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EB-2011-0242
EB-2011-0283

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c.15, Schedule B; and in particular section 36 (2) thereof;

AND IN THE MATTER OF an application by Enbridge Gas Distribution Inc. for an Order or Orders approving and setting the cost consequences associated with the purchase of Ontario biomethane by Enbridge Gas Distribution Inc.;

AND IN THE MATTER OF an application by Union Gas Limited for an Order or Orders approving and setting the cost consequences associated with the purchase of Ontario biomethane by Union Gas Limited.

Biogas Association's Factum for Argument

1. **Who we are.**

The Biogas Association is a member-driven association dedicated to promoting the development of biogas. The Biogas Association works to develop biogas to its full potential by promoting biogas opportunities, helping shape biogas policy, creating networks and offering guidance and assistance to members on a wide range of renewable energy issues. The association also facilitates the exchange of information and valuable operational experience among members, organizes tours of existing installations and works to educate decision makers and the public about biogas and its benefits. The association members include farmer producers, technology suppliers, consultants, financial institutions, utilities, academics, governments, affiliate organizations, students and individuals.

The association was initially formed by farm-based biogas project developers during the early days of the OPA's often turbulent evolutionary development of the Green Energy and Green Economy Act's FIT program. The association was formed during the roll-a-coaster ride from the original Renewable Energy Standard Offer Program, through FIT 1, and two restarts of FIT 2. In the early days, the biogas industry did not have a formal association, let alone a formal advocate. The association's development was directly in response to the government's need for informed input to form policy to direct the OPA; and, in turn, the OPA's need for informed input to implement policy through program development. The Biogas Association has established a substantial reputation for providing informed, practical and supported input in collaboration with all our regulatory and policy partners.

2. **The Legal Framework.**

This case is a rates case and the Board acquires its jurisdiction from section 36 of the Ontario Energy Board to set just and reasonable rates. The law is clear in Ontario, ever since the Union Gas and the Township of Dawn case, that the Board must look to the broad public interest in setting rates and taking other decisions it is mandated to take.

We support the utilities' position on this matter, set out by Mr. Cass in his Argument-in-Chief (V. 5, page 140), that the Board is entitled to look at the environmental benefits, for example, GHG reduction; the reduction of waste in farm waste run-off; and, the economic development benefits for the province, that we think result from local farm-based gas production, in making its decision as to whether it is in the public interest to allow the utility to purchase biomethane at a premium to its existing blended cost of gas.

In an earlier Board decision cited by Mr. Cass, E.B.R.O., 456-4, after finding that Ontario production produces several benefits for Ontario, the Board noted that in E.B.R.O. 343-1, it had found that the parties (in that case, Union Gas and Ontario natural gas producers) have a number of ways to arrive at an acceptable pricing mechanism which would result in fair and reasonable charges to Union's customers. These included:

"(b) a cost-related price, wherein Ontario producers could provide gas to Union with a reasonable profit upon their operation,"...

It is also clear that increased energy conservation and increased production of renewable energy are part of the broad public interest in Ontario, as reflected in the Green Energy Act, the FIT program, and many other government programs.

Moreover, the listed objectives of the Board for both gas and electricity do not add or detract from the Board's power to determine what is in the public interest in making its decisions. Rather, they guide and inform the Board, in the exercise of its interpretation of the public interest. The Board recently made this point about the role of objectives in EB-2010-0279. That decision, which you will remember, Mr. Chairman, was to review the OPA's proposed expenditure and revenue requirements for the 2011 fiscal year. The Board stated at page 6 that:

"The Board finds that its mandate in relation to the review of the OPA's fees application comes from section 25.21 of the Electricity Act. The Board agrees that section 1 of the OEB Act informs the Board in the exercise of that mandate. However, section 1 is not, in the Board's view, a source of independent or incremental responsibility that can override the direction that has been provided by the legislature in relation to the Board's mandate as set out in section 25.21 of the Electricity Act. This is confirmed by the wording of section 1 itself, which refers to the objectives as guiding the Board "in carrying out its responsibilities under" the OEB Act or any other Act".

Just as the objectives could not create a new head of power to enhance the jurisdiction of the Board to review the OPA's revenue requirements under section 25.21 of the Electricity Act, the objectives cannot detract from the Board's discretion to determine and apply its view of the broad public's interest in making its decisions on rates and related matters.

In any event, section 2 of the OEB Act, which sets out the Board's objectives with respect to the regulation of natural gas, states in subsection 2(5) that the Board shall be guided by the following objectives:

"to promote energy conservation and energy efficiency in accordance with the policies of the Government of Ontario including having regard to the consumer's economic circumstances".

