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Kirsten Walli, Board Secretary Ontario Energy Board P.O. Box 2319, 26<sup>th</sup> Floor 2300 Yonge Street Toronto, Ontario M4P 1E4

Dear Ms. Walli:

Re: Enbridge Gas Distribution Inc. – 2010 Rate Adjustment OEB File No. EB-2009-0172

In accordance with Procedural Order No. 1 in EB-2009-0172, Enbridge Gas Distribution Inc. (Enbridge) submitted a written argument to the Board that addressed the issues set out in the Procedural Order. This argument was filed on November 4, 2009. On November 9, 2009, the Board issued Procedural Order No. 2, which re-states the issues set out in the earlier Procedural Order. The re-stated issues are as follows:

- 1. Are the Green Energy Initiatives described in Enbridge's Application (Ex. B, Tab 2, Sch. 4), their associated costs, assets and revenues properly part of the regulated operations of Enbridge and thus under the Board's ratemaking authority?
- 2. If not, does the Board have jurisdiction to deal with the Green Energy Initiatives, their associated costs, assets and revenues outside of the ratemaking process?

Procedural Order No. 2 indicates that, if Enbridge is of the view that additional written submissions are required to establish the Board's ratemaking jurisdiction over those Green Energy Initiatives which are <u>not</u> characterized as electricity generation facility programs, it may do so by November 13, 2009. The Procedural Order also indicates the Board's expectations that any such submissions would be brief.

Enbridge was authorized to undertake the Green Energy Initiatives by a Directive issued by the Minister of Energy and Infrastructure under section 27.1 of the *Ontario Energy Board Act*, 1998. Prior to the issuance of the Directive, Undertakings given to the Lieutenant Governor in Council prevented Enbridge from engaging in any such activities (without prior approval of the Board).

The Minister's Directive was issued on September 8, 2009 and the scheduled date for filing of pre-filed evidence in this proceeding was October 1, 2009. While Enbridge proposes to move ahead in 2010 with activities authorized by the Directive, the period of

less than a month between issuance of the Directive and the date for filing of evidence was not sufficient for full development of Enbridge's plans.

That should not suggest any lack of urgency for Enbridge to proceed with its Green Energy Initiatives in 2010. The opposite is true. The Green Energy Initiatives are of urgent importance for 2010. The government will require immediate actions from stakeholders and industry participants to implement the aims of the Green Energy and Green Economy Act to create 50,000 jobs for Ontarians in the next three years and make Ontario a global leader in clean, renewable energy and conservation. immediate action from market participants is necessary to begin to make steps towards the aggressive emissions reduction targets being proposed by the Ontario government. Utilities such as Enbridge are well positioned to deliver on the Government's green energy goals and must begin to do so as soon as possible. Enbridge has identified customers who have immediate interest in some of its Green Energy Initiatives. It is important to note that a defining characteristic of many Green Energy Initiatives, that they are long life assets, creates a real concern in terms of lost opportunities. That is, opportunities not realized now will be lost for a very long period of time, as less efficient and less environmentally sensitive technologies will be used instead. It is these circumstances that make it important for Enbridge to proceed with its Green Energy Initiatives starting in 2010.

Upon the filing of Enbridge's evidence, the Board raised issues about its jurisdiction with respect to electricity generation that are to be addressed as a preliminary matter at the outset of the proceeding. (Procedural Order No. 1 calls this a "preliminary motion.")

The context for the Board's issues about its jurisdiction in respect of electricity generation was the Green Energy Initiatives (as opposed to some other context, such as emergency backup electricity generation to support gas utility operations). Enbridge therefore addressed the Board's issues about electricity generation by way of submissions with regard to the Board's role and jurisdiction in respect of green energy matters. Because Enbridge made submissions about the Board's role and jurisdiction in respect of green energy matters, these submissions are generally applicable to all of the Green Energy Initiatives. Enbridge did not make detailed submissions about individual activities within the overall group of Green Energy Initiatives, nor could it have done so given the context already described (i.e., an evidentiary filing less than one month after Enbridge was given authority to undertake the Green Energy Initiatives and a requirement to address jurisdictional issues as a preliminary matter at the outset of the proceeding).

