



Eastern Interconnection Planning Collaborative

Eastern Interconnection Transmission Studies Project

Gas-Electric System Interface Study

John P Buechler

NYISO Executive Regulatory Policy Advisor

EGCWG Webinar

June 17, 2013

Overview

- Background
- Statement of Work (SOW)
- Stakeholder Process
- Schedule & Next Steps

Background

Introduction to the Gas-Electric System Interface Study

DOE Interconnection Studies Grant

- Study of transmission needs across stakeholder-specified futures
 - Worked with Stakeholder Steering Committee (SSC) and EISPC to define 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 (80 runs)
 - Stakeholder choice of three scenarios for further analysis
 - Interim report issued 4Q 2011
 - Phase II
 - Planning Authorities developed detailed transmission buildouts for three scenarios
 - Production cost analysis of three scenarios and six sensitivities
 - 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

DOE Guidance

- Recognizes the progress in furthering interconnection-wide planning study
- Notes changes in the natural gas market since the beginning of the study and in particular the new source locations and increased reliance on natural gas for power generation
- Acknowledges that the Phase II draft report states, "it was assumed that new natural gas plants would be placed at the site of deactivated coal plants, reducing the need for transmission; the locations and capacities of natural gas pipelines were not taken into account."

DOE Guidance (continued)

- Recognizes that with the current study information it is unknown if sufficient natural gas infrastructure exists to support the proposed increase in natural gas power production
- Requests that EIPC begin to evaluate the interaction between the natural gas and electricity infrastructures from a planning perspective
- Directs a review of the additional results and development of a revised Phase II report
- Requests that EIPC revisit the role and membership of the SSC to add gas expertise given the gap to be filled