It is very clear from the utilities' joint evidence that the upgrading of biogas produced in anaerobic digesters or landfills into methane is a more efficient use of that energy than conversion of the biogas into electricity.

Producing methane to use in gas customers' facilities produces efficiencies of up to eighty percent, compared to the less than forty percent efficiency of the gas to electricity conversion (Ex. B, T1, App 1, page 27 and Ex. B, T1, page 5). Moreover, if the biogas is currently being flared at the landfill site, the biogas is being wasted. The evidence on the efficiency point was not contradicted or challenged in any substantial manner during the hearing.

The Board itself has been very active over the last fifteen years in encouraging the gas utilities to start up and grow their conservation and demand management programs. In

GHG reporting mechanism under EPA - reporting standards for emissions

EBO 369-I, the Board directed the gas utilities to provide conservation and demand management programs, and they have been a part of the utilities' business since that time.

3. | **Policy of the Government of Ontario**

It is clear that the Government of Ontario is supportive of energy conservation in general and the production and use of biomethane from farm waste in particular. Mr. Cass referred to many of these indicia of the Ontario government's policy in his Argument-in-Chief and we endorse those comments. We would add to his list the fact that the government has, through the Ontario Power Authority, launched a massive four year electricity conservation and demand management program, and has directed both the OPA and the Board to work to encourage the coordination of the energy efficiency efforts of the gas and electric utilities, so that customers will receive an integrated offering. In addition, Ontario is a member of the Western Climate Initiative, like Quebec, Manitoba, and British Columbia, and has a commitment to reduce GHG emissions by 15/4/1990 levels by 2020. Ontario has also developed a substantive Greenhouse Gas Emissions Reporting Regulation, O. Reg. 452/09, under the Environmental Protection Act, which has been in force since January 1, 2011. This regulation imposes strict reporting standards for all greenhouse gas emitters of more than 25,000 tonnes of CO₂ annually at a facility in Ontario. The amount of CO₂ reported must be verified by an accredited verification body. Importantly, under subsection 5(4) of the regulation, the amount of CO₂ produced by the combustion of biomass (including biogas) is to be deducted from the total amount of CO₂ produced because it is considered a carbon neutral process. Finally, the Environmental Bill of Rights Act, 1993 requires the Environmental Commissioner of Ontario (ECO) to report annually to the Legislature on the progress of

Ontario efforts to reduce GHG emissions. In fulfilling that mandate, the ECO is to review any annual report on GHG reductions and climate change published by the government in the year covered by the ECO report.

In British Columbia, utilities came forward with a proposal to enact biomethane production to allow gas customers to purchase biomethane gas from producers because the proposal reflected government policy, underlined the company's social corporate responsibility ethic, and reflected societal trends. That utility initiative stimulated development of the first farm based biogas project in BC.

4. **The Utilities' Application**

Part of the purpose of the utilities' joint proposal is to build a viable biogas industry, to enable the supply of renewable natural gas in the future. The utilities' proposal is also designed to help maximize the environmental benefits of renewable natural gas or biomethane. The position of the Biogas Association is that, of the projects now considered cost-effective, which are mainly large farm projects and landfills (Ex. B, T1, App 5, page 10), the greatest environmental benefits are achieved through on-farm anaerobic digestion. This is because such projects, as well as providing a substitute for natural gas, reduce the existing direct emissions of methane from livestock manures substantially, mitigate farm livestock manure related water pollutants, which include pathogens, such as e-coli and nitrate and phosphate groundwater overloading. As a result, our argument will focus on farm based anaerobic digestion projects.

The Biogas Association supports the existing application, and if approved, it will work to encourage producers to build systems and connect to the natural gas distribution system

as outlined. The Biogas Association submits that the opportunity represented by this application is desirable to provide additional necessary support for what the OPA sponsored Biogas AD FIT program has initiated. Ontario has a significant head-start on other North American jurisdictions regarding the initial development of AD biogas development and operational expertise. However, the capacity of the Ontario electrical grid is severely constrained. Additional development options would also enable the Ontario's biogas industry's potential as a driver of economic growth.

