earlier version of the S1 built-out, there had been an HVDC line from SPP to TVA, but after further consideration it became clear that it wasn't really needed for Load Block 13, and wasn't providing much relief in Block 1, so it was removed. The TOTF tried to see if it was possible to remove an additional HVDC line but the cost of the AC fixes needed to replace it appeared to be greater than the cost of the DC line.
- The system would be able to withstand the loss of one of the 6 lines, due, in part, to a few minor fixes added within the AC system.
- HVDC lines modeled in S1 are designed to move large amounts of power long distances, and do not include drop-offs in between.
- Scenario 3 was simpler, because the generation additions, and therefore the transmission build-out, are not as extensive as S1.
 - There was not a need for large interregional facilities – rather, the transmission fixes consisted of local-area projects internal to particular NEEM regions.
 - The transmission fixes consisted of over 50 generation interconnection projects and over 65 constraint relief projects.
 - In Scenario 3, the key purpose of HVDC lines is to bridge two large 765 kV interconnection overlays.
- Each scenario is being looked at individually, and all fixes shown for a particular scenario are specific to that scenario only (unless specifically stated to be part of the transmission build-out for another scenario).
- The TOTF decided to not use operational tools, such as redispatch and testing overload capability, in planning a system that passed the reliability tests – they determined that, because the planning horizon for this exercise is so far in the future, it didn't make sense to include today's operational concepts.
- There will be some additional changes to the build-outs as a result of Task 8, but they're not going to be large-scale additions like in Scenario 1. Additional fixes at this stage will likely consist of very local line upgrades and maybe small additions needed to get rid of any remaining constraints.
- The Scenarios 1 and 3 will be ready for Task 9 Production Cost Modeling by the 2nd week of July.
- The initial transmission fixes for Scenario 2 should be completed by the June 29 TOTF meeting.
- The high-level cost estimates will begin around late August or early September.
- **The SSC did not raise any major concerns with Scenario 1 or Scenario 3, therefore the TOTF will proceed with further analysis of the build-outs, as described.**

2. Modeling Work Group Updates on Production Cost Modeling - Erin Hogan, NYSERDA

Erin Hogan provided an overview of the role of the Modeling Work Group (MWG) in the Task 9 Production Cost Analysis, the work that has been completed so far, and the remaining tasks. Key points from the discussion included:

- NEEM, which provided the generation information for the three scenarios, was an expansion model with simplified representations of regions, transfers between them, load duration curves, etc. GE-MAPS, which is being used in the Phase II production cost modeling of the three scenarios, uses much more specific and granular data. So the key challenge for the MWG is translating, where needed, the more general NEEM results into more specific MAPS inputs.
- The MWG is not aiming to change assumptions, rather they are trying to figure out how best to represent the assumptions that have been agreed upon.
- Output will be delivered in a fashion similar to Phase I.
- There will be nine MAPS runs in total – three base runs and 6 sensitivities.

- The MWG may recommend using one or more sensitivities to develop costs for demand response, to determine how it would perform in an economic dispatch.
- The base case runs will be completed first, which might give some guidance on how to tweak the inputs for the sensitivities
- The MWG expects to have base run input assumptions done by mid-June and will start on the sensitivities shortly thereafter.
- It may be necessary to achieve quick SSC approval on the sensitivities in order to operate within the tight time frame.

3. Phase II Report Outline and Schedule – Flora Flygt, EIPC

Flora Flygt reviewed the Phase II report outline and schedule. Key points from the discussion included:

- Some SSC members suggested that it might be helpful to have, and include in the report, further analysis on the impacts of the various scenarios or a comprehensive picture of the pros and cons of each, including costs.
- The Observations and Guidance section would be the appropriate place for discussion of next steps, recommendations for further study, or observations about how to move forward.
- Sectors are asked to appoint an individual to aggregate the comments/edits for his or her sector, and send those to EIPC as a redline version of the draft report.

4. Next Steps

- An updated detailed Phase II schedule is available on the website.
- EISPC may provide a demonstration of their EI-wide Energy Zones Mapping Tool at the September SSC meeting in Detroit, if time permits.
- The next SSC webinar will take place **Monday, July 9, at 10 a.m. ET/9 a.m. CT**. Registration information and panelist invitations will be made available in late June.