



Eastern Interconnection Planning Collaborative



**SSC Meeting Summary
September 26-27, 2011
Philadelphia, PA**

This meeting summary highlights SSC decisions, key discussion items, and next steps from the September 26-27, 2011, meeting of the EIPC Stakeholder Steering Committee.

Objectives:

- Review the Scenario Task Force analyses & recommendations
- Review the MWG estimates of integration, nuclear uprates & EE/DR costs
- Provide input on draft Phase I Report

Action Items:

- **Approve description of final three scenarios**
- **Specify the use of the remaining four NEEM runs**

107 individuals were in attendance (75 in person, 32 via webinar). New SSC member Eric Callisto was introduced. 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.

A. Modeling Work Group recommendations on EE/DR, Intermittency and Nuclear Uprate Costs (see [presentation](#) for details)

Erin Hogan gave a brief presentation on the Modeling Work Group's (MWG) work on estimating energy efficiency and demand response (EE/DR), intermittent generation additions and nuclear uprate costs. Key points from the presentation and subsequent Q&A included the following:

- The cost estimates are very high-level, and in some cases the group had to make somewhat arbitrary decisions about which figures or ranges to use.
- These costs estimates are not intended for any purpose other than assisting the SSC with the analysis of the Phase I Futures as they work to select the Phase II scenarios.
- The Scenario Task Force already considered these cost estimates in the development of their recommendation for the Phase II scenarios.
- The full description of the cost estimates can be found in a memo written by the MWG to the scenario task force, located [here](#).

B. Scenario Task Force Recommendations (see [presentation](#) for details)

Wil Burns of the Scenario Task Force gave a presentation on the Task Force's consensus recommendations for the three scenarios to study in Phase II. Key points from the presentation and subsequent discussion included the following:

- After receiving guidance from the SSC at the July meeting, conducting a clustering analysis, and evaluating proposals from Task Force members, the Task Force reached consensus on the package of three scenarios it would recommend for Phase II study. These three recommended scenarios are:
 - **National Carbon Constraint with Increased EE/DR/DG/SG Scenario** – This scenario would include the same policy drivers, generation mix, load growth, and other key assumptions as the base run of Future 8, the Combined National Climate and Energy Policy Future, with the exception of the adjustments noted below. Key characteristics include:
 - National carbon price designed to achieve 42% emissions reductions by 2030. *Carbon price modified from original F8 by flattening the CO2 price after 2030.*
 - Additional 7% load reduction (beyond that resulting from the CO2 price), attributed to increased EE/DR/DG/SG, for a total load reduction of approximately 20% by 2030. This additional EE/DR/DG/SG is assumed to be funded, in part, by carbon revenues, though this assumption cannot be modeled.
 - The original Future 8 included a nationally implemented 30% Renewable Portfolio Standard (RPS), but this had little to no effect in terms of the Future results, since the CO2 price led to renewables penetration exceeding the RPS goals.
 - This scenario is expected to be the largest transmission build-out of the three, with an interface capacity expansion of approximately 37,000 MW.
 - NEEM Run: New sensitivity based on F8 S1, with flat CO2 price after 2030, transmission limits hardened at the OL75 level, and any other corrections for generation/transmission anomalies agreed to by the SSC (see Section C of this summary).
 - **Regionally Implemented National RPS Scenario** – This scenario would include the same policy drivers, generation mix, load growth, and other key assumptions as Future 6, Sensitivity 10 (re-run of base case with “hardened” OL25 transfer limits). Key characteristics include:
 - National 30% RPS implemented regionally – designed to enable regions to attempt to meet the goals using local resources first. (Modeled as super-regions – areas between which transmission is limited)
 - Diverse generation mix – approximately 32% coal, 31% renewables, 23% nuclear, 14% natural gas.
 - Transmission build-out expected to be smaller than in National scenario – aggregate interface capacity expansion of approx. 3,000 MW.
 - NEEM Run: F6S10, with any other corrections for generation/transmission anomalies agreed to by the SSC (see Section C of this summary).

