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BY COURIER (3 COPIES) AND EMAIL

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Dear Ms. Walli:

Re: Pollution Probe – Submissions on Concentric Report
EB-2008-0346 – Review of Demand Side Management (DSM) Framework for Natural Gas Distributors

We are writing to provide the Board with Pollution Probe's submissions regarding the *Review of Demand Side Management (DSM) Framework for Natural Gas Distributors* report prepared by Concentric Energy Advisors (the "Concentric Report").

Overview

Although Pollution Probe has a number of detailed submissions regarding the specific issues in the Concentric Report, there are two main overarching submissions that underlie these later detailed submissions.

First, Pollution Probe submits that the Board should determine that the gas utilities' DSM budgets need to be sufficient to allow the utilities to obtain all of the practical and cost-effective natural gas savings in each of their franchise areas. This would likely require increases from the current levels of DSM spending. However, such increases to the DSM budgets should be subject to the constraint that undue rate increases do not occur.[1]

To provide context, Enbridge Gas Distribution and Union Gas have developed some of the most cost-effective gas DSM programs in North America due to the Board's previous leadership in this area. As a result, these utilities are reducing their customers' bills by over $2 billion, making Ontario's industries more competitive and reducing our greenhouse gas emissions.

[1] Please see Issue #6 below at p. 5 for a detailed discussion of this submission.

However, the DSM budgets of these large Ontario-wide gas utilities are actually relatively low when compared to the Ontario Power Authority's analogous conservation and demand management budgets in the electricity sector. For example, the combined DSM budgets of Enbridge and Union Gas were only *one-fifth* of the OPA's CDM budget in 2009.[2] This disparity exists despite the fact that Ontario's natural gas consumption is virtually *double* its electricity consumption, and it shows that much more DSM can and should be done.[3]

These very low DSM budgets are thus reducing the gas utilities' ability to reduce customers' bills and increase the energy productivity and competitiveness of Ontario's economy. The DSM budgets should accordingly be substantially increased to obtain all of the practical and cost-effective natural gas savings.

Pollution Probe's second key submission is that the Board should adopt a regulatory framework which ensures that cost-effectively saving energy is always the most profitable course of action for the province's gas utilities. Such a regulatory framework would provide utilities with the proper incentives and rewards for saving energy in accordance with government policy. Such a framework would also continue and enhance the Board's regulatory leadership role in this area.

Pollution Probe also has detailed submissions regarding Issues #'s 1, 2, 4, 6, 8, and 10 of the Concentric Report, which are provided below.

Issue #1: DSM Cost Effectiveness Test

Pollution Probe agrees with the Concentric Report that the Societal Cost Test should be used to determine DSM cost effectiveness, and that the SCT should be applied on a program basis rather than on a portfolio basis.

As the Board is aware, the Government of Ontario has decided to adopt very aggressive greenhouse gas ("GHG") emission reduction targets (i.e. 15% reduction by 2020, and 80% reduction by 2050). It will be necessary for Ontario's gas utilities to implement much more aggressive DSM programs in order to ensure that the province can achieve its GHG reduction targets at the lowest possible cost.

Accordingly, gas utilities' DSM programs should be evaluated according to the Societal Cost Test ("SCT") to determine if they are cost-effective. The SCT compares the dollar values of their costs and benefits, and a key component is the financial value of avoiding a tonne of GHG emissions. In other words, the benefit of reducing GHG emissions is included as part of the test. Adoption of the SCT is thus the analytically correct approach

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[2] i.e. $44.9 million for Enbridge's and Union Gas's DSM budgets v. $223.5 million for OPA's CDM budget.

[3] See Issue #6 below at p. 5 for further details regarding this point.

to ensure that Board does not approve gas DSM programs that end up pay too much to save a tonne of GHG emissions (i.e. are not cost-effective).

Pollution Probe thus agrees that the SCT should be used to determine DSM cost-effectiveness. Pollution Probe also agrees that the SCT should applied on a program basis rather than on a portfolio basis to ensure that all the individual programs are cost-effective.

