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15 May 2012

Ontario Energy Board
2300 Yonge St., 27th Floor
Toronto, ON
M4P 1E4

Attn: Ms Kirsten Walli
Board Secretary

By electronic filing and e-mail

Dear Ms Walli:

Re: EB-2011-0242 & EB-2011-0283 – RNG – GEC Final Argument

I will be out of the country on May 22nd when oral arguments are scheduled. Accordingly, pursuant to Procedural Order No. 7, we attach our written submissions.

Sincerely,

David Poch
Counsel to GEC

Cc: all parties

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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 prices for Enbridge Gas Distribution Inc.'s purchase of biomethane;

AND IN THE MATTER OF an application by Union Gas Limited for an Order or Orders approving and setting prices for Union Gas Limited's purchase of biomethane.

Final Argument of GEC

Enbridge Gas Distribution Inc. and Union Gas Limited propose to offer a limited amount of fixed price 20 year contracts to landfills and anaerobic digesters to kick start a biomethane or renewable natural gas (RNG) industry in Ontario.

The Green Energy Coalition recognizes that the RNG proposal has numerous benefits including, assisting with agricultural waste management, local economic development, and improved supply security through local sourcing and diversity of supply. That said, GEC is motivated to support the utilities' proposal primarily due to the GHG reduction benefits offered by this energy efficient approach.

That energy efficiency and GHG reduction is valuable and is a goal of Ontario government policy cannot be seriously disputed. Mr. Cass, in his submissions on the preliminary issue and in his argument-in-chief, took the Board through several examples where the Government of Ontario has enunciated that policy goal and indeed has gone on to develop statutes.

Further, the GHG reductions that a successful program could usher in are significant. Methane releases are some 20 times worse than CO^2 releases for climate change. The evidence suggests that as much as 45% of Ontario's 2020 GHG reduction goal could be met by RNG utilization just from the sectors considered (which are the more cost effective of a larger organic waste producing sector[1]). Even if the program were to result in no RNG beyond the 5.5PJ program cap that is proposed, it would accomplish 8.1% of Ontario's 2020 goal.[2] While it is unlikely that the much larger full potential would be achieved, the witnesses agreed that the end result would likely produce GHG savings that lie within the range of 2,400 – 18,000 kilo-tonnes/annum[3]. The near term potential for conventional gas displacement (prior to gasification technology maturing) amounts to up to 6% of system gas use whereas the long-term potential could theoretically reach 18%[4].

Nor are the GHG reductions expensive in comparison to other options. In Exhibit K1.3 GEC laid out the comparison of the expected cost versus GHG benefits for various illustrative GHG values.[5] The numbers are presented here with the updates provided during the hearing and the $30 GHG British Columbia proposed carbon value that was noted by the witnesses.

EGDI & UNION estimated incremental gas cost at 100% of cap: $58.537 million

Annual GHG reduction potential long term: 18,984 kt CO2 eq.

Annual GHG reduction potential short term: 13,006 kt CO2 eq.

Annual GHG reduction at cap: 2400 kt CO^2 eq.

Annual Value of GHG Reduction

Carbon Value Assumed	Pessimistic case (cap only)	Optimistic Case (full potential)
$15/t CO2 eq.	$36 million	$285 million
$30/t CO2 eq.	$72 million	$570 million
$50/t CO2 eq.	$120 million	$949 million

Other Canadian jurisdictions have enunciated GHG values as part of regulatory regimes or announcements of stated government policy direction including $15/tonne in Alberta and $30/tonne in B.C.[6]. Thus, at a $30 value, if the program just achieves the 5.5 PJ cap, the program would have an annual monetized GHG reduction value of $72 million compared to its

[1] The figures offered by Dr. Abboud were "Calculated as the CH4 generated in landfills plus 20% of the CH4 generated from manure through AD" (Ex. B, tab 1/ app. 1, p. x, table footnote 1)
[2] Ex. I, tab 8, s.9 updated
[3] V.2, p.65
[4] Ex.B, Tab 1, App. 1, p. vii
[5] Updated at v.2, p. 62, assumes project technology uptake in proportion to potential
[6] Discussed at v.2, p. 63

estimated peak annual cost of $58 million at current gas prices[7]. If the program spurs cost reductions and further industry development as it is hoped, at a $50 value for GHG reductions, the benefits could theoretically rise to as much as $949 million per annum, though the witnesses agreed that the actual benefit would likely reside in the middle of the range[8].

