

# **Ontario Gas Electric Interface**

## **Working Group Project Charter**

### **July 29, 2005**

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#### 1. Working Group Purpose

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The purpose of the Working Group is to build the lines of communication between the stakeholders in natural gas-fired electric generation in Ontario. Initial Working Group membership consists of representatives from the Independent Electricity Market Operator (IESO), Union Gas (Union), Enbridge Gas Distribution (Enbridge) and TransCanada PipeLines (TCPL). A member of the Ontario Energy Board staff attends as an observer. Other stakeholders may include the Ontario Power Authority (OPA), electric power generators, gas marketers/suppliers, and natural gas utilities and natural gas transmission systems external to Ontario.

Participants in the Working Group have a vested interest in reliable energy supply for both the electricity and gas customers of the province and, to that end, support the development of communication protocols and/or operational procedures ensuring accurate, effective and timely coordination between these two sectors.

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#### 2. Working Group Objectives

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1. Develop an explicit coordination process between the electricity and the gas industries to facilitate information exchanges and resolution of operational issues for routine situations and during periods of high demand, low resource availability or transmission constraints for either or both commodities affecting Ontario

Determine the need for reliability studies, whether joint or independent, including contingency analyses and establish a framework for conducting them.

2. Disseminate the knowledge of how the natural gas industry works versus how electricity is dispatched in Ontario and U.S. Northeast:
  - a. Train operations and near-term planning teams from Enbridge, TCPL, Union and IESO together and allow and encourage these teams to establish ongoing working relationships;
  - b. Educate working group members and management teams:
    - i. on the workings of Union's T-1 service in the Union South franchise;
    - ii. on how peaky loads have been served in the Union EDA franchise (in cooperation with TCPL); and
    - iii. on how electricity is dispatched; what information will be available; timeliness of information.

3. Enbridge, TCPL and Union to advise the IESO on various day-ahead process alternatives, regarding their effectiveness in allowing generators to nominate on the timely window.

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### 3. Sub-Committees and Deliverables

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#### **Sub-Committee #1 – Co-ordination and Reliability Assessment**

##### Objective

Develop an explicit coordination process between the electricity and the gas industries to facilitate information exchanges and resolution of operational issues for routine situations and during periods of high demand, low resource availability or transmission constraints for either or both commodities affecting Ontario.

Determine the need for reliability studies, whether joint or independent, including contingency analyses and establish a framework for conducting them.

##### Deliverables

1. a) Establish and document communications protocols between IESO, Pipeline Operators/LDCs and where applicable, Gas and Electricity Market Participants, to satisfy operational planning and real-time operational requirements affecting the reliability of both the gas and electricity sectors.

The documented communication protocol must address:

- the initiation of Information Exchange for routine operations and non-routine operations such as contingencies affecting transportation and storage in the gas system as well as limitations and constraints<sup>1</sup> affecting the dispatch of gas fired generation on the electricity system
  - the level of detail and type of reporting required for each information exchange
  - the appropriate contact within the gas and electricity operations for each exchange of information
  - confidentiality requirements to ensure that codes of conduct are met within each energy sector
- b) Develop a written framework that defines coordinated gas / electric reliability studies and contingency / scenario analyses that need to be undertaken. The framework will identify;
    - The development of the scope for each study,
    - The frequency of review and updates to studies,

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<sup>1</sup> Constraints on the electricity system may involve the running of generation at higher levels than would have been dispatched based on bids and offers.

- How studies will be conducted, financed and reported.

The framework document will include a schedule for an initial set of studies. This schedule will be coordinated with EP group.