However, we are concerned that as the application stands, the \$17.00/GJ for the first 50,000 GJ of gas and the \$11.00 GJ remainder, risks an inherent danger of falling short on the intended goal of promoting an attractive investment opportunity while simultaneously establishing program pricing that controls program uptake within a predictable impact on ratepayers. The OPA sponsored AD Biogas FIT program faced similar challenges. The application materials here present a theoretically modeled annual return to the "large farm" producers of ten percent (Ex. 1, T1, App. 5, page 10), compared with the eleven percent theoretically modeled return presented in similar proposal models by the OPA for AD Biogas FIT projects (V-2, page 19). The fact is, that in addition to being persuaded to invest, to whatever extent, by the OPA AD Biogas FIT proposal modeling, the vast majority of the AD Biogas FIT projects presently operating, or in construction, in Ontario also took advantage of a \$400,000 capital grant offered by OMAFRA (\$400,000, or approaching 25% grant on many projects costing more than \$2,000,000). Those AD Biogas FIT grants were a considerable developer incentive to take on the challenge of a new technology project that lacked a local historical track record of development and success examples. We are concerned that anyone

contemplating any AD biogas project anticipated by this application today will not have that additional incentive. Furthermore, given that the biomethane production component of an AD biogas project is even newer technology and not yet commonly applied, project proponents may be hesitant to take an additional risk solely influenced by theoretical modeling presenting lower returns than the original OPA AD biogas FIT models. In the absence of similar grants, the modeling for this application's projects must accurately and unequivocally promote development uptake. For these reasons, and given our understanding of the market, the Biogas Association wants to offer the following observations and suggestions regarding the decision before the Board.

As we understand the case, the applicants have supported their case while simultaneously offering the Board a formula for ratepayer protection by providing:

1. Financial modeling based upon limiting the total cumulative annual RNG cost impact for the average NG residential customer to \$18/year, and commercial customers to \$138/year.
2. Further, the modeling proposes an annual authorization for a maximum of 2.75 petajoules of RNG purchased at a notional purchase price from the anaerobic digester projects. (Landfill RNG is to be purchased at a lower price than AD biogas, but limited to an identical petajoule ceiling; therefore, presenting no threat to exceed the \$18/\$138 commitment.)
3. Therefore, in simplistic terms, the formula for protecting ratepayers from runaway AD biogas RNG program uptake at unfavourable pricing is:

- A maximum of 2.75 PJ annually, multiplied by
- the notional purchase price, equals
- an average impact of $\leq \$18/\138 (after factoring in other market parameters.)

The Biogas Association submits that strict application of this formula allows the Board sufficient tools to fulfill their obligation to protect the ratepayers. Direct the applicants to annually report the current total annual volume contracted from anaerobic digesters in order to monitor the volume ceiling. And further direct the applicants to annually submit recalculations of the relevant formulae contained in their current submissions to reestablish that they have continued to honour their undertaking to not exceed the \$18/\$138 maximum impact for the average NG customer. As for the Board's approach to the notional purchase price, see our suggestions below in section 7 Alternative Structures.

Given our understanding of the market, we propose the following changes to the price modeling offered by the utilities for biomethane produced from on-farm anaerobic digestion:

- According to our calculations, in order to target a reasonable probability of realizing an eleven percent ROE, and therefore provide the same ROE notional target as a project contemplating generating electricity under FIT, the prices for the farm scenarios should be adjusted to eliminate the revenue from tipping fees.

4 In our experience with the Ontario FIT biogas program, agricultural biogas

developers do not factor tipping fees into their business plans. To date, experience has established that tip fee security is not achievable and the agricultural based biogas industry does not see a possibility for a secure, recurring revenue stream that would justify this revenue calculation.

- Change the annual escalator for farm-based projects from 0.3 Ontario CPI to 0.5 of Ontario CPI; in other words, if the increase in Ontario CPI from year one to year two of the contract is two percent, the escalation would be 1% rather than 0.6%, as currently proposed. Biogas systems are more complex than other renewable energy systems, and experience much higher operating expenses warranting a higher CPI formula. They are comprised of a greater number of components and processes (pumps, mixers, pipes) necessary to collect, store and treat organics to create biogas. Feedstock must be managed and moved, grown, or delivered. These moving parts and operational considerations incur greater wear requiring more ongoing maintenance than other renewable energy sources. The OPA's recent review of the FIT prices approved an adjustment of the inflator from 20% to 50% for the formula pricing in that program. The biogas technology and supporting infrastructure investment for this program is nearly identical to that for FIT.

5. **Customer Impacts.**

The annual impact on customer bills from the RNG gas contracted volumes, residential and commercial, at \$18.00 and \$138.00, respectively, are very modest. The annualized residential impact will be the equivalent price of fifteen one-litre bottles of water. Sixty

seven percent of residential and sixty two percent of commercial system gas customers surveyed strongly supported or somewhat supported paying two percent more for gas to support the RNG proposal. In the event an increase in gas bills of \$18.00 per annum would be a tipping point for some low income customers, the Board has both the jurisdiction and the tools to offset these increases for the low income segment of the residential market, including the LEAP program, a means tested program for low income consumers, for which individuals receiving Ontario Works payments or disability payments are automatically eligible.

