



Eastern Interconnection Planning Collaborative

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# Gas-Electric System Interface Study

SSC Webinar - June 20, 2013

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# History

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- The New York ISO originally developed a Scope of Work (SOW) to study the natural gas–electric interface and infrastructure within New York State; ISO-NE, PJM, MISO, TVA, and Ontario were also interested in performing similar studies.
- At the same time, the U.S. DOE recognized a gap in its review of the EIPC Reports on Phase 1 and 2 of the DOE funded eastern interconnection transmission analysis work, which prompted them to extend the interconnection studies grant to include further analysis of the interaction of the natural gas and electric industries:
  - Many of the alternative futures studied within Phase 1 and 2 of the EIPC analysis involved retiring coal-fired power plants and replacing them with natural gas-fired generation.
  - During the period of the EIPC study, noteworthy changes have occurred regarding the natural gas markets that would result in an increased dependence on new gas-fired resources.
  - Recent shale gas development and subsequent changes in the location of new natural gas supplies also factor in.

# Participating Planning Authorities (PPAs) / Study Region

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- The six Participating Planning Authorities (PPAs) are a subset of EIPC members that include:
  1. ISO New England (ISO-NE)
  2. New York ISO (NYISO)
  3. PJM Interconnection (PJM)
  4. Midcontinent ISO (MISO) (including the MISO South/Entergy system)
  5. Tennessee Valley Authority (TVA) Areas
  6. Ontario's Independent Electricity System Operator (IESO)
- The Study Region encompasses the major natural gas supply, pipelines, storage and distribution systems and regional electric systems serving the PPAs. In metropolitan areas, the inclusion of local gas distribution companies (LDCs) is an important consideration because such a large number of generating plants are served directly off the LDC systems in those areas.

# PPA Stakeholder Groups / Stakeholder Steering Committee (SSC)

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- The PPA Stakeholder Groups are the assembly of stakeholders created by each PPA to provide input to the PPA on its activities and to fulfill any requirements it may have under FERC Order No. 890. Since this Gas-Electric System Interface Study will be performed in a transparent and collaborative manner, the study processes will be open to participation by state and federal officials, representatives from ISOs, RTOs, electric utilities, transmission and generation owners, end-users and relevant stakeholder bodies or non-government organizations (NGO's), including appropriate entities in Canada. Representatives from the North American natural gas industry are also included.
- To meet these aforementioned requirements, the EIPC previously established the Stakeholder Steering Committee or SSC, a multi-constituency steering committee, to provide strategic guidance on the scenarios and sensitivities to be modeled, suggested modeling tools, suggest key assumptions for the scenarios and sensitivities, and other activities. The EIPC and SSC Charter and its membership and activities are posted on the EIPC web site which is located at: <http://www.eipconline.com/>.

# Study Targets

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The four (4) Targets of the Statement of Work (SOW) are:

1. Develop a baseline assessment that includes descriptions of the natural gas-electric system interface(s) and how they impact each other. Utilizing public information and other appropriate sources of data, compile a baseline of the natural gas and electric system interface(s) within each PPA Area and the entire Study Region. Assess the specific drivers of the planning process for each of the major pipelines/LDCs in the Study Region, as well as the current level of interaction, at an operational and planning level, between the bulk electric and natural gas systems.

# Study Targets - cont'd

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The four (4) Targets of the Statement of Work (SOW) are:

2. By each PPA Area and for the overall Study Region, evaluate the capability of the natural gas system(s) to supply the individual and aggregate fuel requirements from the electric power sector over a five and ten year study horizon under a Reference Gas Demand Case and a High Gas Demand Case. Subject to funding availability, the Consultant will also provide a separate price quote to evaluate the same for a Low Gas Demand Case and other potential sensitivities which the PPAs or the SSC and PPA Stakeholder Groups may choose to exercise.

