

SENT BY RESS & COURIER

June 28, 2013

Ms. Kirsten Walli  
Board Secretary  
Ontario Energy Board  
P.O. Box 2319  
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**Independent Electricity  
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Dear Ms. Walli:

**Re: EB-2012-0433: Union Gas' Parkway West Project  
EB-2012-0451: Enbridge's GTA Expansion Project  
Independent Electricity System Operator ("IESO") Letter of Support**

Please find attached a letter from the Independent Electricity System Operator ("IESO") in support of the abovementioned proceedings. Two (2) hard copies of this letter have been sent by courier to your attention.

Yours truly,

*Original Signed by*

Kim Warren  
Vice President, Operations and Chief Operating Officer  
Independent Electricity System Operator

cc (email only): All Parties

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## ONTARIO ENERGY BOARD

**IN THE MATTER OF** an application by Enbridge Gas Distribution Inc. for: an order or orders granting leave to construct a natural gas pipeline and ancillary facilities in the Town of Milton, City of Markham, Town of Richmond Hill, City of Brampton, City of Toronto, City of Vaughan and the Region of Halton, the Region of Peel and the Region of York; and an order or orders approving the methodology to establish a rate for transportation services for TransCanada Pipelines Limited;

**AND IN THE MATTER OF** an application by Union Gas Limited for: an Order or Orders for pre-approval of recovery of the cost consequences of all facilities associated with the development of the proposed Parkway West site; an Order or Orders granting leave to construct natural gas pipelines and ancillary facilities in the Town of Milton; an Order or Orders for pre-approval of recover of the cost consequences of all facilities associated with the development of the proposed Brantford-Kirkwall/Parkway D Compressor Station project; an Order or Orders for pre-approval of the cost consequences of two long term short haul transportation contracts; and an Order or Orders granting leave to construct natural gas pipelines and ancillary facilities in the City of Cambridge and City of Hamilton.

## LETTER OF SUPPORT FROM

### THE INDEPENDENT ELECTRICITY SYSTEM OPERATOR (“IESO”)

#### Introduction

The Ontario Energy Board (the “Board”) received three separate applications for approvals to undertake unique, yet related, system expansion projects:

- Enbridge Gas Distribution Inc.’s (“Enbridge”) GTA Expansion (EB-2012-0451);
- Union Gas Limited’s (“Union”) Parkway West (EB-2012-0433); and
- Union’s Brantford-Kirkwall/Parkway D (EB-2013-0074).

In Procedural Order #2 issued May 8, 2013, the Board combined these applications to realize administrative and substantive benefits and made provisions for intervenors to file evidence on or before June 28, 2013.

The Independent Electricity System Operator (“IESO”) submits the following comments in support of Union’s Parkway West Project and Enbridge’s GTA Expansion Project to the extent that these projects enhance electric reliability.

### **Interdependency of the Natural Gas and Electricity Sectors**

The interdependency between electricity and gas systems is an established fact: there are electric-fired compressor units on gas transmission systems and the gas industry supplies fuel for gas-fired generators. As gas-fired generation increases in North America, the level of interdependency between the natural gas and electricity sectors increases significantly (total capacity of gas-fired generation in Ontario alone has doubled since 2005). While each sector monitors contingencies on their respective systems, a contingency on one system can adversely affect the operation of the other system.

This interdependency has garnered attention from various North American organizations including the North American Electric Reliability Corporation (“NERC”), the Federal Energy Regulatory Commission (“FERC”), and the Board. These organizations have issued various reports, such as NERC’s 2013 Special Reliability Assessment: Accommodating an Increased Dependence on Natural Gas for Electric Power<sup>1</sup> and the Board’s Natural Gas Electricity Interface Review<sup>2</sup>, and held numerous technical conferences focused on natural gas-electric coordination to ensure the two sectors operate in a cohesive manner.

