ONTARIO ENERGY BOARD

IN THE MATTER OF: 2010 Natural Gas Market Review; EB-2010-0199

CONCLUDING COMMENTS

BY

THE COUNCIL OF CANADIANS

1. The Council of Canadians (the "Council") responded to the Board's invitation to participate in this consultation herein because of two concerns which both stem from its commitment to Canadian energy security.

2. The first arises from a concern about the risks to Canadian energy security presented by Canada's obligations under the North American Free Trade Agreement (NAFTA) which imposes significant constraints on the policy and regulatory options available to Ontario in regard to energy sector regulation and trade.

3. The other arises from the view that to be secure, Ontario energy services needs must ultimately be met from sources that are ecologically sustainable.

4. The *overall objective* of this Review is to assess how natural gas markets in Ontario are responding or adapting to changing market conditions, and in particular to assess the impact of increased shale gas production at Marcellus, on the Ontario energy sector.

5. In formulating the issues for this consultation, the Board posed several questions for analysis and discussion. Among these were the following:

> Are there risks that, if realized, will change the outlook for shale gas (e.g., potential environmental issues that may impact shale gas exploration and development)?
>
> Are there any regulatory implications? Is there a need for greater inter-jurisdictional regulatory alignment?

6. To help focus discussions, the Board retained ICF Consulting Canada Inc. to prepare an independent market report. That report describes natural gas from unconventional shale formations as a "game changer" that may eventually account for 30 percent of total

supply used in North America. Gas from the Marcellus shale is a significant element in this overall supply outlook.[1]

7. Initially, gas extracted from the Marcellus shale formation, which spans parts of New York, Pennsylvania and West Virginia, is not expected to supply a significant portion of Ontario's natural gas needs. Rather, because of its location, it will be primarily destined for the Northeastern US market. However, by 2020 ICF projects that "due to the anticipated increases in Marcellus production and anticipated decreases in flows from Western Canada, some Marcellus gas will flow into Canada at Niagara in the summer months, helping to fill gas storage in the Dawn area."[2]

The Impact of Environmental Regulation on Shale Gas Supply

8. Among the uncertainties that ICF identifies as potentially impinging upon its projections concerning the supply of shale gas is the possibility that regulation of hydraulic fracturing may become more stringent and slow the growth of shale gas production."[3]

9. Because of its concern for the security and sustainability of Ontario natural gas supplies, the Council retained Ms. Lisa Sumi, MSC to provide information about hydraulic fracturing and its potential environmental impacts, and to assess the likelihood of more stringent regulation of gas development in the Marcellus shale. Ms. Sumi also considered whether other regulatory initiatives pending in the Marcellus region might influence the pace or scope of development of Marcellus shale gas.

10. Her report describes the serious environmental impacts associated with shale gas development, which include:

    i) the impact on aquatic resources of the substantial water supply demands of the fracturing process;

    ii) the environmental, worker safety and public health consequences that arise from the fracturing process, including from the use of toxic substances in fracturing fluids, exposure to methane leaks emanating from fracturing fields, and local air impacts from impoundment ponds that include volatile compounds; and

    iii) the problems of managing large quantities of wastewater from impoundment ponds in the absence of suitable and proximate waste water treatment facilities.

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[1] ICF International. August 20, 2010. *2010 Natural Gas Market Review.* Prepared for the Ontario Enegy Board. p.9. http://www.oeb.gov.on.ca/OEB/_Documents/EB-2010-0199/ICF_Market_Report_20100820.pdf
[2] ICF, 53.
[3] ICF, 75

11. Ms. Sumi's report goes on to describe a number of current and pending regulatory reforms that may significantly reduce the availability of shale gas supply either by limiting exploration and development in certain regions, or by requiring producers to meet environmental requirements that may substantially increase costs.

12. We believe that it is fair to describe the regulation of shale gas exploration and development as very much in the early stages, as regulators have been reluctant to act without sufficient evidence to support more stringent controls. But as Ms. Sumi's report relates, this evidence is being compiled, and recent studies have documented serious environmental and health impacts associated with shale gas development.

13. Nevertheless, in generating their projections, ICF adopted the view that no progressive reform will take place with respect to the regulation of shale gas exploration and development. In this regard, Mr. Petak, speaking for ICF, made the following comments:

> So our report assumes that current regulations that are in place for fracturing move forward, so any of the states that have regulations on fracturing fluids -- for instance, you can't use diesel in a number of states, many states for that matter. That's carried through to the future.
>
> The moratorium for New York is carried through to 2011, but then we make the assumption that the moratorium is lifted after that point. However, we do not have any drilling in the New York City watershed area assumed in our projection. So, you know, that's an uncertainty going forward.
>
> Will the moratorium be lifted? Will it be carried through longer term? Obviously, as Lisa pointed out -- and, you know, she is correct for pointing this out -- there is a lot of uncertainty regarding the regulations going forward.
>
> A frack act -- we do not assume the FRAC Act is implemented, so any federal policies that are currently in place are carried through, but there are no new policies.
>
> So I would characterize the ICF case best as a status quo case regarding policies. Anything currently in place remains in place, but anything new is not implemented.
>
> Transcript of Proceeding Oct. 7, 2010. Pp. 25 (line 16) though 26, (line 10).