Procedural Order No. 2 broadened the Board's issues to encompass all of the Green Energy Initiatives. Enbridge assumes that, in so broadening the issues, the Board intends to address its role and jurisdiction with regard to green energy matters, rather than attempting to reach conclusions about individual activities within the overall group of Green Energy Initiatives. Nevertheless, given that the Board's issues have now been explicitly expanded beyond electricity generation, Enbridge believes that the Board's consideration of its role in relation to green energy matters would be aided by a greater understanding of some Green Energy Initiatives.



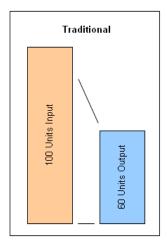
Enbridge's pre-filed evidence sets out some of the Green Energy Initiatives that it may choose to pursue in 2010. As explained in Enbridge's argument, its Green Energy Initiatives are all activities that are newly permitted under the Minister's Directives. The initiatives that Enbridge may pursue in 2010 and subsequent years will largely be driven by market opportunities and demand, which cannot be completely known at this time. For that reason, the list of Green Energy Initiatives set out in Enbridge's pre-filed evidence is intended to be illustrative, and not exhaustive.

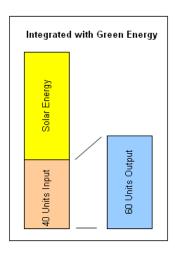
That said, with the expanded scope of the "jurisdictional question" beyond electricity generation projects, Enbridge wishes to provide further details of four examples of Green Energy Initiatives that it plans to pursue. All of these will make substantial contributions to energy efficiency and conservation and assist in meeting government goals for emissions and greenhouse gas reductions.

One of Enbridge's proposed Green Energy Initiatives allows for waste energy from pressure let-down stations along the Company's transmission and distribution lines to be captured and converted into electricity. This is effected using technology called a "turboexpander", which is a flow turbine that harvests the energy from gas flows at the point where the pipeline pressures are reduced. The captured energy is then used to produce clean electricity. This technology represents an exciting opportunity for gas distributors to produce "green" electricity from an existing energy source that would otherwise go unused and wasted. Enbridge has identified 40 to 80 megawatts of potential generation from a number of such sources on its distribution system. The August 10, 2006 Minister's Directive permits this type of activity, which is described in the Directive as "project development and the provision of services related to .... the generation of electricity by means of large stationary fuel cells integrated with energy recovery from natural gas transmission and distribution pipelines". This is an opportunity that is exclusively available to gas transmitters and distributors, since it directly uses their pipes and is located within their facilities. Enbridge does not believe that it would be appropriate, for operational integrity and safety reasons, to make this opportunity available to third parties.

A second Green Energy Initiative that Enbridge plans to pursue in 2010 is solar thermal water heating technology. This involves attaching a solar thermal unit to a natural gas water heater, to increase its efficiency. The solar unit will provide more than half of the required water heating, so that less natural gas is required in total. The natural gas savings will be substantial, as seen in the following example. Assuming that a current house needs 60 units of hot water, then it would require 100 units of natural gas to achieve this (assuming that current natural gas water heaters are 60% efficient). If a solar thermal unit was attached to the water heater, then 36 of the 60 units of hot water would come from the sun through the solar panels and the other 24 units would require only 40 units of natural gas. Therefore, as seen in the chart below, the energy efficiency would move from 60% in the conventional case to 150% with the adoption of the solar panel.







Enbridge's role with this new technology would be as an enabler, to take steps to encourage its adoption by interested customers. The September 8, 2009 Minister's Directive permits this type of activity, which involves "assets required in respect of the provision of services by Enbridge .. that would assist the Government of Ontario in achieving its goals in energy conservation, including assets related to solar-thermal water". Given the negative impact that the use of this technology would have on Enbridge's system load, the Company is not prepared to pursue this opportunity unless it is able to include any investment as part of its regulated operations.

Another Green Energy Initiative that Enbridge plans to pursue in 2010 is the capture and use of biogas from landfills or anaerobic digesters. The project would include Enbridge's involvement with facilities and associated pipelines required to convert raw biogas from either a landfill operation or from an anaerobic digester to bio-methane. The resulting biomethane would have the same chemical characteristics as natural gas and the biomethane would be injected into the natural gas pipeline system. Careful monitoring and processes must be observed to ensure that the bio-methane would not pose any greater health risk to end use customers and distribution staff than natural gas, and that the biomethane would have the same effectiveness as natural gas in any end-use appliances. Since the bio-methane would come from a waste stream, it would be considered a "green" gas or renewable in nature. This would assist end-use customers who would be users of the bio-methane to effectively reduce their greenhouse gas emissions. The August 10, 2006 Minister's Directive permits this type of activity, which involves "services that would assist the Government of Ontario in achieving its goals in energy conservation, including services related to: .. the promotion of cleaner energy sources, including alternative energy sources and renewable energy sources." Enbridge has had discussions with municipalities in its franchise area about these projects and the municipalities' desire to acquire these "green" energy sources for their operational needs and to aid municipalities in meeting their greenhouse gas emission reduction targets. One encouraging example of



such discussions is those being held with the City of Toronto about bio-methane opportunities within their Source Separated Organic facilities.<sup>1</sup>

