



Eastern Interconnection Planning Collaborative

**SSC Meeting Summary**  
**April 18-19, 2012**  
**Omaha, NE**

This meeting summary highlights SSC decisions, key discussion items, and next steps from the meeting of the EIPC Stakeholder Steering Committee.

**Objectives:** Seek input from SSC and interested stakeholders on TOTF activities and EIPC's progress on:

- Scenario 1 & 3 load flow inputs and results
- Scenario 1 & 3 Regional and EI-wide transmission proposals
- Demand response in Scenario 1

80 individuals were in attendance (55 in person, 25 via webinar); a full list of attendees is attached. The meeting agenda and presentations are available in their entirety at [http://www.eipconline.com/SSC\\_Meetings.html](http://www.eipconline.com/SSC_Meetings.html), along with the [April 18](#) and [April 19](#) webinar recordings.

**1. Overview and status of Phase II Tasks/Project Management Update**

David Whiteley provided an update on the status of the Phase II work. Key points from the presentation and discussion included:

- Now that Phase 1 of the project has been completed, the Transmission Options Task Force (TOTF) is currently working on the Phase II tasks related to the development of interregional transmission plans for the scenarios and testing those for reliability.
- Peak load case (Load Block 1 or B1) is typically the most important to study, but Scenario 1 (S1) and Scenario 2 (S2) will also be analyzed under less-than-peak load (Load Block 13). These Block 13 (B13) cases had renewables operating at a significant capacity – not 100% but typically higher than Block 1. See the [Phase II resources](#) page on the EIPC website for documents pertaining to the creation of the less-than-peak cases.
- The different “passes” at solving the load flow cases involve the addition of facilities or changing of the system in other ways to resolve contingencies and constraints. The TOTF is involved in the dialogue related to these different passes and all information related to the final answers will be shared with the SSC.
- The status of the three scenarios:
  - Scenario 1 (S1) = Future 8, Combined Policy Future – TOTF has completed pass 2 for B1 and B13.
  - Scenario 2 (S2) = Future 6, National RPS regional implementation – TOTF is working on the load flow model for this case.

- Scenario 3 (S3) = Future 1, Business As Usual – TOTF is working on the load flow model for this case and expects to complete pass 1 of the transmission topology soon.
- The transmission “fixes” can be identified and proposed by any member of the TOTF. The transmission options available in the development of the transmission build-out plans include HVDC as well as phase angle regulators and other methods to eliminate parallel path issues.
- Identifying the “best” transmission solution involves the PAs making judgments about a number of factors, including general costs and plausibility, but many of these factors aren’t being studied in great depth at this stage.
- Task 7, the development of the transmission solutions, includes a measure of reliability testing in the process of identifying the limiting constraints and applying the fixes. Task 8, the reliability tests of those solutions, is a final check on the transmission solution/plan. If all is done correctly in Task 7, Task 8 is just a check, and the result will be that the scenario passes all of the tests.

## 2. Treatment of Demand Response

Dave Whiteley presented the proposed treatment of demand response in the development of the transmission solutions. Key points from his presentation and the discussion included:

- Demand response (DR) resources are currently integrated into the three Phase II scenarios as pseudo-generators, based on the assumptions that defined the Futures in Phase I.
- Some stakeholders have expressed an interest in having additional DR dispatched as a possible option in the development of the transmission solutions for the three scenarios, during the reliability tests performed in Task 8.
- EIPC and the PAs are concerned about the possible problems that could be raised if DR was considered in lieu of a transmission option, including possible inconsistencies resulting from changing the NEEM results that define the scenario, and the additional time and work required to figure out when and how to incorporate additional DR properly. Typically, DR dispatch is considered for operational purposes, not transmission planning purposes (though there is some variation among the PAs).
- Some stakeholders pointed out that while DR hasn’t historically been included in planning, non-transmission alternatives are considered in some jurisdictions now (Bonneville Power Authority) and may be given more weight in the future; therefore, considering additional DR dispatch might actually enhance the study’s credibility, if it is more reflective of likely future trends in planning.
- Some sectors expressed the feeling that there is already a significant amount of DR built into the generation plan, and the need to avoid double-counting DR that is already accounted for, or reducing the amount of transmission to the extent that the S1 build-out would no longer represent a “bookend” as originally intended.
- After some discussion, it was determined that **redispatch of DR could be considered/tested in limited instances in the later stages of the build-out development, if an expert involved with the TOTF recommends a targeted proposal**

**where additional DR could provide a valid solution**, particularly in N-1-1 or N-G-1 contingencies.

### **3. Scenario 1 Preliminary Results**

Jeremy Bennett of Southern Company presented the work being done to develop the load flow model and transmission topology for Scenario 1, B1 & B13. Key points from his presentation and the discussion included:

- The wind generation for B13 was lower than wind generation for B1. There is still the same amount or more exported, but relative to peak demand, the amount needed to export is less.
- The wind capacity factor in SPP (60% in SPP-N and 64% in SPP-S) appeared to some to be unusually high. It was clarified that Block 1 represents the 10 hours of highest load in the Eastern Interconnection, not necessarily the top 10 hours in SPP, and that the high capacity factor likely results from unusually high wind production during those hours, the reserve margin used, and the fact that the NEEM model makes decisions on a purely economic basis. **EIPC agreed to consult with CRA to clarify the cause of the high wind generation in S1B13.**
- As the TOTF members worked with the case, it became clear that there was a significant amount of wind resources trying to move from MISO and SPP to PJM. Various AC solutions were tested, which did not solve the initial constraints. The most recent pass includes seven HVDC lines from the Midwest toward the east, then a few AC lines in the south. These options were viewed as less expensive than possible AC solutions.
- Some stakeholders expressed concern that such high amounts of HVDC would result in a less integrated and responsive grid, and were interested in learning more about the alternative options that had been explored.
- It was proposed that the TOTF consider removing one DC line at a time and replacing each one with AC solutions, if possible, and then do a rough assessment of which is more cost effective, so the SSC has more information about various AC and DC alternatives. (The PAs would judge how many passes or how deep of an analysis would be reasonable.)
- The SSC was reminded that these fixes will be included in the next pass, but they aren't yet considered final. Those with alternative proposals should submit them to the TOTF so they may be considered.

### **4. Update on EISPC Energy Zones and Whitepapers**

Marya White and Bob Pauley of EISPC shared a presentation about the progress of EISPC's activities. Some key points from their presentation included:

- EISPC is working to identify zones conducive to clean energy development, defined as all renewables plus low- and no-carbon fuels, including "clean coal" (carbon capture and sequestration) and nuclear.
- This will involve the development of a comprehensive mapping tool to help policymakers and stakeholders throughout the Eastern Interconnection.

- The topics for the white papers include: market structures, EE/DR, nuclear, clean coal, G&T co-optimization, resource adequacy, long-term electric and gas infrastructure, and possibly others.
- The white papers will share information about what is known about these topics but also will identify where information gaps exist and where more study is needed.

## 5. Scenario 3 Preliminary Results

Jeremy Bennett of Southern Company provided an overview of the preliminary work that has been completed on Scenario 3. Key points from the presentation and discussion included the following:

- Scenario 3 involves significantly fewer deactivations than S1, and therefore is less complex than S1.
- So far, it appears that there are far fewer overloads/constraints to “fix” in this scenario, and most of them are smaller than in S1. There may still be interregional lines needed, but they will not be based on the need to move large amounts of power extraordinarily long distances, as with S1.
- These results are not particularly surprising, since much of the new generation in this scenario is in the same locations as coal deactivations.
- Some stakeholders expressed concern that the wind capacity in some regions (particularly SPP and Canada) is not reflective of what currently exists, much less what is expected to exist in 2030.
- There is no Block 13 analysis for Scenario 1, because the peak load case (Block 1) has such minimal new transmission requirements that a less-than-peak case would not be expected to yield additional information.

## 6. Schedule Update and Next Steps

David Whiteley of EIPC reviewed the project schedule, including upcoming meetings and deadlines, and next steps.

- After some discussion about the best way to provide stakeholders with a final opportunity to review and weigh in on the results, it was determined that **three SSC webinars should be held around the times that the “final” passes on the three transmission scenarios are completed, roughly around the following time frames:**
  - **S1 – early June**
  - **S2 – early-to-mid July**
  - **S3 – mid-to-late June**
- The Modeling Work Group will need to reconvene in early- to mid- May in order to prepare for the production cost analyses, expected to begin in late May or early June.
- The first day of the May 15-16 TOTF meetings will be a working session open only to those with CEII clearance. Stakeholders planning to attend should register as soon as possible.
- SSC members and other interested stakeholders should be sure to check the [Phase II Resources page](#) for detailed schedule and task information and the [Calendar](#) for information on upcoming events.