Issue #2: DSM Avoided Costs

Pollution Probe submits that the Board-approved cost of capital should continue to be used to evaluate the cost-effectiveness of DSM and supply-side investment projects. However, if the Board wishes to use a social discount rate instead, the proper rate ought to be 8% net of inflation, and this methodology ought to be applied to both DSM and supply-side investment projects.

The current practice of the Board is that the gas utilities use the Board-approved cost of capital to evaluate the cost-effectiveness of their DSM and supply-side investment projects. However, the Concentric Report suggests that the utilities could instead use a "social discount rate" to evaluate their DSM programmes. Furthermore, Concentric states that the appropriate "social discount rate" could be based on the average yield on long-term Government of Canada bonds. The motivation for the Concentric recommendation appears to be that it would increase the number of DSM programs that could pass the SCT.

Pollution Probe respectfully submits that these Concentric Report recommendations are not appropriate for the following reasons.

1. The gas utilities' current policy of using their Board-approved cost of capital as the discount rate for their supply-side and DSM cash flow analyses is appropriate since it accurately reflects their cost of actually attracting capital. It thus should not be changed.

2. A social discount rate ("SDR") is often used to evaluate the economics of projects undertaken by the public sector since a government's cost of borrowing money is typically lower than the social opportunity cost of transferring capital from the private sector to the public sector. However, since Ontario's gas utilities are privately-owned, in the absence of compelling evidence to the contrary, it is not appropriate to assume that their actual cost of obtaining equity and debt capital from the marketplace does not equal their true risk-adjusted opportunity cost.

3. If the Board instead still wishes to adopt the usage of the SDR, the SDR is **not** equal to the average yield of long-term Government Canada bonds (as proposed by the Concentric Report).

As the Board will recall, Pollution Probe filed expert evidence by Professor David Burgess of the University of Western Ontario re: *The Economic Cost of Capital for the Integrated Power System Plan* as part of the Integrated Power System Planning (IPSP) proceeding.[4] As noted by Dr. Burgess, the SDR is instead a weighted average of the pre-tax rates of return in the various sectors of the economy that compete for capital; the after-tax rates of return earned by the various domestic suppliers of capital; and the marginal cost to the economy of drawing incremental funding from abroad. The weighted average reflects the proportions of an incremental dollar of funding that come from each source. According to Dr. Burgess' evidence, the SDR is actually 8% net of inflation, and Pollution Probe submits that this is the SDR rate that should actually be used.

4. Finally, if the Board decides to mandate using an SDR for evaluating DSM programs, it must also mandate the use of an SDR to evaluate gas supply options. Both options should use the same methodology, as they do currently. Otherwise, supply-side and DSM options cannot be evaluated or compared on a "level playing field".

Pollution Probe thus submits that the Board-approved cost of capital should continue to be used instead of an SDR. However, if the Board wishes to use an SDR instead, the proper rate ought to be 8% net of inflation, and this methodology ought to be applied to both DSM and supply-side investment projects.

Issue #4: DSM Adjustment Factors

According to the Concentric Report, there is merit in assuming that *all* DSM programs have free-ridership rates of between 0% and 10%. However, Pollution Probe strongly disagrees with Concentric on this issue as it is an arbitrary assumption.

It is well known that actual free-ridership rates are a function of program design, and such rates thus need to be supported by evidence to ensure proper cost-effectiveness, incentives, and rewards. If the Board were to instead arbitrarily assume that *all* DSM programs have free-ridership rates of between 0% and 10%, then the gas utilities' would not have a financial incentive to develop and implement programs with lower actual free-rider rates.

In addition, if the Board arbitrarily assumes free-ridership rates of 10% for DSM programs, the Board may approve DSM programs that are actually not cost-effective if the actual free-ridership rate is significantly higher. The Board would also be approving shareholder profit bonuses that are based on fictitious savings.

Pollution Probe submits that none of these outcomes are in the best interests of Ontario's gas consumers. Instead, to fulfill its mandate to protect gas consumer interests, the Board

[4] EB-2007-0707, Exhibit L, Tab 12, Schedule 2.

must ensure that the gas utilities' free-rider rates input assumptions are evidence based and reasonable.