The IESO is committed to supporting the coordination between the natural gas and electricity sectors because such coordination will support the reliable operation of the IESO-controlled grid and the efficient operation of the IESO-administered markets. In their applications, Union and Enbridge claim that their respective projects, Union’s Parkway West and Enbridge’s GTA Expansion, will enhance the reliability of the gas system<sup>3,4</sup>. In doing so, these projects also increase reliability of the electricity system by providing increased redundancy to the fuel supplies of various gas-fired generators in Ontario.

Gas-fired generation is essential in maintaining the reliability of the IESO-controlled grid, not only contributing to resource adequacy but also to transmission security. These points are discussed in detail below.

### **Resource Adequacy: The Role of Gas-Fired Generators in Ontario’s Supply Mix**

Gas-fired generation plays an important part in Ontario’s supply mix. It accounts for approximately 27% of Ontario’s total installed capacity (second only to nuclear) as reported in the IESO’s recent 18-Month Outlook (issued May 24, 2013)<sup>5</sup>. This is illustrated in table 1 below.

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<sup>1</sup> [http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC\\_PhaseII\\_FINAL.pdf](http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_PhaseII_FINAL.pdf)

<sup>2</sup> [http://www.ontarioenergyboard.ca/documents/cases/EB-2005-0306/ngf\\_geinterface\\_report-211105.pdf](http://www.ontarioenergyboard.ca/documents/cases/EB-2005-0306/ngf_geinterface_report-211105.pdf)

<sup>3</sup> Union’s Parkway West, Application Summary, Page 6 of 121, Line 3-4

<sup>4</sup> Enbridge’s GTA Expansion, Exhibit A, Tab 2, Schedule 1, Page 2 of 12, Paragraph 2

<sup>5</sup> [http://www.ieso.ca/imoweb/pubs/marketReports/18MonthOutlook\\_2013may.pdf](http://www.ieso.ca/imoweb/pubs/marketReports/18MonthOutlook_2013may.pdf)

*Table 1: Existing Generation Resources as of April 15, 2013*

Fuel Type	Total Installed Capacity (MW)	Forecast Capability at Summer Peak* (MW)	Number of Stations	Change in Installed Capacity (MW)	Change in Stations
Nuclear	12,998	12,844**	5	0	0
Hydroelectric	7,939	5,718	70	0	0
Coal	3,293	3,018	3	0	0
Oil / Gas	9,987	8,925	29	0	0
Wind	1,560	213	13	49	1
Biomass / Landfill Gas	122	90	6	0	0
<b>Total</b>	<b>35,899</b>	<b>30,808</b>	<b>126</b>	<b>49</b>	<b>1</b>

\* Actual Capability may be less as a result of transmission constraints

\*\* Output of certain nuclear units may be limited due to environmental variances

Of the over 9900 MW of gas-fired generation in Ontario, approximately 2300 MW is situated in the greater Toronto area.

In accordance with Ontario Regulation 496/07, all coal-fired generation will be retired by December 31, 2014, and approximately 3000 MW of coal-fired generation capacity is expected to be shut down by the end of 2013. Coal-fired generation currently represents over 3200 MW of installed capacity in Ontario. While these shutdowns will not result in energy or capacity shortfalls, there will be more dependence on gas-fired generation to meet Ontario demand.

Further, over the next decade, there are significant projects planned affecting Ontario's nuclear generators. With the expected shutdown and refurbishments of various nuclear generating units, the dependence on gas-fired generation to meet Ontario demand is expected to increase.

The Toronto electricity zone's<sup>6</sup> peak demand for the summer of 2012 was 9344 MW. The installed capacity of generators in this zone is 8954 MW which represents a mix of natural gas and nuclear generators. Natural gas generators account for 2314 MW of the Toronto zone's installed capacity. With the upcoming anticipated nuclear refurbishment projects, there will be significantly increasing dependence on the natural gas-fired generation within the Toronto zone to supply local demand.

<sup>6</sup> The Toronto electricity zone is bounded by the municipalities of Oakville to the west, Woodbridge to the north and Pickering to the east, inclusive.

