

Enbridge's Proposed GTA Pipeline: Fracked Shale Gas vs. Energy Conservation

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Enbridge Gas Distribution is seeking permission from the Ontario Energy Board (OEB) to build a \$623.7 million natural gas pipeline in the Greater Toronto Area (GTA).¹

The proposed pipeline would start near Winston Churchill Boulevard in Brampton and travel east along the Highway 407 corridor to the north-south hydro transmission line between Pharmacy and Warden Avenues in Markham. The pipeline would then travel south through the utility corridor to Sheppard Avenue.²

According to Enbridge, the pipeline is needed to meet a forecast rise in demand for natural gas. Enbridge is forecasting that the demand for natural gas will rise by 0.75% (three quarters of one percent) per year between now and 2025 in the GTA.³ As a result, Enbridge predicts that the GTA's demand for natural gas will exceed its existing pipeline capacity by the winter of 2015-2016.⁴

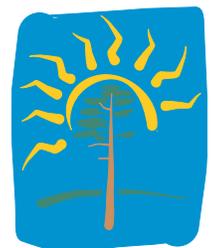
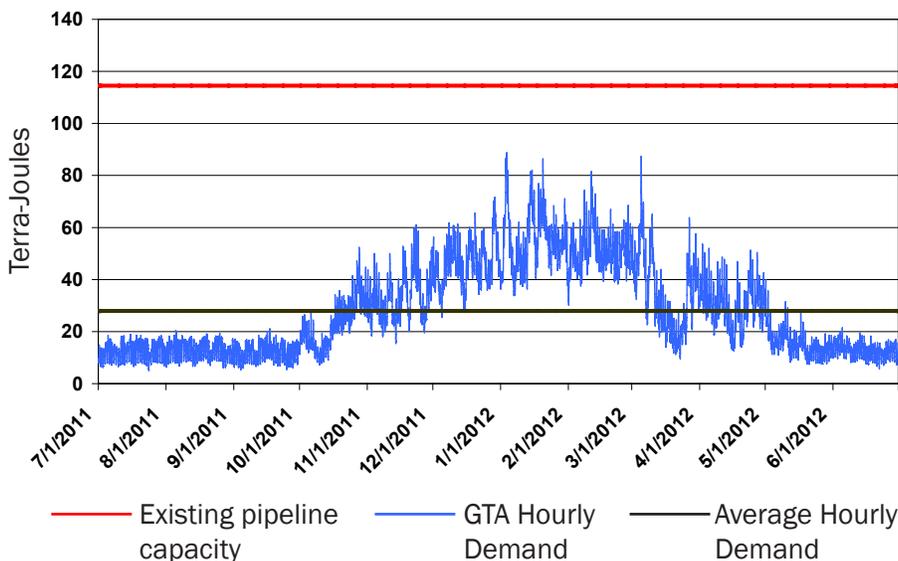
The proposed pipeline would also permit a large increase in shale gas imports from the Marcellus and Utica shale basins in Pennsylvania. This is gas that is extracted using the controversial fracking process of injecting water and chemicals deep into rock formations to release trapped gas and oil. Specifically, the new pipeline would permit shale gas imports from the U.S. to supply approximately 50% of the GTA's natural gas demand by 2016.⁵

In contrast to the \$623.7 million cost of the expanded pipeline, Enbridge spends only \$15.5 million per year on energy conservation and efficiency programs to reduce the demand for natural gas in the GTA.⁶ This means the cost of its proposed pipeline is 40 times greater than Enbridge's annual budget to help its GTA customers save energy and reduce their natural gas bills.



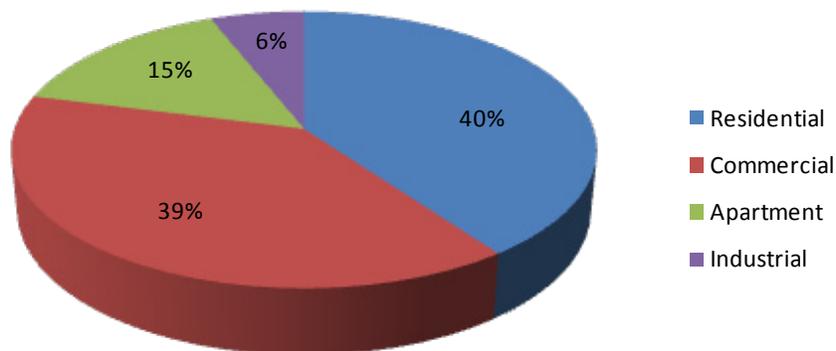
Enbridge's new pipeline will cost more than \$600 million. Investing in energy conservation instead would save gas ratepayers close to \$2 billion.

Figure 1: Hourly Demand for Natural Gas in the GTA , July 2011 to June 2012⁷



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Figure 2: Break-Out of 2011/12 Peak Hour Demand by Customer Groups⁸



Geothermal heating and cooling can reduce the need for natural gas

As Figure 1 indicates the demand for natural gas spikes on cold winter days when the furnaces and boilers in our homes and buildings are running full-out. In fact, the GTA's peak hour demand for gas (88.7 terajoule/hour) is 3 times greater than its average annual hourly demand (27.9 terajoule/hour).

We can clip these winter spikes in demand by implementing energy conservation and efficiency programs to:

- improve the thermal envelopes of our homes and buildings (e.g., more insulation, better draft-proofing, high-efficiency windows);
- improve the operating performance of existing space and water heating systems;
- replace aging and inefficient furnaces and boilers with new, high-efficiency models; and
- switch from natural gas to geothermal energy for space and water heating.