Enbridge also intends to pursue District Energy projects.<sup>2</sup> One current District Energy project opportunity is to provide heat to homes in a subdivision by using thermal energy to provide hot water and space heating to all homes on the site. In this particular project, the ground source geo-exchange system would provide baseload heating and cooling and some electricity would be needed to meet peak heating and cooling requirements. There would be no natural gas system to the community and natural gas consumption would be eliminated. By relying on geothermal energy, the community's total energy (natural gas and electricity) consumption would be decreased significantly below what it would be with conventional natural gas and electrical options for thermal energy. There are also other types of District Energy projects that could be pursued in the future. The September 8, 2009 Minister's Directive permits this type of activity, which involves "the ownership and operation of ... assets required in respect of the provision of services by Enbridge ..that would assist the Government of Ontario in achieving its goals in energy conservation, including assets related to ... ground-source heat pumps.." Enbridge's investigations into District Energy projects have revealed that customers and municipalities are eager to make use of Enbridge's thermal distribution expertise, and that without the participation of a major utility like Enbridge, these projects will not proceed. Because of the fact that these projects will generally decrease natural gas use (as is the case with solar thermal

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<sup>&</sup>lt;sup>3</sup> Other types of District Energy projects are permitted under different provisions of the Directives, which allow for Enbridge to own and operate "generation facilities that use technology that produces power and thermal energy from a single source" and which encourage Enbridge to provide "services that would assist the Government of Ontario in achieving its goals in energy conservation, including services related to ... the promotion of electricity conservation, natural gas conservation and the efficient use of electricity .. and the promotion of cleaner energy sources, including alternative energy sources and renewable energy sources."



<sup>&</sup>lt;sup>1</sup> The City of Toronto very recently issued its Sustainable Energy Strategy, titled "The Power to Live Green". This strategy recognizes the connection between green energy activities and "distribution". Among other things, it says "Smart energy distribution will improve security of supply, eliminate waste, promote efficiency and enable conservation. Deployment of distributed energy systems and further development to the smart grid will help decentralize energy production and move clean, renewable power to where it is needed, when it is needed."

(at p. 10) http://www.toronto.ca/livegreen/downloads/2009-10\_report.pdf

<sup>&</sup>lt;sup>2</sup> The City of Toronto's Sustainable Energy Strategy describes District Energy as follows: "Distributed or district energy is a recognized approach to meeting the heating, cooling, and domestic hot water needs of buildings, that also can support the process heating requirements of local industry. District energy is the distribution of thermal energy using a pipeline distribution system work. A district energy system may be designed with a single central energy plant or multiple smaller plants. These thermal plants may use various types of fuel including natural gas, renewable energy (geo-energy, bio-energy, solar), or industrial waste heat. By linking buildings and industrial activities together, district energy systems can aggregate the varying energy requirements into a steady heat load that can be effectively and efficiently managed. Modern high performance district energy systems provide an opportunity to meet the demand and minimize energy waste, reduce energy costs, provide increased security of energy supply, and reduce the need for large scale central generation." (at p. 18)

## November 13, 2009 Page 6

water heating technology), Enbridge is not prepared to pursue this opportunity unless it is able to include the investment as part of its regulated operations.

As stated, Enbridge's submissions are premised on the assumption that, in broadening the issues, the Board intends to consider its role and jurisdiction in green energy matters. However, the new, broader issues framed in Procedural Order No. 2 also raise the possibility that the Board could attempt to reach conclusions about (or, in essence, prejudge) individual activities that are within the Green Energy Initiatives. Enbridge submits that, as is apparent from the examples given above, each activity within the Green Energy Initiatives will have its own particular features that must be considered in an activity-by-activity jurisdictional analysis. This is not an analysis that can be done on a preliminary motion at the outset of the 2010 rate proceeding.

Yours truly,

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