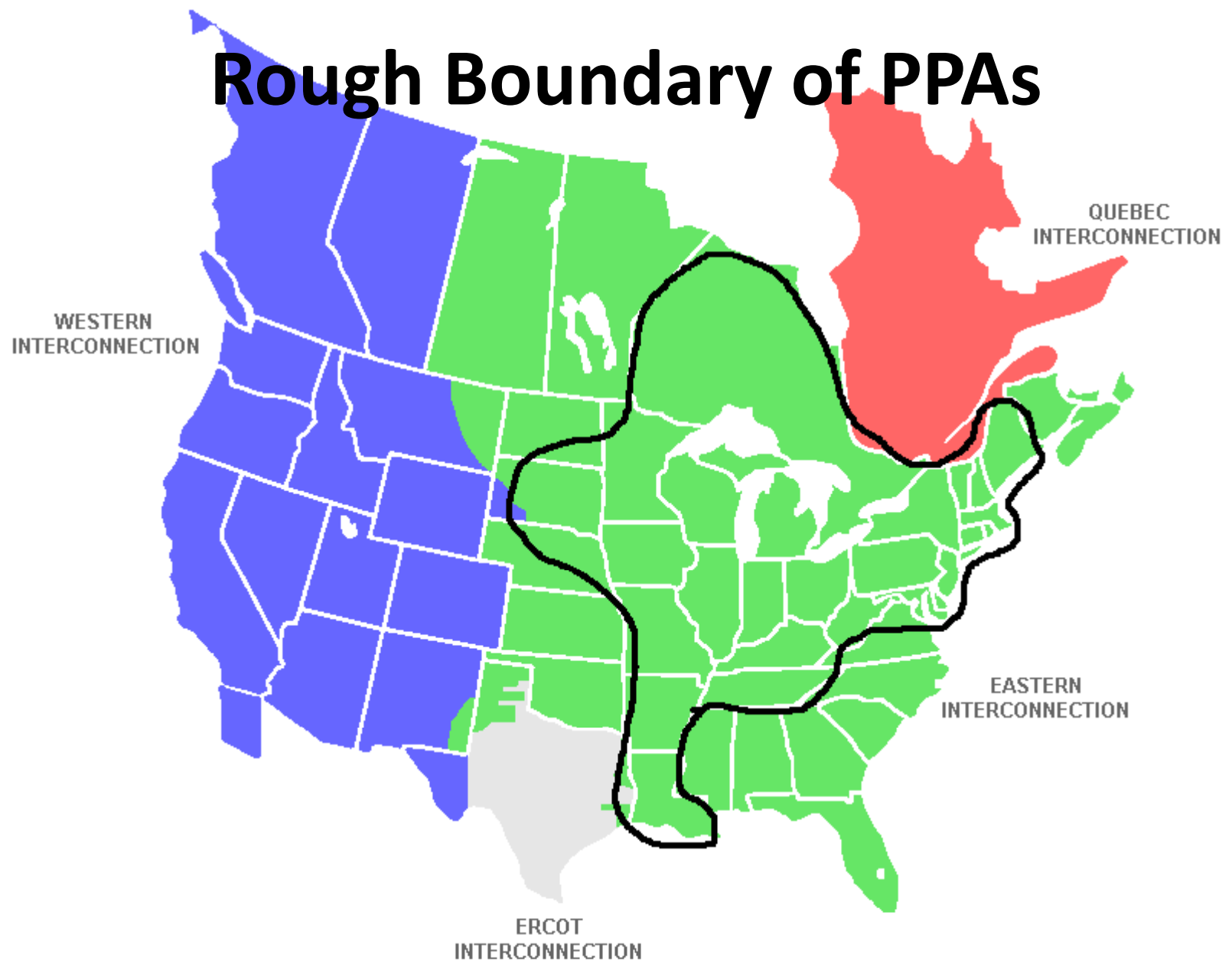
Gas-Electric System Interface Study

- Participating Planning Authorities (PPAs) are: ISO-NE, NYISO, PJM, IESO (Ontario, Canada), MISO (including the Entergy system), and TVA
- Four Targets (areas to be analyzed)
- Most analytical work to be completed by a consultant chosen through an RFP process
- Stakeholder process:
 - Request SSC to reconvene
 - Recommendation to add gas expertise (SSC is currently focused on electric transmission)
 - Include regional stakeholder groups from each PPA in the process