Issue #6: DSM Budget Development

Pollution Probe submits that the 6% upper cap on DSM spending proposed by the Concentric Report is arbitrary as the Report does not contain supporting evidence to show that relevant goals would be met. The upper cap should accordingly not be imposed. Instead, Pollution Probe submits that the Board should determine that the gas utilities' DSM budgets need to be sufficient to permit the utilities to obtain all the practical and cost-effective natural gas savings. This would likely require increases to current DSM spending, which should be subject to the constraint that undue rate increases do not occur.

The Concentric Report recommends that future gas utilities' DSM budgets should equal *at least* 3% of their distribution revenues excluding gas commodity costs. According to the Concentric Report, this recommendation would require annual DSM budgets for Enbridge and Union of approximately $25 million and $22.6 million respectively. For comparison purposes, Enbridge's and Union Gas's DSM budgets were $24.3 million and $20.6 million respectively in 2009, which is relatively close to the proposed minimum.

On the other hand, the Concentric Report recommends an *upper limit* for the gas utilities' DSM budgets be set at 6% of their distribution revenues (excluding gas commodity costs revenues). This would translate into a maximum total of approximately $95 million for Ontario's two major gas utilities.

To put Concentric's recommendations in context, it is important to note the following as a key comparison:

1. 35% of Ontario's energy needs are supplied by natural gas whereas electricity provides us with only 18% of our total energy needs. In other words, Ontario consumes nearly twice as much energy from natural gas relative to electricity.[5]

2. Yet despite this consumption disparity, the OPA is spending much more on analogous conservation and demand management in the electricity sector relative to DSM in the natural gas sector. For example, the OPA's CDM expenditures in 2008 and 2009 were $160.1 million and $223.5 million respectively.[6] Further, according to the CEO of the OPA, it will be launching a $1 billion industrial energy efficiency program for the 58 largest industrial electricity consumers in the province.[7]

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[5] Environmental Commissioner of Ontario, Rethinking Energy Conservation in Ontario: Annual Energy Conservation Progress Report – 2009 (Volume 1), p. 7.
[6] Ontario Power Authority, *2009 Annual Report*, p. 27.
[7] Colin Andersen, "Opening Address", *Green Living Business Forum 2010: Green Strategies for Economic Success*, (April 23, 2010).

3. It thus appears that much more can and should be done regarding DSM in the natural gas sector. In fact, according to Ontario's Environmental Commissioner:

> The potential savings on consumers' bills and emissions reductions from reduced [gas] consumption is large – *possibly more than the savings from electricity* [emphasis added].[8]

4. If one were to merely achieve *energy parity* with the OPA's conservation spending, the gas utilities' 2009 DSM budgets would have to rise to $435 million,[9] which Pollution Probe submits is a laudable goal.

However, the Concentric Report's proposed upper limit for gas DSM spending would only result in a maximum of $95 million. While this amount is well below the amount required for energy parity, it is also approximately $130 million *less* than what the OPA actually spent on electricity CDM in 2009,[10] despite the fact that Ontario's gas consumption is almost *double* its electricity consumption.

Further, according to the Concentric Report, some of the parameters relevant to set its recommended upper limit on DSM spending include:

1. achieving a long-term Societal Cost Test equal to 1.0;
2. achieving a 90% market penetration for Best Available Technologies for mass market DSM measures; and
3. contributing towards provincial carbon reduction targets.

However, the Concentric Report contains *no evidence* to show that its recommended range of DSM spending would be sufficient to achieve these goals. It instead appears that the recommended upper cap is more of an arbitrary selection.

Pollution Probe thus submits that it would not make sense for the Board to impose an arbitrary cap on the gas utilities' DSM spending. Such a cap could irrationally limit their ability to reduce their customers' bills and to increase the competitiveness of Ontario's industries, and the utilities ought to be free to be able to do all the practical and cost-effective DSM that they can do.

Pollution Probe notes that Enbridge and Union's DSM programs provide a number of benefits for Ontario. These benefits include:

1. increasing our natural gas productivity (i.e. GDP$ per cubic metre of natural gas consumed), which in turn helps increase the overall productivity of the Ontario economy, makes our industries more competitive, and raises our living standards;

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[8] *Ibid.*, p. 31.

