Introduction to
EIPC Studies 2013-2014

PJM Regional Stakeholder TEAC Meeting
July 10, 2013
Outline

• EIPC Background and History
• EIPC Scope of Activities (non-grant)
• EIPC Work Plan 2013-2014 (non-grant)
• Stakeholder Process Overview
• Stakeholder Role and Expectations
• Questions for Discussion
• Schedule for 2013
• 2018 and 2023 Roll-up Cases
• Discussion of Potential Scenarios to be Studied
About the EIPC

• Eastern Interconnection Planning Collaborative (EIPC)
• 25 Planning Authority (Planning Coordinator) members including ISOs/RTOs, non-ISO regions, municipals, cooperatives, ...
• Members are from the U.S. and Canada
• Approximately 95% of the Eastern Interconnection customers covered
• Formed in the Spring of 2009
<table>
<thead>
<tr>
<th>Planning Authority Members of EIPC</th>
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<tr>
<td>• Alcoa Power Generating</td>
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<td>• American Transmission Co.</td>
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<td>• Duke Energy Carolinas</td>
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<td>• Electric Energy Inc.</td>
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<td>• Entergy *</td>
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<td>• Florida Power &amp; Light</td>
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<td>• Georgia Transmission Corp.</td>
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<td>• IESO *</td>
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<td>• International Transmission Co.</td>
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<td>• ISO-New England *</td>
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<td>• LG&amp;E/KU</td>
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<td>• MAPPCOR *</td>
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<td>• Midwest ISO *</td>
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<td>• Municipal Electric Authority of Georgia</td>
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<td>• New York ISO *</td>
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<td>• PJM Interconnection *</td>
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<td>• PowerSouth Energy Coop.</td>
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<td>• Progress Energy – Carolinas</td>
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<td>• Progress Energy – Florida</td>
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<td>• South Carolina Electric &amp; Gas</td>
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<td>• Santee Cooper</td>
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<td>• Southern Company *</td>
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<td>• Southwest Power Pool</td>
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<td>• Tennessee Valley Authority *</td>
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*Primary participants on portions of the DOE funded project.*
EIPC Activities

1. DOE Interconnection Studies Grant
   - ARRA funded
   - EIPC selected in fall of 2009
   - Study continues into 2015

2. EIPC Model Development and Analysis (non-grant)
   - Funded by EIPC members
DOE Interconnection Studies Grant

- Study of stakeholder-specified futures
- Two Phase Process:
  - Phase I
    - Developed base case starting point for expansion analyses
    - Macroeconomic study of resource needs under different policy and economic growth futures then determine three scenarios for further analysis
  - Phase II
    - Detailed transmission buildouts for three scenarios, production cost analysis, and costs estimated for generation and transmission development in three scenarios
    - Draft report sent to DOE and posted 4Q 2012
- DOE Guidance on Gas-Electric System Interface Study
Gas-Electric System Interface Study

• Phase I assumption that natural gas delivery can keep pace with electric generation development with no impact on gas price

• Recent interest in Gas-Electric interface by DOE, FERC, states, etc.

• EIPC working with DOE to study the issue:
  – Base line of existing electric and gas system analysis
  – Future gas adequacy assessment
  – Detailed modeling under gas contingency conditions, and impact on electric system operations
  – Dual fuel evaluation
EIPC Activities

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Remainder of presentation focuses on activity #2
EIPC Scope of Activities (non-grant)

• Initial EIPC Scope of Activities adopted 12/22/09
• Non-grant work in 2013-2014:
  – Roll-up analysis of the PA’s plans to find possible changes that will improve their efficiency and effectiveness
  – Result of this analysis available for consideration in regional and inter-regional planning processes
  – Perform a defined number of scenarios/sensitivities against the rolled-up model
EIPC Work Plan 2013-2014

• 2013 – Model roll-up and evaluation by Planning Authorities – during Q1, Q2, and Q3

• 2013 – Develop and put in place a new stakeholder process
  – Develop process
  – Poll states and other stakeholders for input and comment
  – Finalize and implement new stakeholder process
    • Hold initial open stakeholder webinars
EIPC Work Plan 2013-2014 (cont’d)