Once the cap is taken up, if no more RNG was to come on line, the cost of the GHG reductions per tonne (assuming a mix of projects proportional to the potential) is the $58 million cost divided by the 2400 kilo-tonnes, or $24/tonne, which compares favourably to the government initiatives noted above. At just 50% of the potential that the Alberta Innovates Technology Futures study identified the cost falls to $6/tonne[9], which is extraordinarily inexpensive.

The benefit of RNG was not seriously challenged in the hearing of the evidence and accordingly, in GEC's submission, the key issues that are raised in this case are:

1. Should the Board allow the LDCs to take action toward the goals of GHG reduction and energy efficiency or leave it to direct government programs given the costs involved?

2. What mechanism should LDCs utilize to support the development of an RNG industry: Opt in – opt out programs, RFP's, or feed-in style tariffs?

3. Is the level of support, both the price level and the PJ cap, reasonable to achieve the stated goal – how should that be set?

4. Who should pay: taxpayers, system gas users, all distribution customers, or all system users including ex-franchise customers?

We will address each of these questions in turn:

1. Should the Board allow the LDCs to take action toward the goal of GHG reduction and energy efficiency or leave it to government programs given the costs involved?

While there is a legitimate question to ask about the Board taking a leadership role versus awaiting broader direct government action or explicit direction to the Board, we suspect that the motivation of many who raise this issue is really the pursuit of delay prompted by a desire to avoid paying their fair share of the costs of externality reduction. We will address the question of the fairness of gas customers paying for

[7] Assuming the mix of projects reflects the potential in the Alberta Innovates Technology Futures study
[8] V.2, p. 65
[9] $58 million/(18,984 kt/2)

externality reduction below under the topic: *Who should pay*. That said, for the reasons that follow, we submit that the Board's jurisdiction is clear and that there is a strong case for Board action.

1.1. Ontario's regulatory practice in gas versus electricity supports Board action

Government is hands on when it comes to electricity (perhaps because it owns and directly regulates so much of the electricity sector) – not so for gas. It leaves the gas side largely in the Board's hands. For example, Government hasn't directed gas conservation targets as it has for electricity, but the Board has nevertheless recognized the need to act in that regard. The Board has found DSM (balanced with an eye to rates) to be in the long-term interest of the province and of gas customers.

What the Board does with DSM and with CDM is try to overcome market barriers and try to facilitate market transformation so that energy efficient and externality reducing technologies become the standard without the need for ongoing program support. RNG is really no different than DSM and the approach should be similar. As with DSM, a broad government program or specific direction to the Board is not a prerequisite, nor has it been the government's practice.

1.2. The Board's statutory objectives encourage action

Section 2.5 of the Act includes the objective: *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.* RNG obviously fits within the goals of conservation and efficiency (ranging from three times more efficient than biogas electricity generation to infinitely better than simple emission or flaring). As noted above, it is also supported by government policy. Surely the statutory objective must require the Board to consider the merits of rate spending that achieves efficiency. It cannot mean promote energy efficiency only when it's free or the statutory wording would not inject the requirement of a weighing of the efficiency improvement against the consumers' economic circumstances. The real debate is to what extent it should be supported in rates 'having regard to the consumer's economic circumstances'?

While gas prices are unpredictable, consumers are currently enjoying historically low levels. In that sense, the 'consumer's economic circumstances' are particularly good as far as gas cost burdens go. Moreover, if we assume, as GEC submits we must, that a carbon reduction regime is inevitable in the coming years, a program to accelerate the RNG industry and drive in economies before widespread application is required will be in the long-term financial interest of consumers. Even without that future financial benefit, the large externality reductions that the program brings are a real benefit to customers immediately (witness the strong support for environmental protection in the polling), whether monetized or not, and the ramp up to the $1.50 per month estimated average price for a residential customer (the price of a cup of coffee) is not an undue burden for the benefit identified.

Further, it is important to note that the Board's statutory objective is not simply to enable efficiency, it is to *promote* it. As with DSM and CDM, government standards tend to follow market readiness. It is entirely appropriate for the Board to usher in market readiness as a means of facilitating subsequent government regulations. It is not optimal to await government initiation when a less disruptive path is available through Board action.

