500 Consumers Road
North York, Ontario M2J 1P8
PO Box 650
Scarborough ON M1K 5E3

Lorraine Chiasson
Regulatory Coordinator
phone: (416) 495-5962
fax: (416) 495-6072
Email: lorraine.chiasson@enbridge.com

September 2, 2008

VIA EMAIL and COURIER

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street,
Suite 2700
Toronto, ON
M4P 1E4

Dear Ms. Walli:

Re: Board File No.: EB-2007-0707
Ontario Power Authority - IPSP and Procurement Process
Interrogatory Responses of Enbridge Gas Distribution Inc.

Further to Procedural Order No. 6, please find enclosed the interrogatory responses from Enbridge Gas Distribution to Board Staff, the City of Toronto, CME, and PWU as follows:

Exhibit I, Tab 54, Schedules 1 and 2;
Exhibit I, Tab 71, Schedules 1 to 3;
Exhibit I, Tab 76, Schedules 1 and 2; and
Exhibit I, Tab 125, Schedules 1 to 3.

Three paper copies are being forwarded to the Board via courier.

Yours truly,

[original signed]

Lorraine Chiasson
Regulatory Coordinator

cc: David Stevens, Aird & Berlis (via email)
Miriam Heinz, Regulatory Coordinator, OPA (via email)
All Registered Intervenors (via email)

EGD RESPONSE TO PWU INTERROGATORY #1

INTERROGATORY

1. Reference: Exhibit L, Tab 17, Schedule 1, Page 1, Paragraph 2
   Issues: A1 – A23

> An important question to be asked is whether the IPSP is sufficiently robust and flexible such that it will result in the OPA indentifying and including in its future procurement new and emerging technologies. EGD does not take issue, through this proceeding, with the Ministerial Directives that establish the procurement process for the Standard Offer Program (SOP). EGD is concerned, though, that the rigidity of the procurement approach employed by the OPA under the SOP may inhibit or prevent the early adoption of beneficial new technologies. EGD believes that the IPSP could be made more robust by addressing other procurement approaches beyond the current SOP approach and recognizing at an early stage that emerging and new technologies could and should play a more prominent role in the future procurement of generating capacity. While the benefits from what the OPA currently classifies (under the SOP) as high-value "renewable" technologies are well-known, there are other technologies that will drive environmental and societal benefits that are not fully identified and/or valued by the OPA's current procurement approach.

   a. EGD refers to "other technologies". Please provide a list and description of these technologies along with EGD's estimated cost/MWh and the current status of the technology.

   b. Can these technologies be implemented in Ontario?

   c. If so when?

   d. What does EGD see as the barriers to their implementation?

RESPONSE

   a. EGD believes that there are other technologies which will drive benefits which are not fully valued by the OPA's current approach. Examples are large, stationary fuel cells, turboexpander generation derived from pressure reducing

operations, organic rankine cycle (ORC) systems that harvest thermal exhaust gas, as well as energy derived from some municipal and industrial waste streams. As well, some applications may drive additional value by virtue of their location because they may save on transmission costs. EGD does not have estimates of the cost for all of these technologies; however, the Company has constructed a 2.2 MW hybrid fuel cell plant that incorporates both turboexpander generation and large stationary fuel cells. Based on the first-time learning from this pilot plant, the Company has identified several opportunities for subsequent turboexpander generation installations that could generate electricity that is competitive with wind and biomass electricity supplies in the $100 to $120 per MWh range. Today's large, stationary fuel cell technology can be competitive at $145 per MWh.

b. Yes.

c. When the benefits are appropriately valued.

d. While these technologies will continue to make technical in-roads, the nearest-term barrier to their adoption is the lack of a level procurement environment that adequately values all the technical and environmental attributes for these technologies.

EGD RESPONSE TO PWU INTERROGATORY #2

INTERROGATORY

1. Reference: Exhibit L, Tab 17, Schedule 1, Page 4, Paragraph 8
   Issues: B1 – B3

> As the OPA acknowledges in its definition of "innovative strategies", experience in other jurisdictions is instructive when looking at approaches that may be used in Ontario. The American experience in the procurement of a variety of different and new technologies for electricity supply is instructive in this regard. In recent years, many American states have established "renewable portfolio standards" that require electricity retailers to provide a minimum percentage of their electricity supplies from renewable energy sources. This has led to an evolution and expansion of what is considered to be a "renewable" energy source, taking into account the need for and benefits from the increase in supply of these energy sources. A recent report from an agency within the US Department of Energy sets out examples of the acceptance of a range of alternative technologies that qualify as "renewable" energy sources, and which are eligible for the enhanced pricing that is offered for renewable energy sources.3 An innovative, value-based procurement strategy as EGD proposes could allow for similar results in Ontario.

   a. EGD cites the DOE report and refers to many American states where the proposed EGD value based approach has been used. EGD refers to similar results for Ontario. Please provide examples of the results that EGD is referring to.

RESPONSE

For examples of results, please refer to Exhibit L, Tab 17, Schedule 1, page 4, paragraph 9.

EGD RESPONSE TO PWU INTERROGATORY #3

INTERROGATORY

1. Reference: Exhibit L, Tab 17, Schedule 1, Page 5, Paragraph 10
   Issues: A33 – A34

> Fuel cells are only one example of missed opportunities under an inflexible procurement regime. When such opportunities are missed, a technology's potential contributions to the Ontario supply mix are marginalized or lost. Conversely, in jurisdictions where the environmental benefits of a range of technologies are examined on an individual, rather than aggregate basis, new and emerging technologies can complement wind, solar, and biomass resources and contribute to a diversified portfolio of environmentally preferred electricity supplied. Examples of such jurisdictions include the United Kingdom, Connecticut, Nevada, and Saskatchewan, to name just a few.

   a. Please provide a brief description of the new and emerging technologies and how they would complement wind, solar and biomass in Ontario as envisioned by EGD.

   b. How large an emerging technologies market does EGD envision being developed in Ontario and over what time frame?

RESPONSE

a. Please refer to EGD response to PWU Interrogatory #1, at Exhibit I, Tab 125, Schedule 1. Many of these technologies offer low, or near-zero, criteria air emissions, they have predictable generation profiles and many are dispatchable. Overall these technologies would complement renewable generation of an intermittent nature.

b. In the planning horizon of the IPSP, these applications may contribute 500 to 1000 megawatts of predictable, low-emission generation. The total megawatts that are ultimately developed will depend on how the benefits of distributed low-emission technologies are assigned to the investors in these new generation supplies or if the benefits are socialized. The next five to seven-year window will likely see greater investment in recycled energy technologies that generate electricity from energy otherwise wasted. Examples of these technologies are turboexpander

generators and organic rankine cycle systems. Within Enbridge's existing Ontario operations, the Company has identified 40 to 80 megawatts of potential generation from such sources. Additional opportunities exist within other industrial and utility-based operations throughout Ontario. During the three to ten year period, the technology cost reductions should result in increased economic viability for large, multi-megawatt fuel cells. These multi-megawatt low-carbon generation supplies are already in operation, or under construction, in the California and US Northeast electricity markets. The in-roads made with large, multi-megawatt fuel cell technology will translate into increased stationary fuel cell uptake in the small residential and commercial markets requiring low-emissions, high-efficiency cogeneration during the last half of the planning horizon for the IPSP.