- **Business-As-Usual (BAU) Scenario** – This scenario would include the same policy drivers, generation mix, load growth and other key assumptions as Future 1, Sensitivity 3 (base run with baseline infrastructure transfer limits and revised inputs related to updated information on EPA regulations). Key characteristics include:
 - Current economic, policy and energy-related trends are assumed to continue.
 - Includes only planned new generation and transmission additions.
 - Includes additions and retirements based on current laws and regulations.
 - NEEM Run: F1S3, with any other corrections for generation/transmission anomalies agreed to by the SSC (see Section C of this summary).
- **The SSC approved the three recommended scenarios.**

C. NEEM/Transmission Subteam Recommendations on Anomalies and use of final NEEM runs

Tyler Ruthven of the NEEM/Transmission subteam gave a [presentation](#) on the group's recommendations for dealing with perceived generation placement anomalies that arose in Phase I NEEM runs corresponding to the three recommended Phase II scenarios. Key points from the presentation and subsequent discussion included the following:

- The Subteam's analysis and recommendations:
 - Southwest wind: Some stakeholders perceived that a high amount of wind placed in SPP_S was an anomaly in Future 8. The subteam attributed this to the significantly higher load and retirements in this region, and therefore did not view this as an anomaly requiring any adjustments.
 - Midwest wind: Some stakeholders perceived the high concentration of wind builds in MISO_W to be an anomaly in Futures 8. The subteam attributed these high winds builds to the higher-quality class of wind available in those areas. Additionally, in F8, MISO_IN saw a major wind build, but the subteam attributed it to the high amount of retirements and poor availability of other low-carbon generation. The subteam did not recommend any adjustments.
 - Midwest Gas – Combustion Turbines (CTs): The Subteam agreed that the large CT build in MISO_WUMS is an anomaly in Futures 1, 6, and 8, resulting from the MISO reserve requirements and the location of the lowest capital cost multiplier. The subteam developed two options for dealing with this anomaly in consultation with the planning authorities.
 - Midwest Gas – Combined Cycle (CCs): The subteam agreed that the high level of CCs in WUMS and Indiana in F8 and F1 did appear to be somewhat anomalous, but due to the challenges – and numerous sensitivity runs – required to effectively eliminate it, was undecided as to whether or not they would recommend action. Additionally, the subteam recommended that the wind reserve contribution in SPP in Future 1 (BAU) should be increased from 6% to 15%, as was done in the other Futures at the advice of SPP.

- Finally, the subteam did not recommend any adjustments of <50MW transfer increases, since it appears the PAs will deal with those appropriately in Phase II.
- Some stakeholders supported the inclusion of an OL50 NEEM run for Future 8, in order to help with the redistribution of Midwest wind, and to allow stakeholders to see any other impacts of expanded transfer limits before completing the final NEEM run that would define the inputs for the National scenario.
- After much discussion, it was clear that there were not enough NEEM runs available for an OL50 run and for correcting the anomalies.
- **Ultimately, the SSC agreed to the following method of correcting for anomalies and completing the final NEEM runs:**
 - The Planning Authorities, in consultation with CRA and the NEEM-Tx subteam, will develop recommendations for redistributing generation to correct for anomalies.
 - F8 – portion of MISO_IN wind, portion of CCs in MISO_WUMS and MISO_IN; MISO_WUMS CTs
 - F6 – MISO_WUMS CTs
 - F1 – MISO_WUMS CTs, portion of CCs in MISO-WUMS and MISO_IN, increase wind reserve contribution in SPP to 15%
 - The SSC will have an opportunity to comment on these recommendations.
 - Then the first F8 NEEM run will be completed based on the recommendations (as modified by the Pas, CRA and the subteam based on any SSC member comments), and will include the recommended redistribution of CTs, CCs and wind, as well as the flat CO2 price after 2030 (NEEM Run 1).
 - The SSC will review this NEEM run and determine whether to move forward with these results, or revert to the default redistribution method, which would involve forcing in the recommended redistribution of CCs and CTs only (not the wind redistribution). (If the SSC reverts to the default, this would be NEEM Run 2). Given the imperfections in the default alternative, the understanding of the group was that the new NEEM run addressing anomalies should be used unless significant, unexpected problems with that run are identified.
 - NEEM will be run to harden the transfer limits from the previous NEEM run (NEEM Run 2 if using PAs' recommendation, or NEEM Run 3 if using default).
 - Run F1S3 with redistribution of CCs and CTs and 15% wind contribution to reserve in SPP (NEEM run 3 or 4).
 - F6 redistribution of CTs in MISO_WUMS can be completed without using a NEEM run. However if there is a NEEM run available after the

final F8 and F1 NEEM runs are completed, some stakeholders asked that it be available as an option for the F6 redistribution.