## In-person Attendance

First Name	Last Name	Organization	Role	Sector
Rob	Sinclair	OPA	SSC Member	Canadian Provincial Representatives
Ryan	Kind	Missouri Public Counsel	SSC Member	End Users
Sonny	Popowsky	PA Consumer Advocate	SSC Member	End Users
Steve	Gaw	Wind Coalition	SSC Member	Generation Owners and Developers
Michael	Goggin	AWEA	SSC Member	Generation Owners and Developers
Mark	Brownstein	Environmental Defense Fund	SSC Member	NGOs
Wil	Burns	Wind on the Wires	SSC Member (alt.)	NGOs
Andy	Oliver	Land Trust Alliance	SSC Member	NGOs
Herb	Healy	EnerNOC, Inc.	SSC Member	Other Suppliers
David	Boyd	Minnesota Public Utilities Commission	SSC Member	State Representatives
Ed	Finley	NCUC	SSC Member	State Representatives
Doug	Gotham	Purdue University (EISPC)	SSC Member (alt.)	State Representatives
Kevin	Gunn	MO Public Service Commission	SSC Member	State Representatives
Douglas	Nazarian	Maryland Public Service Co	SSC Member	State Representatives
Bob	Pauley	EISPC	SSC Member (alt.)	State Representatives
James	Volz	Vermont Public Service Board	SSC Member	State Representatives
Marya	White	EISPC	SSC Member (alt.)	State Representatives
Tim	Noeldner	WPPI Energy	SSC Member	TDU/Public Power
Maryam	Sharif	New York Public Power	SSC Member	TDU/Public Power
Will	Kaul	Great River Energy	SSC Member	Transmission Owners and Developers
Stuart	Nachmias	Stu	SSC Member	Transmission Owners and Developers
Paul	Napoli	PSE&G	SSC Member	Transmission Owners and Developers

Garrett	Bissell	Couch White, LLP	Table Representative	End Users
Fred	Plett	Massachusetts Attorney General	Table Representative	End Users
John	Moore	Sustainable FERC Project	Table Representative	NGOs
Theodosia	Price	Brandywine Conservancy	Table Representative	NGOs
Samir	Succar	NRDC	Table Representative	NGOs
Keith	Daniel	Georgia Transmission Corporation	Table Representative	TDU/Public Power
Lloyd	Linke	Western Area Power Administration	Table Representative	Transmission Owners and Developers
Mark	Wehlage	Xcel Energy	Table Representative	Transmission Owners and Developers
Mike	Gregerson	Great Plains Institute	Other	NGOs
Amy	Hansen	NJ Conservation Foundation	Other	NGOs
Doug	Bowman	SPP	Other	Other/NA
Jim	Busbin	Southern Company	Other	Other/NA
Alicia	Dalton-Tingler	NETL US DOE	Other	Other/NA
Stan	Doe	ISO New England	Other	Other/NA
Don	Gates	ISO New England	Other	Other/NA
Craig	Glazer	PJM Interconnection, L.L.C.	Other	Other/NA
Chuck	Liebold	PJM	Other	Other/NA
Paul	Mansoor	Center for Rural Affairs	Other	Other/NA
Roy	Thilly	SSC Co-Chair	Other	Other/NA
David	Till	TVA	Other	Other/NA
Eric	Toolson	Energy Exemplar	Other	Other/NA
David	Whiteley	EIPC	Other	Other/NA
Ben	D'Antonio	New England States Committee on Electricity	Other	State Representatives
John	Buechler	NYISO	Other	TDU/Public Power
Flora	Flygt	American Transmission Company	Other	Transmission Owners and Developers

Dan	Fredrickson	MAPPCOR	Other	Transmission Owners and Developers
Barry	Huddleston	Clean Line Energy Partners	Other	Transmission Owners and Developers
Randell	Johnson	Northeast Utilities	Other	Transmission Owners and Developers
Jeff	McKinney	NYSEG	Other	Transmission Owners and Developers
Tyler	Ruthven	National Grid	Other	Transmission Owners and Developers
Yingzi	Wang	Exelon	Other	Transmission Owners and Developers
Jason	Weiers	Otter Tail Power Company	Other	Transmission Owners and Developers
Clay	Young	SCE&G	Other	Transmission Owners and Developers

### Webinar Attendance

First Name	Last Name	Organization (if provided)
Parveen	Baig	Iowa Utilities Board
Jeremy	Bennett	Southern Company
Terry	Black	Project for a Sustainable FERC
Jim	Calore	PSE&G
David	Duebner	MISO
Ed	Ernst	Duke Energy
Bert	Finzer	Arkansas Public Service Commission
Jonathan	Forward	
Gloria	Godson	Pepco Holdings Inc
Erin	Hogan	NYSERDA
Lucyna	Khazanovich	
Luis	Leon	
Ralph	Luciani	CRA
Alan	Myers	ITC Great Plains
Sunil	Palla	
Bob	Pierce	Duke Energy
Brian	Rybarik	PSC Wisconsin
Jason	Schmidt	Ventyx, an ABB Company
George	Smith	NESCOE
Zach	Smith	NYISO
John	Stovall	ORNL
Ellen	Vancko	UCS
Kenneth	Wei	New York ISO

Elana	Wills	Arkansas PSC
John	Zarzycki	NJBPU