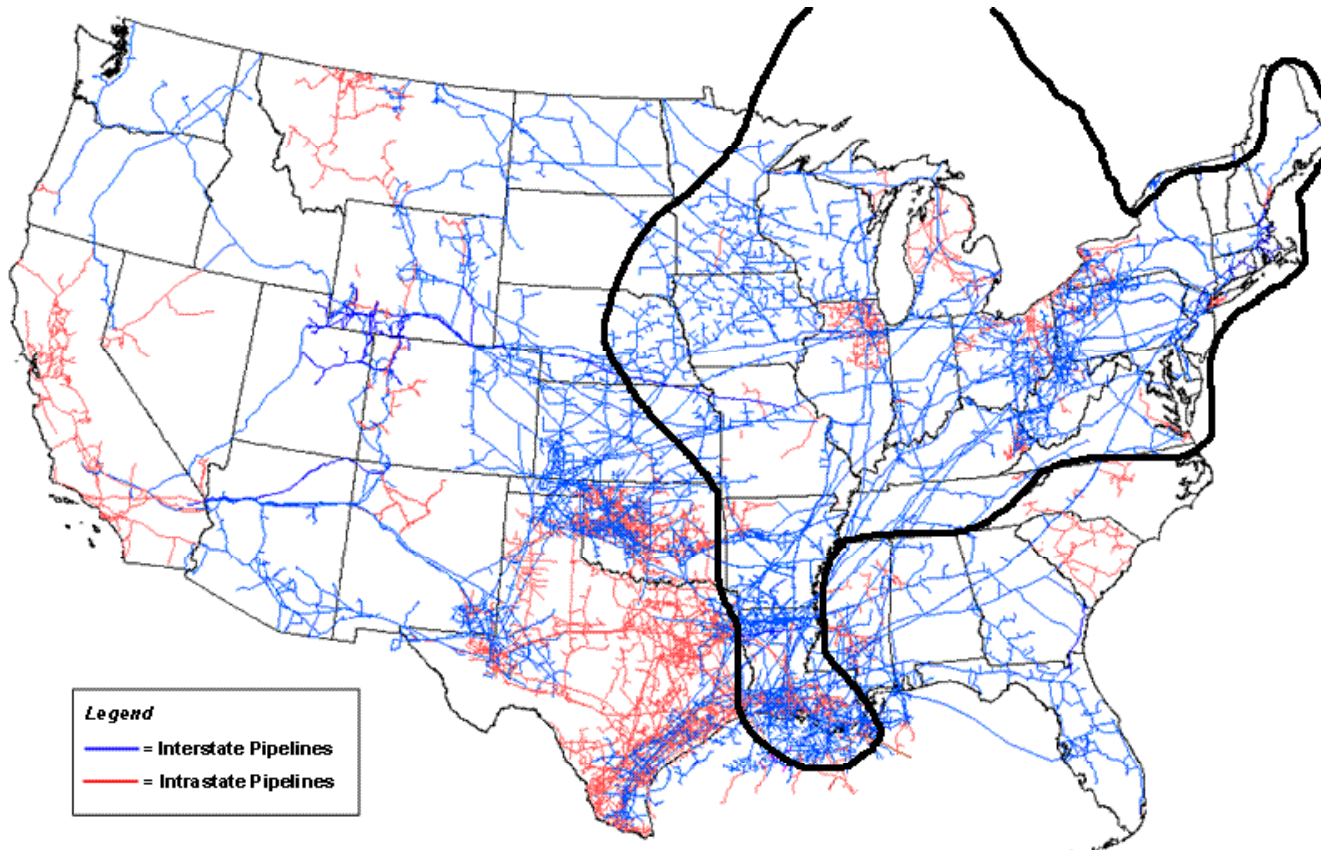
Study Region

- The Study Region is the collective area of all six PPAs electric transmission system and the natural gas pipelines that supply these areas, even if an entire pipeline does not fall within the geographic area served by the PPAs
- The next few slides illustrate, in a general manner, the Study Region

Rough Boundary of PPAs



Rough Boundary of PPAs



Source: Energy Information Administration, Office of Oil & Gas, Natural Gas Division, Gas Transportation Information System

Possible Areas of Interest



Project Statement of Work (SOW)

History

- 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 on a broader inter-regional basis.
- At the same time, the U.S. DOE recognized a gap in its review of the EIPC Reports on Phase 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.

Study Targets

Target 1: Baseline Assessment

- 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

Target 2: Capability Assessment

- 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

Target 3: Contingency Analysis

- 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

Target 4: Dual-Fuel Analysis

- 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

- 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.

Stakeholder Process

Stakeholder Process Background

- A fundamental requirement is that the analyses and planning should be performed in a transparent and collaborative manner.
- The SSC was constituted as a multi-constituency steering group, to provide strategic guidance and input on the study.
- The SSC Charter defines its structure and how its members are elected.

Stakeholder Process Enhancement

- The EIPC recommends that the SSC, using its existing processes described in its Charter, add gas representatives to its membership since this will enable the SSC to more fully contribute to and benefit from the study
- The SSC will meet at different times determined by the SSC
- Stakeholder participation will be further enhanced by utilizing PPA Stakeholder Groups previously created for other purposes in each PPA Area
- PPA Stakeholder Group meetings will be scheduled as needed by the regions

Stakeholder Participation and Input

- Subtask 1.A* – Adjust structure of SSC as needed
- Subtask 1.E – Project task and scope development
- Subtask 11.A – Review results and develop first draft Phase II report
- Subtask 11.B – Review results with SSC and solicit input on the draft report
- Subtask 11.C – Review draft report during workshop with stakeholders
- Task 12 – Phase II Report

* Task designations refer to the EIPC contract with DOE

Stakeholder Communication

- Contributions by the SSC will be achieved through three face-to-face meetings, one at the beginning, one mid-course, and one at the end, combined with webinars
- PPA Stakeholder Groups will be invited to all SSC meetings
- SSC and PPA Stakeholder Group meeting schedules and announcements will be posted on the EIPC website
- The EIPC website and its mailing lists will be used to keep stakeholders apprised of progress on the study
- Comments received from the SSC and PPA Stakeholder Groups will be posted on the EIPC website
- Documents will be posted at http://www.eipconline.com/Gas-Electric_Documents.html

Schedule and Next Steps

Preliminary Schedule

- Initial stakeholder outreach and posting of documents on website – June 7, 2013
- SSC Webinar and PPA Stakeholder Group Meetings planned for June
 - Request for prompt review of Statement of Work (SOW) to enable issuing RFP for consultant in July
- Stakeholder comment and input on SOW – due 7/12/13 – send to EIPC@TVA.gov
- RFP to be issued and posted – late July

Preliminary Schedule (continued)

- SSC Meeting – July or August
 - Possible agenda topics:
 - Review stakeholder process and schedule
 - Review membership (gas industry reps)
 - Comments from gas industry reps
 - Discuss sensitivities for analysis in Target 2
 - Update on EISPC activities
- PPA Stakeholder Group Meetings – mid-July through August
 - Review stakeholder process and schedule
 - Discuss sensitivities for analysis in Target 2

Preliminary Schedule (continued)

- Stakeholder input on sensitivities – due 9/30/13
- SSC Webinar – October
 - Discuss sensitivities recommended by stakeholders
 - Reconcile differences (if needed)
 - Develop stakeholder recommendation
- Discussion of study results at SSC and PPA
Stakeholder Group webinars and meetings as the results become available – fall 2013 through end of 2014
- Revise Phase II draft report – early 2015

Questions and Discussion