# Study Targets - cont'd

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The four (4) Targets of the Statement of Work (SOW) are:

3. By each PPA Area and for the overall Study Region, identify contingencies on the natural gas system that could adversely affect electric system reliability and vice versa. This contingency analysis shall be performed at the five year study horizon. Subject to funding availability, the Consultant will also provide a separate price quote to evaluate the same type of contingency analysis at the ten year horizon or for other optional sensitivities which the PPAs or the SSC and PPA Stakeholder Groups may choose to exercise.



# Study Targets - cont'd

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The four (4) Targets of the Statement of Work (SOW) are:

4. Review operational and planning issues and any changes in planning analysis and operations that may be impacted by the availability or non-availability of dual fuel capability at generating units. This analysis should also review the benefits and costs of requiring dual fuel capacity versus the benefits and costs of gas sector infrastructure expansion. This analysis should also include a review of the siting and/or permitting issues that might affect the feasibility of one solution over the other (e.g. dual fuel versus gas system expansion), or possibly drive an alternative solution.

# Confidential and CEII Materials

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- The PPAs and the Consultant will identify and correspondingly redact or appropriately label those sections of the Draft and Final Reports and Presentations that are deemed classified as either **Confidential - (Redaction)** or **Critical Energy Infrastructure Information (CEII) - (Labeling)**. This **Confidential** or **CEII** information **must be redacted or labeled** within the Draft and Final versions of the Reports and Presentations prior to any document, report, presentation or other work product(s) being released into the public domain.

# PPA Comments

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- At a time that is mutually agreeable to both the PPAs and the Consultant, the Consultant shall deliver a Draft Report and Presentation for each of the four SOW Targets (1-4) to the combined PPAs and/or the individual PPAs on the draft results and findings of the analysis. The PPAs will work with the Consultant to minimize the number of presentations, which could be as high as six (6) or one for each PPA. The PPAs shall be given sufficient time and opportunity to review and comment on the Consultant's Draft Report and Presentation. The PPAs shall review and return all of their comments to the Consultant by the dates specified. The Consultant shall incorporate all of the PPAs comments and suggestions, or provide an explanation of why the specific comments were not incorporated. The Consultant shall then produce a Revised Draft Report and Presentation for review by the SSC and PPA Stakeholder Groups. No later than the dates specified, the Consultant shall deliver the Final Report and Final Presentation to the PPAs. The Final Presentation shall reflect the results and findings within the Final Report.

# SSC and PPA Stakeholder Group Comments

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- At a time that is mutually agreeable to both the PPAs and the Consultant, the Consultant shall deliver a Revised Draft Report and Presentation for each of the four SOW Targets (1-4) to the SSC and the combined PPA Stakeholder Groups and/or the individual PPA Stakeholder Groups. The PPAs will work with the Consultant to minimize the number of presentations, which could be as high as seven (7) or one for each PPA Stakeholder Group and the SSC. The SSC and PPA Stakeholder Groups shall be given sufficient time and opportunity to review and comment on the Consultant's Revised Draft Report and Presentation. The PPAs shall take all stakeholder comments and suggestions into consideration and subsequently provide the Consultant with a final set of comments for incorporation into the Final Report and Final Presentation. The Consultant shall also provide support to the PPAs, the SSC, and PPA Stakeholder Groups in the development of the optional sensitivities.

# Review of Results – Preliminary Dates

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- Target 1: Baseline the Existing Natural Gas–Electric System Interfaces
  1. No later than 12/20/13, the Consultant shall deliver a Draft Report and Draft Presentation to the PPAs for preliminary review and comment.
  2. The PPAs review and return all comments to the Consultant by 01/03/14.
  3. The Consultant shall then produce a Revised Draft Report and Presentation by 01/10/14 for review by the SSC and PPA Stakeholder Groups.
  4. The SSC and PPA Stakeholder Groups will provide comments on the Revised Draft Report and Presentation by 01/31/14. The PPAs shall take all stakeholder comments and suggestions into consideration and subsequently provide the Consultant with a final set of comments for incorporation into the Final Report and Final Presentation by 02/14/14.
  5. The Final Report and Final Presentation shall be delivered to the PPAs by 02/21/14.