14. However, Mr. Petak readily concedes that any number of other scenarios may play out. As he puts it:

> Uncertainty regarding -- you know, obviously there is a whole number of scenarios that could play out regarding regulations. Who knows what could play out.
>
> Transcript of Proceedings for Oct. 7, 2010, p 26, L 11-14

15. Mr. Petak also concedes that it is possible that more stringent regulation may substantially reduce the availability of shale gas, and in response to the suggestion that such regulation might halve production rates, agrees that this would have a concomitant affect on supply to Ontario.

Idem, p.28 - L19 to p. 29 L 23

16. Yet other factors may seriously affect ICF projections, such as the development of shale gas resources in Quebec.

Transcript of Proceedings for Oct 8, p. 30, L 2-16

17. In light of these uncertainties, we believe that it would be prudent for Ontario to adopt a wait-and-see approach before authorizing additions to, or a restructuring of, Ontario gas distribution infrastructure to accommodate a significant expansion of shale gas production that may not materialize.

Is there a need for greater inter-jurisdictional regulatory alignment?

18. The Board has also posed the question of whether there is a need for greater inter-jurisdictional regulatory alignment. Several of those who participated in the consultation underscored the uncertainties that abound in trying predict developments in the natural gas market in Ontario. On behalf of several interveners, Mr. Rosenkrantz has proposed that the Board adopt a more systematic approach to system planning. We support that suggestion.

19. Moreover, we believe that any system planning exercise be informed by an understanding of the constraints on public policy and law relating to the energy sector that arise in consequence of Canada's international trade obligations, including those under NAFTA.

20. We made a similar intervention in the IPSP hearings concerning system planning for the electricity sector, but the issue remained unaddressed when the hearings were suspended. Since that time, Japan has challenged the *Green Energy Act* for being inconsistent with its obligations under agreements of the World Trade Organization. While the case is in preliminary stages, both the U.S and the E.U. have now intervened to support Japan's complaint.

The international trade commitments Canada has made undermine the policy and regulatory flexibility of both the government and the Ontario Energy Board, but still allow considerable latitude for both to act in the public interest. However it is important that these trade constraints be taken into account to avoid pitfalls. This is particularly true in the case of additions to, or reconfiguration of, Ontario's natural gas distribution system that increase Ontario's interconnections with the U.S.

Respectfully submitted on behalf of the Council of Canadians

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ADDENDUM

During the question and answer period following Ms. Sumi's presentation, a question was asked about radioactivity in shale gas wells. We agreed to provide further information if it was available. The following is Ms. Sumi's response to that question:

Radioactivity data from Marcellus shale gas wells in Pennsylvania is available. The Pennsylvania Department of Environmental Protection (PA DEP) has undertaken a project to study the chemical makeup of flowback water produced from hydraulically fractured Marcellus Shale wells in Pennsylvania, and should be coming out with a report on the concentrations of the various chemicals in flowback in the near future.[1] The data has been posted on the Palmerton Group web site, and an analysis of the flowback data shows that 15 out of 16 samples labeled "Frac Flow Back" exceeded the EPA standard for Radium-226 plus 228 in drinking water.[2] These constituents were found at concentrations ranging from 73 to 10,640 picocuries per litre, which is the equivalent of 15 to 2,128 times EPA's maximum allowable level.[3]

According to an article in ProPublica, New York City's Health Department has raised concerns about the concentrations of radioactive materials in wastewater from natural gas wells. In a July, 2009 letter obtained by ProPublica, the Department wrote that "Handling and disposal of this wastewater could be a public health concern." The letter also mentioned that the state may have difficulty disposing of the waste, that thorough testing will be needed at water treatment plants, and that workers may need to be monitored for radiation as much as they might be at nuclear facilities.[4]

[1] Palmerton Group. "Frac Flow-Back Water Study."
http://www.palmertongroup.com/services/marcellus-shale-gas.asp

[2] Environmental Protection Agency web site. "Radiation Protection."
http://www.epa.gov/rpdweb00/radionuclides/radium.html The Safe Drinking Water Act authorizes EPA to limit the Maximum Contaminant Levels (MCL) of radium and other radionuclides in publicly supplied drinking water. For 226 and 228 radium, the MCL is 5 picocuries per liter.

[3] Data reviewed by Lisa Sumi: "PADEP Frac Flow-Back Water Study: Presence of Radioisotopes."
http://www.palmertongroup.com/pdf/PADEP%20Frac%20Flow_Back%20Water%20Study_%20Presence%20of%20Radioisotopes.pdf

[4] Lustgarten, A. Nov. 9, 2009. "Is New York's Marcellus shale too hot to handle?" ProPublica. http://www.propublica.org/article/is-the-marcellus-shale-too-hot-to-handle-1109