D. Phase I Report

Jim Busbin of EIPC provided an update on the progress of the Phase I report. Key points from his [presentation](#) and the subsequent discussion included the following:

- EIPC is seeking input (written comments) on Draft 2 by the end of September.
- Draft 3 will be out by October 14 and comments will be due by November 1.
- David Meyer of DOE commented that the report should be reflective of the opinions and concerns of stakeholders as well as the meaningful lessons and conclusions of the first phase of the project. He also noted that the collaborative nature of the development of the report should not be subjugated by the schedule.
- Several stakeholders commented on the importance of including contextual information that provides a more meaningful understanding of what was accomplished. Stakeholders also emphasized the importance of making it accessible and useful for policymakers, as well as bringing greater clarity to what was not included or considered in the analysis in this phase.

E. Next Steps

- SSC members should continue to provide their input on Draft 2 of the Phase I report. Draft 3 will be available soon for stakeholders' comments. For now, all comments/redline versions of the report should be e-mailed to both David Whiteley and to Keystone.
- The Transmission Options Task Force (TOTF) will begin to meet soon. Sectors should submit their confirmed TOTF representatives' names and contact information to Keystone.
- The in-person November SSC meeting has been cancelled. Instead, there will be one or two webinars held to make the final adjustments to the NEEM runs and review the next draft of the Phase I report. SSC members should stay tuned for scheduling information.

Attendance Report, SSC Meeting, September 26-27, 2011

First Name	Last name	Organization	Role	Sector
Robert	Sinclair	OPA	SSC Member	Canadian Provincial Representatives
Ryan	Kind	Missouri Public Counsel	SSC Member	End Users
Brenda	Harris	Occidental Chemical	SSC Member	End Users
Sonny	Popowsky	PA OCA	SSC Member	End Users
Michael	Goggin	AWEA	SSC Member	Generation Owners and Developers
Mark	Volpe	Dynegy, Inc.	SSC Member	Generation Owners and Developers
Steve	Gaw	Wind Coalition	SSC Member	Generation Owners and Developers
Mark	Brownstein	Environmental Defense Fund	SSC Member	NGOs
Andy	Oliver	Land Trust Alliance	SSC Member	NGOs
Beth	Soholt	Wind on the Wires	SSC Member	NGOs
Herb	Healy	EnerNOC, Inc	SSC Member	Other Suppliers
Bob	Pauley	EISPC	SSC Member (Alt. for Ed Finley)	State Representatives
Marya	White	EISPC	SSC Member (Alt. for Elana Wills and Jon McKinney)	State Representatives
Doug	Nazarian	Maryland PSC	SSC Member	State Representatives
David	Boyd	Minnesota Public Utilities Commission	SSC Member	State Representatives
Kevin	Gunn	Missouri Public Service Commission	SSC Member	State Representatives
Garry	Brown	NYS PSC	SSC Member	State Representatives
Eric	Callisto	Public Service Commission of Wisconsin	SSC Member	State Representatives
James	Volz	Vermont Public Service Board	SSC Member	State Representatives
Rebecca	Dulin	SC PSC	SSC Member (Alt. for Lib Fleming)	State Representatives
Maryam	Sharif	NYPA	SSC Member	TDU/Public Power
Tim	Noeldner	WPPI Energy	SSC Member	TDU/Public Power
Paul	Malone	NPPD	SSC Member	TDU/Public Power
Will	Kaul	Great River Energy	SSC Member	Transmission Owners and Developers
Paul	Napoli	PSE&G	SSC Member	Transmission Owners and Developers
Stuart	Nachmias	Con Edison	SSC Member	Transmission Owners