With the shift in where natural gas supplies for Ontario are sourced, Union's Dawn-Parkway system has become increasingly critical to the gas transmission system. As many of the natural gas-fired generators in Ontario are supplied either directly from or downstream of the Dawn-Parkway system, it is vital that there is security in their supply. In their application, Union identifies that "Given the function and nature of Union's other compressor stations, Union has long deployed a loss of critical unit philosophy at Dawn, and at Lobo and Bright."<sup>7</sup> However, Union also states that, currently, "there is not sufficient redundancy at Parkway Compressor Station to meet compression needs in the event of an outage to compressor Unit A or Unit B."<sup>8</sup> The proposed Parkway West project is expected to provide this necessary redundancy.

### **Transmission Security: The Role of Portlands Energy Centre in Electric Reliability for the Downtown Toronto Core**

After the shutdown of Lakeview generating station in 2005, Toronto relied on supplies generated outside the city to meet demand. During this time, the IESO identified that there was an increasingly high risk of transmission facilities supplying downtown Toronto becoming overloaded during heavy demand periods and that a combination of new generation capacity, demand-side initiatives and transmission were needed to alleviate this concern. The IESO identified these concerns in 2005 – 2006 in 18-Month Outlook<sup>9</sup> and Ontario Reliability Outlook<sup>10</sup> reports and further in a letter to the Ontario Power Authority ("OPA") in July 2005<sup>11</sup>.

Due to these mounting concerns, in 2006, the Minister of Energy issued a directive<sup>12</sup> to the OPA to proceed with negotiations with Portlands Energy Centre ("PEC") for the purpose of executing and delivering a definitive contract to address these GTA supply concerns.

Since PEC achieved commercial operation in 2009, it has played a vital role to secure the supply to downtown Toronto. Based on its location, it is not only needed to meet demand during peak demand days but also to allow maintenance outages of various local transmission elements to proceed.

In Enbridge's application, Enbridge states that "in order to maintain adequate inlet pressures at Station B to supply the downtown core and the Portlands Energy Centre, additional facilities are required. Segment B will facilitate future needs by increasing the capacity to supply Station B".<sup>13</sup> As Segment B will enhance the reliability of gas supply to PEC, the IESO submits that this, too, is important for the reliability of the IESO-controlled grid.

### **Conclusions**

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<sup>7</sup> Union's Parkway West Application, Section 7 – Infrastructure Resilience and Reliability, Page 60 of 121, Lines 1 – 3

<sup>8</sup> Union's Parkway West, Schedule 7-3, Page 4 of 15

<sup>9</sup> [http://www.ieso.ca/imoweb/pubs/marketReports/18MonthOutlook\\_2005dec.pdf](http://www.ieso.ca/imoweb/pubs/marketReports/18MonthOutlook_2005dec.pdf)

<sup>10</sup> [http://www.ieso.ca/imoweb/pubs/marketReports/ORO\\_Report-2006-1-1.pdf](http://www.ieso.ca/imoweb/pubs/marketReports/ORO_Report-2006-1-1.pdf)

<sup>11</sup> [http://www.ieso.ca/imoweb/pubs/rfp/IESO\\_Requirements-Downtown\\_Toronto\\_Supply.pdf](http://www.ieso.ca/imoweb/pubs/rfp/IESO_Requirements-Downtown_Toronto_Supply.pdf)

<sup>12</sup> [http://powerauthority.on.ca/sites/default/files/page/1600\\_Central\\_Toronto-Feb10-06.pdf](http://powerauthority.on.ca/sites/default/files/page/1600_Central_Toronto-Feb10-06.pdf)

<sup>13</sup> Enbridge GTA Project, Exhibit A, Tab 3, Schedule 1, Page 4 of 14, Paragraph 8

In summary, both Union's Parkway West and Enbridge's GTA Expansion projects enhance the reliable supply of natural gas to various gas-fired generators in Ontario. As gas-fired generation is essential to the reliable operation of the IESO-controlled grid, the IESO supports these projects.

All of which is respectfully submitted this 28<sup>th</sup> day of June, 2013.

*Original signed by*

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