Deliverable Tasks/Schedules

**Deliverable 1 a)**

Date	Item
Aug 21, 2005	1. Review Current Practices from other jurisdictions <ul style="list-style-type: none"> <li>○ New England</li> <li>○ California</li> <li>○ Texas</li> <li>○ PJM</li> <li>○ MISO</li> </ul>
Sept 30, 2005	2. Identify interdependencies between gas and electricity systems
Sept 30, 2005	3. Define Information needed for <ul style="list-style-type: none"> <li>○ Gas operations</li> <li>○ Electricity operations</li> </ul>
Oct 15, 2005	4. Determine Public Information that is available
Oct 15, 2005	5. Determine sources for required Confidential information
Jun 1, 2006	6. Develop Confidentiality Agreements for Operations Information Exchanges under the protocol developed
Jun 1, 2006	7. Identify Electricity Market Rule / Procedure Changes
Jun 1, 2006	8. Identify Gas Operating Procedure Changes
Jun 1, 2006	9. Documentation of Communication Protocol <ul style="list-style-type: none"> <li>○ Information Exchange               <ul style="list-style-type: none"> <li>○ Content</li> <li>○ Level of detail</li> </ul> </li> <li>○ Timeliness of Exchange               <ul style="list-style-type: none"> <li>○ Routine and regular                   <ul style="list-style-type: none"> <li>▪ Format</li> </ul> </li> <li>○ Non Routine                   <ul style="list-style-type: none"> <li>▪ Contingencies and Limitations</li> <li>▪ Format</li> </ul> </li> </ul> </li> <li>○ Contacts</li> </ul>

Date	Item
	<ul style="list-style-type: none"> <li>○ Planning</li> <li>○ Real-time</li> <li>○ Confidentiality</li> <li>○ Documentation Control</li> </ul>

**Deliverable 1 b)**

Date	Item
<b>Framework Development</b>	
Aug 31, 2005	1. Review and summarize electric contingency analyses (steady state and transient), including: identification of specific infrastructure contingencies affecting gas requirements, both direct and indirect; description of models and analytical methods; regulatory or other standards influencing contingency analysis
Aug 31, 2005	2. Review and summarize gas scenario analyses (steady state and transient) including: identification of specific infrastructure scenarios affecting gas-fired generation, both direct and indirect, in particular multiple generating station impacts; description of models and analytical methods; regulatory or other standards influencing contingency analysis
Sept 9, 2005	3. Exchange of contingency / scenario analysis summaries among IESO, TCPL, Union and Enbridge (exchange of written summaries followed by joint review meeting)
Oct 31, 2005	4. Determine future demand / supply scenarios and modeling complexity required for future studies, both steady-state and transient (written assessment) and determine capability to complete integrated analysis within GEIWG and associated costs.
<b>Initial Study Requirements</b>	
Oct 31, 2005	5. Identify future demand / supply scenarios impacting gas-fired generation which will need to be subject to future contingency analysis (written list)
Nov 30, 2005	6. Complete scope (based on earlier work) and timetable for commencement and completion of studies
Jan 31, 2006	7. Compile joint final framework report to the Working Group of adequacy of current analyses, analytical models available, need for future study and schedule.
Mar 1, 2006	8. Upon WG acceptance of report, forward to management of

Date	Item
	IESO, TCPL, Union and Enbridge for internal implementation the framework and proceed with the studies.

## **Sub-Committee #2 – Education and Training**

### Objective

Disseminate the knowledge of how the natural gas industry works versus how electricity is dispatched in Ontario and U.S. Northeast:

- a. Train operations and near-term planning teams from Enbridge, TCPL, Union and IESO together and allow and encourage these teams to establish ongoing working relationships;
- b. Educate working group members and management teams:
  - i. on the workings of Union’s T-1 service in the Union South franchise;
  - ii. on how peaky loads have been served in the Union EDA franchise (in cooperation with TCPL); and
  - iii. on how electricity is dispatched; what information will be available; timeliness of information.

### Deliverables

2. a) **“Natural Gas/Electricity” Training Plans** (scope, audience, schedule, syllabus etc.) for IESO and utility/pipe operations personnel (possibly including generators and gas/electric marketers where existing programs are determined to be insufficient).
- b) Periodic progress updates to management (all organizations) detailing results of education of working group participants on services that generators need to underpin reliable response to dispatch notice.

### Deliverable Tasks/Schedules

Date	Item
<b>Phase I – Current State</b>	
week of July 25, 2005	Three utilities co-ordinate/share current training material
week of Aug 2, 2005	Share gas training materials with IESO
week of Aug 2, 2005	Determine who needs training, what they need and when

Date	Item
week of Aug 2, 2005	The IESO will direct gas sub-committee members to the relevant IESO web pages
week of Aug 15-19, 2005	GAP analysis – what training materials need to be created?
<b>Overview</b>	
Sept 6, 2005	Needs analysis and GAP analysis completed
Sept 20, 2005	Regroup with all sub committees
Sept 20, 2005	“Beta Run” training which consists of “Electricity 201” and “Natural Gas 201”
	Communication protocol inputs and introduction training needs
<b>Next Steps</b>	
	Steering group to define other stakeholders and what training this group should provide?