[9] i.e. $223.5 million (OPA 2009 CDM budget) x [35% (total energy provided by natural gas) / 18% (total energy provided by electricity)].

[10] i.e. $223.5 million - $95 million.

2. reducing the natural gas bills for Ontario's residential consumers;

3. reducing the outflow of Ontario dollars to Alberta to purchase natural gas, which in turns help create jobs in Ontario; and

4. helping the province achieve its greenhouse gas emission reduction targets.

Pollution Probe thus submits that the Board should instead determine that the gas utilities' DSM budgets need to be sufficient to permit the utilities to obtain all practical and cost-effective natural gas savings in each of their franchise areas. Given the context above, this will likely require significant increases to current DSM spending. However, such increases should be subject to the constraint that undue rate increases do not occur.

Pollution Probe notes that the publicly acceptable level of rate increases will vary over time depending on numerous factors. Such factors include changes in natural gas commodity costs; shifts in the business cycle; and the number of customers that are experiencing bill decreases as a result of participation in one or more of the gas utilities' DSM programs. Pollution Probe submits such an analysis better protects the interests of consumers and promotes energy conservation instead of simply imposing an arbitrary cap.

Pollution Probe also notes that its proposal is consistent with the Environmental Commissioner of Ontario's recommendation that an energy strategy for Ontario should include a *loading order* that requires "pursuit of all cost-effective conservation actions as the first priority for policy makers, planners and regulators before they consider supply options."[11]

Pollution Probe thus submits that the Board adopt Pollution Probe's proposal instead of the Concentric Report's recommendation on this issue.

Issue #8: Shareholder Incentive Mechanism

Pollution Probe strongly supports the following recommendation in the Concentric Report:

> The financial incentive mechanism should be designed to encourage gas distributors to pursue aggressive targets that result in significant progress toward market penetration of the Best Available Technologies and meaningful reductions in gas consumption per customer. The current incentive structure does not appear to provide sufficient impetus for utilities to go beyond the generic solutions to energy efficiency. Concentric recommends that the Board develop an incentive formula that considers the magnitude by which the gas distributor exceeds certain

[11] Environmental Commissioner of Ontario, *Rethinking Energy Conservation in Ontario: Annual Energy Conservation Progress Report – 2009 (Volume 1)*, p. 18.

> metrics or targets, including market penetration, reduction in gas consumption, and/or contributions toward reductions in carbon emissions.[12]

Pollution Probe also submits that the Board's report should endorse the following principles:

1. In order to provide proper incentives, a utility's most profitable course of action should be the aggressive pursuit of all cost-effective DSM options.

2. There should be no cap on the level of DSM shareholder incentives. In other words, it should always be in a utility's financial self-interest to achieve additional cost-effective DSM savings.

Issue #10: DSM Conservation Impact Evaluation

According to the Concentric Report:

> Concentric recommends that the OEB appoint the entities that are responsible for conducting the independent program evaluation and third-party audit of program results. This approach would be expected to enhance transparency, confidence and trust among stakeholders' that the DSM program evaluation and program audit were being conducted by independent entities chosen by the OEB.[13]

Pollution Probe supports this recommendation subject to the caveat that the Board needs to also establish individual DSM Audit Advisory Committees for both Enbridge and Union Gas to assist with the selection of the auditors and the audit process. Pollution Probe also submits that each utility's Advisory Committee should include a utility representative and 3 intervenor members elected by the intervenors involved with the utility's most recent rate case.

Conclusion

In addition to the detailed submissions above, Pollution Probe submits that the gas utilities DSM budgets need to be sufficient to allow the utilities to obtain all of practical and cost-effective natural gas savings. Further, the Board should adopt a regulatory framework which ensures that cost-effectively saving energy is always the most profitable course of action for the province's gas utilities.

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[12] Concentric Report, pp. 118-119.
[13] Concentric Report, p. 132.

We trust that Pollution Probe's submissions are of assistance to the Board, and please do not hesitate to contact the undersigned if you wish to discuss this matter further.

Yours truly,

Basil Alexander

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