Accordingly, GEC submits that the Board has jurisdiction, government policy direction and good reason to act.

1.3. Correcting market failure justifies action and addresses any Section 29 concern

Some of the cross-examinations during the hearing suggested that it was not for the Board to interfere with the market, that there is ample supply of conventional gas, so there is no reason to ask all customers to pay a premium for this cleaner supply. As any economist will attest, the failure of the market price to capture the damage cost of emissions is a market failure. If the externality of GHG emissions were monetized at a level in the range that governments are currently establishing, Ontario's RNG industry would likely be competitive and require little support in the form of long term premium contracts. The program in essence recognizes that market failure and corrects for it, enabling a proxy for real competition, i.e. it is a proxy for competition on a level field where the full price of supply including externalities is accounted for.

Where the regulator is in a position to spread the cost of this market repair among the public who are enjoying the commodity and who are all responsible for emissions of the type being addressed, in GEC's submission it is both fair and good economic practice to do so.

Further, an action that in effect compensates for market failure cannot be said to conflict with the Board's section 29 statutory obligation to abstain from regulation where the matter "*will be subject to competition sufficient to protect the public interest*". The fact that conventional gas suppliers do not at present have to price their product to reflect its true societal costs, dictates that competition alone cannot be said to be "*sufficient to protect the public interest"*.

1.4. Long-term customer interest is served by driving in economies on a timely basis

If the program is successful in supporting the development of Ontario expertise, the availability of technology, and the creation of competition in the Ontario market among the suppliers of technology and expertise, there will be significant benefits for gas consumers who might otherwise face the burdens of a GHG regulatory regime with no ready means to mitigate that burden.

We wish to stress that the value to gas consumers (apart from the immediate contribution to addressing an urgent societal need) is not due to any potential revenue from the trade of carbon credits, as the argument on behalf of Shell Energy has suggested. Selling credits to enable a third party to satisfy that party's regulatory or P.R. requirements would negate the environmental benefit of the program. Rather, the value of the program's accumulation of carbon credits will be to enable the eventual retirement of the credits and thereby satisfy regulatory requirements on gas consumers or to satisfy requirements faced by the gas supply system and thereby allow a passing on of savings to the consumers.

1.5. Customer desires support action

Much cross-examination sought to dissect the polling data provided in support of the proposal. The opinion of Ms. Guiry, Vice President of the leading Canadian polling company was that the poll was appropriate and fair. As she noted, the "ballot question" was exactly the issue herein.

Among the alternative versions of polling questions that cross-examiners suggested, two deserve comment.

Mr. Aiken asked if customers being polled were told that some customers would be paying for the premium while others would not.[10] The question is an astute one. It is easy to imagine how enthusiasm would drop if respondents felt they were being asked to bear an undue share of the burden. It is for that reason that a mandated rather than voluntary program is preferred and that the spreading of costs widely among all gas users in proportion to use is advisable, topics we address below.

Mr. Warren proposed the less astute (though perhaps facetious) question: would customers support a billion dollar expenditure on RNG?[11] Of course an inflammatory exaggerated question offered out of context would not assist. Mr. Warren's question ignores the context of something on the order of a $100 billion gas bill over the timeframe, ignores the likelihood that the 'premium' will fall and may be negative as conventional gas prices rise, ignores the built in reduction of the real cost of the premium due to the inflator being a fraction (.3) of inflation, and ignores the likelihood that a carbon regulation regime will offset the premium which may bring a *net savings* to customers, perhaps in the billions of dollars (see above).

Apart from the positive response to the key ballot question it is notable that 5 of the 6 top comments cited environmental benefits in one form or another. The top response is: "Good for the environment." (23%), the third is: "Support of alternative energy." (16%), the fourth is: "Clean energy source." (14%) the fifth is: "Renewable source." (12%) and the sixth: "Less dependence on natural resources." (11%).[12]

2. What mechanism should be used to support development of an RNG industry: Opt in – opt out programs, RFP's, or feed-in style tariffs?

2.1. Opt in – opt out – introduces uncertainty, requires marketing, adds complexity, higher cost per participating customer, and will fail.