• Late 2013 through 2014
  – Provide results of updated roll-up analysis to stakeholders
  – With stakeholder input, develop resource expansion scenarios to be studied in 2014 on 2013 roll-up models
  – Perform inter-regional transmission analysis to support selected scenarios
  – Provide cost estimate for incremental transmission improvements and build-out required to support selected scenarios
  – Discuss interim results with Stakeholders and receive feedback
  – Revise analysis as appropriate
  – Hold Stakeholder meeting(s) to present final results of analysis
  – Publish results
  – In 2014, develop a new work plan for 2015 and beyond
EIPC Work Plan 2013-2014 (cont’d)

• Supporting Activities
  – CEII: Continue to make EIPC models available to those who have completed the EIPC CEII process (based on regional clearance)
  – Website: www.eipconline.com
    • Continue to host the EIPC website
    • Review current EIPC website and recommend modifications as appropriate
    • Post material from both grant and non-grant EIPC activities
Stakeholder Process Overview

• Note difference between the DOE-funded Gas-Electric System Interface Study and EIPC Roll-up (not funded by DOE)

• Existing stakeholder groups previously created for other purposes such as compliance with FERC Order 890 will used to facilitate stakeholder input

• Ensure a regional focus:
  – Present roll-up models and results
  – Receive stakeholder feedback, input, comments and suggestions on specific scenarios to be studied
  – Present the results of scenario studies
  – Seek stakeholder feedback on reports that are created
Stakeholder Process Overview (cont’d)

• EIPC plans to hold two to three interconnection-wide stakeholder webinars each year
• These webinars provide transparency and coordination between the regions and to seek additional stakeholder input
• Webinars will be open to all stakeholders including federal and state (EISPC) representatives
• If necessary, interconnection-wide in-person stakeholder meetings could be held in place of or in addition to the webinars
Planning Authority Responsibility

• Ensure appropriate communication with regional stakeholder processes
• Coordinate with EISPC to ensure they have the opportunity to provide input and feedback
• Develop potential scenarios to be presented to stakeholders for input
• Solicit, organize, and review input from stakeholders
Planning Authority Responsibility (cont’d)

• Work with stakeholders through webinars (and meetings, if necessary) to provide transparency and resolve disagreements if possible

• Determine which scenarios will be studied based on input from stakeholders and guidance from the EIPC Executive Committee

• Post chosen scenarios and explanations for why those scenarios were chosen

• Report back to each region on interim and final study results
Stakeholder Role and Expectation

• Participate in regional processes and meetings
• Provide input on the roll-up models and results
• Provide input on potential scenarios developed by the PAs
• Suggest other scenarios of interest that should be considered
• Work with other stakeholders in determining which scenarios would be of most value
• Participate in interconnection-wide webinars (and meetings, if necessary) to provide input on the interim results, draft conclusions, and recommendations
Questions for Discussion

• When and how would stakeholders like to hear from the EIPC on the status of EIPC work?
• Do stakeholders want a separate set of EI-wide calls/webexes?
• What is the best use of EI-wide web meetings?
• How often would stakeholders like to be updated on EIPC work?
• Would stakeholders want the capability to provide input via an EIPC “mail box” in addition to input via their regional process?
• What would you like to get from EIPC studies?
• How much time do folks need to be able to provide comments once material is shared with them in – 2 days, 2 weeks, 1 month?
Schedule for 2013

• Regional Meetings: June through August
  – Background on non-grant work
  – Stakeholder process
  – 2018 and 2023 roll-up base cases
  – General discussion on potential scenarios to be studied

• Stakeholder Comments and Input on Stakeholder Process, Roll-up, and Scenarios Due – 9/3/13
  – Comments on stakeholder process
  – Roll-up work
  – Input on scenarios to be studied
Schedule for 2013 (cont’d)

• EIPC Consideration of Comments Received on Stakeholder Process: August and September
  – Finalize any recommended changes to stakeholder process – 9/19/13
• Regional Meetings: Mid-September – October
  – Results of roll-up case contingency and transfer testing
  – List of potential scenarios to be studied in 2014
  – Stakeholder feedback on which potential scenarios to select
• Eastern Interconnection-Wide Webinar – November
• EIPC Develops 2014 Study Schedule – October to December
  – Consider PA manpower requirements
  – Final selection of scenarios – 12/19/13
  – Post/notify stakeholders final scenarios to be studied in 2014
Questions and Discussion