It is also likely at least based on current gas futures prices, that natural gas will not remain at \$2.00/GJ. Finally, the RNG contracts provide that environmental attributes of the RNG will be held by the utilities in trust for the system gas customers. These attributes exist today and will likely have demonstrable value in the next few years.

6. **Program Review.**

The Biogas Association is proposing an annual progress report to the Board from the utilities. We also support a mid-project review so that costs and prices can be verified and experiences in construction and connections can be analyzed. If a review is held, it is critical that the existing contracts not be modified in any way. Doing so would severely handicap the financing prospects of future projects. Given our recent experiences with FIT reviews, it is equally critical that consideration be given toward projects in the 'development pipeline' at the inception of the review to avoid stalling their progress during the review period. At the end of the five year period, the government could

consider several options, including asking the Board to extend the program, more direct regulation, or establishment of a Renewable Portfolio Standard.

7. **Alternative Structures.**

A number of suggestions were made by intervenors during the hearing. We provide our comments on some of those proposals in this section.

The Biogas Association does not agree with the proposal suggested by some intervenors at the hearing, that the utilities use a traditional RFP process to select the biomethane gas suppliers or the best of a group of homogenous suppliers, for example, farm-based suppliers. The utilities are correct that farmers are not familiar with answering traditional RFPs. They do not have existing resources within their businesses to accomplish such a task and therefore would require a significant risk-investment in third-party expert resources to take the 'chance' they may win a traditional RFP and would be very hesitant to do so. The Biogas Association also agrees with the utilities that it is difficult to have a traditional RFP process in an industry that does not yet exist. As noted above, while our farm members have expressed considerable interest in pursuing the biomethane option, and, while they appreciate having an option to the FIT program, no farm based project has yet constructed a biomethane production plant to produce utility quality gas in Ontario.

As an alternative to a traditional RFP process, the Biogas Association is proposing that the Board not take on the task of passing judgment upon the notional purchase price. The Board risks setting a firm five year price that is marginally too low to attract development with the result being this whole exercise was for no gain. The annual reporting format

suggested above allows the Board to monitor against too rapid an uptake at too high a price. Let the applicants establish the price by publishing their current modeling as the basis for negotiations. Grant them the leeway to openly negotiate with early project developers to establish purchase pricing for the initial projects. In essence, that is what the applicants have already attempted to do by offering the Board a notional purchase price to project the program's impact on ratepayers. They too attempted to 'estimate' a purchase price that might attract production (not too high, not too low). Alternatively, by allowing the applicants to adjust pricing in their offering model as the market unfolds the Board is assured something will happen and takes advantage of the potential for future technology improvements (within five years) lowering the price at which proponents will contract delivery. The Board maintains control of the uptake impact on ratepayers via the annual progress reports from the utilities. The applicants are capable of rationing the first 2.75 petajoules of annual uptake to get the most RNG at the best price at which they can attract supply.

The Biogas Association is proposing a non-traditional RFP process. The Association is prepared to work with the applicants to provide an information exchange format that would allow them to make an offer to purchase to industry project developers. The developers would meet with the applicants together with Association management. The Association would facilitate the developer's consideration of the offer and advise and inform the developer's responses, questions and exchanges with the applicants. The Association represents expertise that can fill some of the knowledge gaps on the part of some of the project developers and assist the communication between the parties. After

the initial projects are operational, the developers themselves will educate each other and the applicants toward streamlining the project delivery pipeline.

It was also suggested by some intervenors that the utilities proceed by way of a demonstration program, perhaps one project in each major category, as a way of reducing ratepayer risk. The Biogas Association does not agree with this proposal. We have already substantiated our belief that the ratepayers' interests are more than adequately protected under this application.

The Biogas Association supports the utilities' rationale for recovering the incremental gas costs from the system gas customers. The potential biogas producers would encourage the gas marketers to launch similar initiatives. They would be prepared to sell gas to the marketers on the same basis as they sell to the utilities. However, even if the marketers do not embrace RNG, the producers believe that all gas purchasers benefit from this initiative in the sense that it will help create a new supply of renewable gas for all customers.

8. **Conclusion.**

As an association of progressive businesses, the Biogas Association applauds the utilities for being forward thinking and progressive, and not waiting for government regulation, which can sometimes be more resource-intensive than industry-led initiatives.

9. **BOMA Addendum.**

BOMA agrees with the argument presented by the Biogas Association. BOMA supports involvement by the gas utilities in efforts to increase the supply of renewable natural gas, and to achieve more efficient use of renewable energy resources.