As Mr. Smith noted in his argument-in-chief, climate change is a problem that necessitates a collective response or we face the 'tragedy of the commons'. For that reason, proposals to make gas consumer participation voluntary would inevitably fail to achieve the level of response required. Opt-in or opt-out regimes would require an expensive administrative mechanism and a supporting marketing program. The uncertainty in available budget would then cripple the utilities' ability to enter into long-

[10] Vol. 3, p. 83
[11] Vol.2, p. 101
[12] Ex.B, Tab 1, App.3, p. 16

term supply contracts which they indicated are a necessity to overcome the barriers to entry faced by potential RNG suppliers.

Further, a voluntary model would unfairly compete with marketers such as Bullfrog Power who seek to serve highly environmentally motivated customers and could thereby transgress the Board's Section 29 constraint.

2.2. RFPs are a mechanism for a more mature market and would preclude smaller suppliers

While an RFP approach might work well for large sophisticated market participants, the challenge is to encourage a range of players with little or no experience. The witnesses repeatedly noted how an RFP approach would not enable relatively smaller participants, and it is the smaller anaerobic digestion operations that offer the greatest potential for GHG reductions.

GEC suggests that after an initial period to allow local industry sophistication to increase, an RFP approach could be considered for larger installations while the FIT approach for smaller operations could be maintained. (See our comments below concerning a mid-term review.) An alternative approach suggested in cross by CME would be to administer each contract individually to cap the projected return on a project-specific basis at 11% rather than to deal in averages. This too may be a refinement that could be introduced for larger projects either immediately or once experience is gained, but it would not be suitable for smaller projects due to the administrative cost and difficulty.

2.3. A FIT style program offers certainty and can be accomplished without undue premium

It is the undisputed evidence that the RNG industry in Ontario is in its infancy. As evidenced by the success of the electricity FIT and Micro-FIT programs the feed in approach overcomes risk aversion and enables a fast take up and, if administered intelligently, a fast price reduction. Again, see our comments below on a mid-term corrective mechanism.

The consumer cost of the premium being paid will start at a low level in the initial year or two, ramping up as projects come on line, and will then likely decline rapidly for several reasons. First, the conventional gas price risk is asymmetrical. We are at an all-time low for conventional gas prices. The two indicators in evidence, the futures market and the US EIA both predict rising prices (and both predictions were made after the recognition of the shale gas phenomenon)[13]. Second, GHG regulation is likely to eliminate any premium. Any monetization of GHG emissions via regulation will allow a corresponding credit to gas customers that will likely more than offset the premium given the carbon prices discussed above. RNG contracts are likely to bring savings to gas consumers. Third, the inflation adjustment at a fraction of CPI will erode the real price paid.

3. Is the level of support, both the price level and the PJ cap reasonable to achieve the stated goal– how should that be set?

3.1. Can the target sources be narrowed to lower the cost?

The evidence discloses a wide range in the price offering needed to enable participation from the nine archetypical sources considered. GEC asked if the range of sources could be narrowed somewhat to avoid the most expensive while preserving the benefit of developing technology and a market for the anaerobic digestion sector which is a key sector for GHG. One example that we suggested was to rule out dry manure operations. Another was to rank projects by GHG reduction value per dollar of premium required and select the more GHG cost-effective ones. In J. 3.1 the companies responded that constraining the effort based on “implied” GHG values was not workable. We fail to see how the setting of a particular GHG monetized value by government or markets is necessary to allow the ranking of these projects in terms of GHG reduction cost-effectiveness.

GEC wishes to stress that in suggesting a possible narrowing of the eligible sources it does not suggest a ruling out of anaerobic digestion sources as a category as these sources offer the largest potential for GHG reduction due to their combined emission reduction and fuel substitution impacts. In that sense we agree with the utilities that a strict GHG cost-effectiveness ranking could throw the baby out with the bathwater. Nevertheless, such a ranking could be an effective tool to enable a mitigation of the consumer costs if the Board deems it needed at this time or at the time of a mid-term review.

At a minimum, given that gas customers are potentially paying an initial premium based in large part on the benefits of GHG reduction, GEC suggests that the utilities be empowered to restrict eligibility to situations where a significant incremental GHG

[13] Ex. I, tab 6, s. 5 and Ex. I, tab 7, s. 7

reduction can be demonstrated and that the utilities be required to record and disclose the GHG reduction rate of each project and the costs (i.e. not preclude review with a claim of commercial confidentiality when the Board examines progress on these matters).

