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Phase II:
- Input Data Requirements
- Approach and Timeline

Stakeholder Steering Committee Meeting

July 28-29, 2011

Purpose

- Describe Phase II input data requirements
- Share updated Phase II process and schedule with Stakeholders

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Background

- Develop process to carry out phase 2 with the following intentions:
  - Adherence to SOPO commitments and timeframes
  - Stakeholder involvement early and often
  - Reliance on EIPC PAs for expertise in developing transmission system to accommodate SSC specified scenarios
  - Address feedback from May SSC meeting

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Phase II from SOPO

- Develop alternative transmission options and perform reliability and production cost analyses to support the expansion scenarios selected during Phase I
- Develop high-level cost estimates for the generation and transmission expansion facilities for each scenario

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Phase II Input Requirements

Item/Sub-Item	Breakdown	Source	Location/ Comment	Phase II Process	Comments
Initial Transmission Topology/Model		Baseline Infrastructure Model (from the SSC Phase 1 work)	Powerflow model is CEII	The Baseline Infrastructure model will be the starting point for the build-out analysis.	
Resources: Capacity additions and reductions.	By NEEM Region & Technology	Aggregate information in NEEM Output. CRA to provide specific retirements on non-aggregated units.	See NEEM capacity report	Pick specific bus locations - Existing sites - Retirement sites - Near bulk transmission Use generic unit types/sizes from NEEM inputs	Open to further granular definition of resources (e.g. by state).
Loads	By NEEM Region	NEEM Input NEEM Output	See Google docs See NEEM capacity report	include DR, EE, DG, PHEV load modifiers from NEEM inputs as specified by SSC - Need to allocate load to specific buses - Peak/ Off-Peak issue	
Reserve Requirements	By Reserve Margin Area and/or NEEM Region	NEEM Input NEEM Output	See Google docs See NEEM capacity report	May need to break this down by Control Area and shift resources accordingly	As long as the SSC uses the NEEM results, reserve requirements should be satisfied-by NEEM region
Transfers Limits	Between NEEM Regions	NEEM input or "hard limit" determined by SSC	See Google docs or "hard limit" results	Use SSC "Hard Limit" methodology specified by SSC	
Energy Transferred	Between NEEM Regions	NEEM Output	See NEEM transmission report	Peak/Off-Peak issue	
GE-MAPS Data	Power Plant specific data	tbd	tbd	Match completed Scenario build-out transmission system	Currently being developed

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Phase II Input Requirements

- Initial Transmission Topology/Model
- Resources: Capacity additions and reductions
- Loads
- Reserve Requirements
- Transfers Limits
- Energy Transferred
- GE-MAPS Data

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Phase II Schedule and Outline of Work

Phase II Schedule and Outline of Work
Steps 1-7 (Prior to January 1, 2012)

- Select Scenarios
- Form Transmission Options Task Force
  - Technical resources from PAs and SSC
- Possible TOTF Webinar
  - Review and discuss initial process and scope of TOTF
- Identify process for modifying generation in power flow model to reflect retirements
- Define parameters for "less than peak" cases
- Define set of reliability parameters used in Task 8

Phase II Schedule and Outline of Work
Steps 8-13 (January - March, 2012)

- Initial meeting of TOTF
- Develop data sets for each Scenario
- Set up initial load flow for each Scenario
- Perform gap analysis
- Second TOTF meeting
- Identify new transmission for each Scenario

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Phase II Schedule and Outline of Work
Steps 14-22 (March – June, 2012)

- Additional TOTF meetings to review work and obtain feedback
- Presentation to SSC to obtain feedback on case development progress
- Final modifications to build-outs based on Stakeholder feedback
- PAs finalize transmission upgrade for each Scenario
- SOPO Task 7 Deliverable: One solved peak case per scenario plus “less-than–peak” as required

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Phase II Schedule and Outline of Work
Steps 23-26 (June – August, 2012)

- PAs test build-out topologies against reliability criteria
- TOTF and SSC comment and feedback sought
- Adjustments made as necessary
- Flowgates for use in production cost analysis determined
- Task 8 deliverable is one reliability-tested transmission topology for each scenario

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Phase II Schedule and Outline of Work
Steps 27-30 (July – September, 2012)

- Production cost analysis on each Scenario

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Phase II Schedule and Outline of Work
Steps 31-34 (July – October, 2012)

- Develop transmission cost information for each scenario
- Generation costs derived from SSC-approved inputs from SOPO Task 5
- Results provided to SSC for review and input

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Phase II Schedule and Outline of Work
Steps 35-44 (August – December, 2012)

- Final Report – SOPO Task 12 Deliverable

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Next Steps

- Comments on Schedule and Work Outline
  - To Dave Whiteley by August 8th
- EIPC reviews and adjusts outline
- PAs review and prepare for 2012 work
- TOTF is formed

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Questions

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