### **Sub-Committee #3 – Day-Ahead Process Alternatives**

#### Objective

Enbridge, TCPL and Union to advise the IESO on various day-ahead process alternatives, regarding their effectiveness in allowing generators to nominate on the timely window.

#### Deliverables

3. a) **Day-Ahead Process Alternatives** report that documents positive aspects of day-ahead processes both unique to Ontario and drawn from experiences of other gas and electric jurisdictions, in particular those benefits derived from gas/electricity coordination.
- b) Joint Enbridge, TCPL, Union documentation of the “current state” capability to serve Ontario gas-fired electric generation, a modelled “future state” with or without implementation of day ahead process alternatives.

Deliverable Tasks/Schedules

Date	Item
week of Jul 18, 2005	Agreement on common modeling assumptions: Union; EGD; TCPL
July 22, 2005	Last day for feedback to IESO on June 15th DAM session date recorded here for timeline planning only
week of Jul 25, 2005	<p>OEB to finalize scenarios.</p> <p>Inputs we need for modeling are:</p> <ul style="list-style-type: none"> <li>• Heat rate</li> <li>• Location</li> <li>• Size (mw)</li> <li>• Timing</li> <li>• Profile (daily, weekly, seasonal)</li> <li>• Upstream supply assumptions (gas at Dawn or how gas is expected to get to Dawn?)</li> </ul> <p>Service expectations as described by generators</p>
week of Jul 25, 2005	<p>Write up description of current services used by power generators</p> <ul style="list-style-type: none"> <li>• T-1, Rate 100, Rate 25 (UGL rates)</li> </ul> <p>How gas is managed between Union and TCPL</p>
Aug 4, 2005	<p>Conf call sub-committee #3 meeting</p> <p>Review all tasks with due dates as of now and plan for next month</p>
Aug 15, 2005	<p>Draft backgrounder on gas day ahead describing why gas industry schedules and commits on day ahead</p> <ul style="list-style-type: none"> <li>• What are the benefits of the gas industry being on a day ahead process alternatives?</li> <li>• What are the issues or problems of operating on a real time market in the gas industry?</li> </ul>
Aug 11, 2005	<p>IESO Day Ahead Process Alternatives stakeholder meeting</p> <p>Some sub-committee #3 members may be attending, date recorded here for timeline planning only</p>

Date	Item
Aug 10 to 15, 2005 (approx)	<p>Approx 2 weeks after start of individual company modeling, based on July 25th scenarios by OEB.</p> <ul style="list-style-type: none"> <li>• UGL, EGD, TCPL to circulate their results (note meeting scheduled for Aug 22nd for group to review).</li> </ul> <p>1st cut at company view of description of additional services (if any) required by generators</p>
Aug 22, 2005	<ul style="list-style-type: none"> <li>• Meeting of sub-committee #3 to review progress to date; specifics include modeling implications, services, edits for other deliverables noted earlier</li> </ul>
Aug 29, 2005 (approx)	<p>OEB holding meeting to prep industry NGF participants on next process related to facilities cost stage</p> <p>date recorded here for timeline planning only</p>
Aug 31, 2005	<p>First draft of description for the costs, business issues, risks, reliabilities issues etc for Day Ahead Process Alternatives:</p> <p>From the gas industry perspective:</p> <ul style="list-style-type: none"> <li>• What are the issues or problems of the gas industry operating on a day ahead process alternatives except for the gas-fired electric power generation sector?</li> <li>• What are the benefits for the gas industry of also having the power industry (gas power generation sector) operating on a day ahead process alternatives?</li> </ul>
Sept 30, 2005	<ul style="list-style-type: none"> <li>• All sub-committee #3 reports to be complete OEB expected to make their report public</li> </ul>
4th Quarter 2005	<p>IESO to make Day Ahead Process recommendations to the IESO Board of Directors</p> <ul style="list-style-type: none"> <li>• No action by sub-committee #3, date recorded here for timeline planning only</li> </ul>