A related condition is that GHG credits obtained be used solely to allow gas users to fulfil regulatory requirements on gas users or on upstream emitters whose costs of compliance are being visited on the ultimate consumers and not simply be traded. In other words, credits should ultimately be retired to ensure a net reduction, not sold to allow other regulated entities to avoid reductions.

Finally, if the Board accepts the companies' refusal to triage projects based on GHG cost-effectiveness, we would ask the Board to consider, after a suitable teething period to allow for the gathering of data on program uptake, the imposition of a constraint that would require projects to achieve an expected cost of GHG reduction at or below a benchmark level such as $30/tonne.

3.2. Uncertainty about pricing, projected take up and terms suggests the need for a mid-term review

The adequacy of the 5.5 PJ cap and the 11% average ROE to achieve the goals of the program is inherently difficult to predict.

In our cross-examination of panel one, we asked for the companies' views on a mid-term review and correction mechanism. They responded that they were not proposing it but were not opposed. Over the course of the oral hearing the matter arose repeatedly and the companies appeared to grow increasingly comfortable with the concept. Indeed, in his argument in chief Mr. Smith noted:

> *There's been some talk of reviewing contracts, and that can be a little ambiguous, I guess.*
>
> *If that means in any way interfering with a contract once entered into, then that just -- it fundamentally undermines planning certainty, but if that means reviewing a program after a certain amount of time to see if the contracts are generating the desired results or if some tweaking is required, without interfering with existing contracts and undermining planning certainty, well, then that is something that is very reasonable, in our submission.* (v.5, p.175)

A mid-term review could, *inter alia,* allow for:

- Price level adjustment if production costs have changed;
- Scope adjustment if take up does not meet objectives such as GHG reduction or the encouragement of multi-sector experience or if gas prices change significantly, greatly reducing or increasing the premium;
- Rule adjustments if unforeseen contractual or performance issues arise; and
- Price structure adjustments such as moving to project-specific ROE.

4. Who should pay: taxpayers, system gas users, all distribution customers, or all system users including ex-franchise customers?

Some parties have suggested that the potential costs of GHG reduction could be borne by government or that these technologies will emerge on their own once competitive. Those suggestions ignore the reality that gas users are major emitters of GHGs and fairness dictates that such emitters should bear the potential cost of mitigation (a user pay philosophy). If and when broader government regulation in the form of a carbon tax or cap and trade system emerges gas customers will have an offsetting credit and will not double pay.

As to which gas customers should pay, there is virtue in a universally funded program as it enhances fairness by matching costs proportionately with gas user emissions, and lowers average bill impact.

The matter was quantified at V.5, p. 121-122 where Enbridge indicated that the bill impact would be halved if all gas users rather than just system gas users were included. However, for Union the residential bill impact would fall from $18 to $1.40 due to the large volume of ex-franchise gas use.

While it might be tempting to opt for an all user approach (including ex-franchise customers) to lower bill impacts, that approach might risk imposing costs on users who will face overlapping carbon regulation regimes elsewhere. Accordingly, GEC submits that the fairest approach would be to charge all *distribution customers* for the program in proportion to gas use. That approach would lower residential bill impact by approximately 50% for Enbridge and presumably more for Union due to the larger proportion of non-system gas users in that franchise.

J4.11 contemplates the alternative of keeping the bill impact at 1.8% but extending it to all distribution customers. In that scenario the PJ cap could rise and any 'unfairness' of imposing the costs solely on system gas users would be mitigated.

The benefit of a higher PJ cap was discussed with Mr. Goulden at V.2, p. 69:

> MR. POCH: If bill impact were not a constraint, do you think a higher volume cap would be desirable to better ensure the market development? I'm not suggesting that bill impact isn't a constraint. I'm just saying if it were not.
>
> MR. GOULDEN: In theory, yes.

Accordingly, with a cap of 1.8% average residential customer bill impact (rather than a PJ cap) and a broader distribution customer funding base, the program could better ensure market transformation. This approach would be preferable in GEC's submission. Coupled with a mid-term review to consider adjustments to the cap, ROE or pricing structure, the aims of the program might better be met while minimizing average gas customer impacts.

All of which is respectfully submitted this 15th day of May, 2012

David Poch
Counsel for GEC