A Better Solution

Energy conservation and efficiency is a better solution to meet the GTA's energy needs for multiple reasons.

Energy conservation and efficiency is a lower cost solution. According to Enbridge, by increasing its energy conservation budget by approximately \$33.7 million per year, it could eliminate the need to build the proposed pipeline to supply a rising demand for natural gas.⁹ That is, energy conservation and efficiency programs can eliminate the projected 0.75% annual increase in the GTA's demand for natural gas. By lowering the pressure on Enbridge's system, it can also make it safer.

Energy conservation and efficiency programs will reduce the energy bills of Enbridge's customers. Specifically, according to Enbridge's best estimates, every dollar that it spends on energy conservation will lead to \$4.17 of *net* energy cost savings for its customers. Therefore, by spending an extra \$33.7 million on energy conservation in 2014, Enbridge can reduce its customers' bills by approximately \$140.6 million.¹⁰ Therefore, by spending an extra \$33.7 million per year on energy conservation, during each of the next ten years, Enbridge can reduce its customers' energy costs by up to \$1.4 billion. Over ten years, this spending equals roughly half what Enbridge is planning to spend on its new

pipeline, a cost that will be passed through to customers on their utility bills. The total net savings for customers, therefore, are actually closer to \$2 billion (energy cost savings plus avoided pipeline construction costs).

Energy conservation programs will reduce the outflow of Ontario dollars to the U.S. to purchase shale gas. By investing in energy conservation and efficiency projects we can create good jobs in Ontario instead of sending our dollars to Pennsylvania to pay for shale gas imports.

Energy conservation and efficiency programs can help Ontario achieve its greenhouse gas emission (GHG) targets, namely, a 15% reduction by 2020 and an 80% reduction by 2050, relative to 1990 levels. Since natural gas is responsible for approximately 35% of Ontario's energy-related GHG emissions, the pursuit of all of our cost-effective opportunities to save natural gas will be necessary to achieve our GHG emission reduction targets.

Enbridge's Shareholder Incentives: Pipelines vs. Conservation

If the OEB approves the GTA pipeline, Enbridge's *after-tax* profits will rise by approximately \$17 million per year commencing in 2017.¹¹ On the other hand, new energy conservation programs, which would prevent the GTA's demand for natural gas from rising, would raise Enbridge's *pre-tax* profits by only \$11.4 million per year.¹² This may explain why Enbridge is focusing on the pipeline instead of energy conservation.

What you can do

Energy conservation is the best way to meet the GTA's future energy needs since it will lower our energy bills, reduce our greenhouse gas emissions and create good jobs in Ontario.

Enbridge Gas Distribution should pursue all of the cost-effective energy conservation and efficiency options that will save energy and lower its customers' bills *before* it seeks permission from the OEB to *raise* our rates to pay for new pipelines.

You can contact Ontario Energy Minister Bob Chiarelli at bchiarelli.mpp@liberal.ola.org and ask him to direct the Ontario Energy Board to ensure that Enbridge Gas Distribution pursues *all* of its cost-effective energy conservation and efficiency opportunities before it receives permission to build new pipelines.



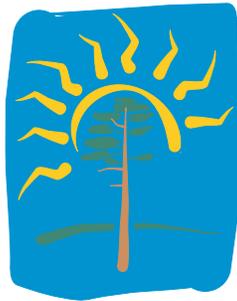
Conservation measures like added insulation, on-demand water heating and waste heat recovery can dramatically reduce natural gas demand at a much lower cost than a new pipeline



Drain water heat recovery unit

Endnotes

- 1 Ontario Energy Board Docket No. EB-2012-0451, Exhibit A, Tab 2, Schedule 1, Page 9.
 - 2 EB-2012-0451, Exhibit A, Tab 2, Schedule 1, pages 4 – 7.
 - 3 EB-2012-0451, Exhibit I.A4.EGD.ED.3.
 - 4 EB-2012-0451, Exhibit I.A4.EGD.ED.25.
 - 5 EB-2012-0451, Exhibit I.A3.EGD.ED.31 and JT2.36, page 4.
 - 6 EB-2012-0451, Exhibit I.A4.EDG.ED.14.
 - 7 EB-2012-0451, Exhibit I.A4.EGD.ED.3; Exhibit I.A4.EGD.ED.10; and Exhibit I.A4.EGD.ED.17.
 - 8 EB-2012-0451, Exhibit I.A4.EGD.ED.3.
 - 9 EB-2012-0451, Exhibit I.A4.EGD.ED.14 and Exhibit I.A4.EGD.ED.20.
 - 10 EB-2012-0451, Exhibit JT2.20
 - 11 EB-2012-0451, Exhibit I.A4.EGD.ED.29.
 - 12 As noted above, a \$33.7 million per year increase in Enbridge's energy conservation budget would be necessary to hold annual natural gas consumption constant in the GTA. According to the OEB's rules, a \$33.7 million increase in Enbridge's energy conservation budget would lead to an \$11.4 million increase in its conservation profit incentive. See OEB Docket No. EB-2012-0394, Exhibit B, Tab 1, Schedule 2, page 3; and EB-2008-0346, *Demand Side Management Guidelines For Natural Gas Utilities*, (June 30, 2011), page 31.
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