# Review of Results – Preliminary Dates - cont'd

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- Target 2: Evaluate the Capability of the Natural Gas Systems to Satisfy the Needs of the Electric Systems
  1. No later than 03/28/14, the Consultant shall deliver a Draft Report and Draft Presentation to the PPAs for preliminary review and comment.
  2. The PPAs review and return all comments to the Consultant by 04/11/14.
  3. The Consultant shall then produce a Revised Draft Report and Presentation by 04/18/14 for review by the SSC and PPA Stakeholder Groups.
  4. The SSC and PPA Stakeholder Groups will provide comments on the Revised Draft Report and Presentation by 05/09/14. The PPAs shall take all stakeholder comments and suggestions into consideration and subsequently provide the Consultant with a final set of comments for incorporation into the Final Report and Final Presentation by 05/23/14.
  5. The Final Report and Final Presentation shall be delivered to the PPAs by 05/30/14.

# Review of Results – Preliminary Dates - cont'd

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- Target 3: Identify Natural Gas System Contingencies that Could Impact Electric System Reliability and Vice Versa
  1. No later than 09/12/14, the Consultant shall deliver a Draft Report and Draft Presentation to the PPAs for preliminary review and comment.
  2. The PPAs review and return all comments to the Consultant by 09/26/14.
  3. The Consultant shall then produce a Revised Draft Report and Presentation by 10/03/14 for review by the SSC and PPA Stakeholder Groups.
  4. The SSC and PPA Stakeholder Groups will provide comments on the Consultant's Revised Draft Report and Presentation by 10/24/14. The PPAs shall take all stakeholder comments and suggestions into consideration and subsequently provide the Consultant with a final set of comments for incorporation into the final Report and Final Presentation by 11/07/14.
  5. The Final Report and Final Presentation shall be delivered to the PPAs by 11/14/14.

# Review of Results – Preliminary Dates - cont'd

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- Target 4: Review Dual Fuel Capability
  1. No later than 05/23/14, the Consultant shall deliver a Draft Report and Draft Presentation to the PPAs for preliminary review and comment.
  2. The PPAs review and return all comments to the Consultant by 06/06/14.
  3. The Consultant shall then produce a Revised Draft Report and Presentation by 06/13/14 for review by the SSC and PPA Stakeholder Groups.
  4. The SSC and PPA Stakeholder Groups will provide comments on the Consultant's Revised Draft Report and Presentation by 07/04/14. The PPAs shall take all stakeholder comments and suggestions into consideration and subsequently provide the Consultant with a final set of comments for incorporation into the Final Report and Final Presentation by 07/18/14.
  5. The Final Report and Final Presentation shall be delivered to the PPAs by 07/25/14.



# EIPC Phase II Report – Preliminary Dates

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- EIPC Phase II Report and Presentation to the SCC and PPA Stakeholder Groups
  1. Consultant delivers final reports and final presentations from Targets 1-4 to the PPAs by 12/12/14.
  2. PPAs incorporate the final reports and final presentations from Targets 1-4 into the EIPC Phase II draft report (dated 12/22/12) by 01/09/15.
  3. The revised EIPC Phase II draft report and presentation are delivered to the SSC and PPA Stakeholder Groups for review and comment by 01/20/15.
  4. The SSC and PPA Stakeholder Groups review and deliver comments on the EIPC Phase II draft report and presentation to the PPAs by 02/17/15.
  5. PPAs review and incorporate applicable stakeholder comments into a revised EIPC Phase II draft report and presentation by 03/10/15.

# EIPC Phase II Report – Preliminary Dates - cont'd

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- EIPC Report and Presentation to U.S. DOE
  1. PPAs send the revised EIPC Phase II draft report and presentation to the U.S. DOE for review and comment by 03/11/15.
  2. U.S. DOE reviews and delivers comments on the revised EIPC Phase II draft report and presentation to the PPAs by 04/08/15.
  3. PPAs incorporate U.S. DOE comments into the final EIPC Phase II report and presentation by 05/06/15.
  4. PPAs deliver final EIPC Phase II report and presentation to U.S. DOE for acceptance by 05/07/15.

# Questions



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