



Eastern Interconnection Planning Collaborative

EIPC GAS-ELECTRIC SYSTEM INTERFACE STUDY

Status Update

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Joint IPTF/EGCWG Meeting

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Four Study Targets & Status Updates

Four Study Targets

- **Target 1:** Develop baseline assessment, including descriptions of the natural gas-electric system interfaces, interaction effects, specific drivers of the pipeline/LDC planning process
COMPLETE
- **Target 2:** Evaluate the capability of the natural gas systems to meet individual and aggregate core and non-core gas demand over a 5- and 10-year horizon
- **Target 3:** Identify contingencies on the natural gas system that could adversely affect electric system reliability, and *vice versa*
- **Target 4:** Review the operational / planning issues affecting the availability of dual fuel capable generation, including fuel assurance objectives

Target 2 – Infrastructure Adequacy

- Electric simulation modeling
 - AURORAxmp model used to develop generator gas demands
 - Reference, High, Low gas demand cases
 - Sensitivities developed with stakeholder groups
 - Assumptions / inputs developed with PPAs and SSC
- Residential/Commercial/Industrial (“RCI”) sectors’ gas demand forecast
 - Infrastructure expansions, load growth, LDC expansion, oil-to-gas conversion, EE/DR/DSM programs
- GPCM Model used to combine core and non-core demand forecasts
 - Identify constraints and unconstrained locations
 - Identify mitigation opportunities

Target 2: Recent Activities

- Initial Target 2 Draft Report posted on June 20th
- SSC Meeting in Atlanta on June 25-26th
 - Review initial results & draft report
 - Finalize Second Set of Sensitivities
- SSC Webinar on July 7th
 - Discuss modeling of pipeline constraints using GPCM model
- July – September
 - Initial Aurora analyses revised based on comments received
 - Aurora and GPCM analysis conducted on 3 Scenarios & 37 Sensitivities
 - Revised Draft Report preparation
- Revised Target 2 Draft Report to be posted on September 30th
- SSC Webinar on Oct 10th – to discuss Draft Report

Target 3 – Contingency Analysis

- Hydraulic modeling of selected areas
 - WinFlow (steady-state) / WinTran (transient)
- Gas contingencies
 - Loss of supply, loss of storage, line break, loss of compression
- Electric contingencies
 - Loss of electrical supply (bulk power system outage), loss or outage of electric-drive compression
- Identify top three to five gas and electric contingencies in each PPA and in Study Region as a whole
- Identify possible mitigation measures / infrastructure work-arounds

Target 3: Recent Activities

- LAI configuring their hydraulic models (WinFlow & WinTran)
 - FERC has provided some CEII data on jurisdictional pipelines
 - Still awaiting further CEII data
- LAI/PPAs working with Canadian pipelines and certain LDCs to obtain additional information needed for the hydraulic analysis
- Contingency lists are under development for each PPA Region
- SSC Webinar: October 10th
 - Status update will be provided

Target 4 – Dual-Fuel Capability

- Liquid fuel storage capability and method of resupply for dual-fuel units
- Operating characteristics of new plants
 - Fuel switching, regulatory barriers
 - Pressure-sensing capabilities, reaction time
- Analysis of petroleum market and supply options
- Compare trade-offs between gas system expansion (firm transportation contracts) and adding dual-fuel capability (incl. liquid storage capacity)

Target 4: Recent Activities

- Data collection is underway
 - Existing units' alternate fuel supply assessment
 - Liquid fuel supply & delivery options
 - New unit operating characteristics
 - Including fuel-switching capability
- Study methodology posted on May 30th
 - SSC Meeting: June 25-26th
- Dual-fuel plant cost models under development
 - CC & CT plant configurations
 - Account for site-specific variables
- SSC Webinar: – October 10th
 - Status update

Project Administration Timeline

Project Administration Timeline

- SSC Webinar – August 1
 - Status Updates – Targets 2,3, & 4
- *Joint IPTF/EGCWG Meeting – Sept 17th*
- Target 2 Final Draft Report posted – Sept 30th
- SSC Webinar – Oct 10th
 - Discuss Target 2 results & Final Draft Report
 - Discuss Target 3 & 4 status
- Stakeholder comments on Target 2 Draft Report – due Oct 17th
- Target 2 Final Draft Report to DOE – Oct 31st
 - Target 2 Complete
- *Joint IPTF/EGCWG Meeting – Nov 19th*

QUESTIONS?