				and Developers
Garrett	Bissell	Couch White, LLP	Table Representative	End Users
Frederick	Plett	Massachusetts Attorney General	Table Representative	End Users
Robert	Weishaar	McNees Wallace & Nurick LLC	Table Representative	End Users
Erin	Hogan	NYSERDA	Table Representative	End Users
Teddy	Price	Brandywine Conservancy	Table Representative	NGOs
Erin Stojan	Ruccolo	Fresh Energy	Table Representative	NGOs
Wil	Burns	NGOs	Table Representative	NGOs
Terry	Black	NRDC/FERC Prroject	Table Representative	NGOs
Ellen	Vancko	UCS	Table Representative	NGOs
Keith	Daniel	Georgia Transmission Corporation	Table Representative	TDU/Public Power
Ken	Lotterhos	LIPA	Table Representative	TDU/Public Power
Paul	McCurley	NRECA	Table Representative	TDU/Public Power
Raja	Sundararajan	American Electric Power	Table Representative	Transmission Owners and Developers
Steven	Naumann	Exelon	Table Representative	Transmission Owners and Developers
Pedro	Modia	FPL	Table Representative	Transmission Owners and Developers
Mary Ellen	Paravalos	National Grid	Table Representative	Transmission Owners and Developers
Jason	Weiers	Otter Tail Power Company	Table Representative	Transmission Owners and Developers
Lloyd	Linke	Western Area Power Administration	Table Representative	Transmission Owners and Developers
Mark	Wehlage	Xcel Energy	Table Representative	Transmission Owners and Developers
Matt	Schuerger	ESCS	Other	NGOs
Mike	Gregerson	Great Plains Institute	Other	NGOs
Flora	Flygt	American Transmission Company	Other	Other
Ralph	Luciani	CRA	Other	Other
Eric	Runge	Day Pitney LLP for NEPOOL	Other	Other
Alicia	Dalton-Tingler	U.S. DOE/NETL	Other	Other
maria	hanley	US DOE - NETL	Other	Other
Lawrence	Mansueti	U.S. DOE	Other	Other
David	Meyer	U.S. DOE	Other	Other

David	Andrejcek	U.S. DOE/ FERC	Other	Other
Roy	Thilly	EIPC	Other	Other
David	Whiteley	EIPC	Other	Other
Don	Gates	ISO New England	Other	Other
Joseph	Eto	LBNL	Other	Other
Jeffrey	Webb	MISO	Other	Other
Tom	Schneider	NREL - National Renewable Energy Laboratory	Other	Other
John	Buechler	NYISO	Other	Other
Stan	Hadley	Oak Ridge National Lab	Other	Other
Chuck	Liebold	PJM	Other	Other
Jason	Fordney	Platts	Other	Other
Jim	Busbin	Southern Company	Other	Other
G. Scott	Morris	Alabama PSC	Other	State Representatives
Jeff	Bentz	NESCOE	Other	State Representatives
Barry	Huddleston	Clean Line Energy Partners	Other	Transmission Owners and Developers
Yingzi	Wang	Exelon	Other	Transmission Owners and Developers
Tyler	Ruthven	National Grid	Other	Transmission Owners and Developers
Randall	Johnson	Northeast Utilities Service Co.	Other	Transmission Owners and Developers
Jeffrey	McKinney	NYSEG and RG&E	Other	Transmission Owners and Developers
Gloria	Godson	Pepco Holdings, Inc.	Other	Transmission Owners and Developers
Jim	Calore	PSE&G	Other	Transmission Owners and Developers

Attending via Webinar (32 total)

First Name	Last Name	Organization
Diane	Barney	NYS Dept. Public Service
jeff	Bentz	NESCOE
Denis	Bergeron	Maine PUC
Ben	D'Antonio	MA DPU
George	Dawe	Duke Energy
Danny	Dees	MEAG Power
Michael	Delaney	City of New York
David	Duebner	MISO
Ed	Ernst	Duke Energy
Bob	Fagan	Synapse for NGOs
Jonathan	Forward	New York State Dept. of Public Service

Mike	Frazier	Piedmont Municipal Power Agency
Dan	Fredrickson	MAPPCOR
Stephen	Garl	Florida Public Service Commission
Don	Gates	ISO-NE
Herb	Healy	EnerNOC, Inc.
David	Jacobson	Manitoba Hydro
Seth	Kaplan	Conservation Law Foundation
David	Kelley	SPP
Chris	Lyons	Constellation
Olivia	Martin	State of Alabama
Sarah	McKinley	Federal Energy Regulatory Commission
Alan	Myers	ITC Great Plains
Michael	Odom	Southwest Power Pool
Christopher	Plecs	NSTAR
Jason	Schmidt	Ventyx
Samir	Succar	NRDC
Leonard	Tillman	Balch & Bingham LLP
Andy	Tunnell	Balch & Bingham LLP
Greg	Watkins	Iowa Utilities Board
Gary	Will	MMWEC
John	Zarzycki	NJBPU