



**BY EMAIL and RESS**

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June 27, 2019  
Our File No. 20190003

Ontario Energy Board  
2300 Yonge Street  
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**Attn: Kirsten Walli, Board Secretary**

Dear Ms. Walli:

**Re: EB-2019-0003 – Gas DSM Framework Post 2020**

We are counsel for the School Energy Coalition. Pursuant to the Board's letter dated May 21, 2019, this letter constitutes SEC's submissions to the Board on the three questions posed in Phase 1.

The theme of these submissions is to propose that the Board rethink the gas utilities' approach to DSM programs in fundamental ways. After more than twenty years of gas DSM programs in Ontario, the Board should be looking anew at the administrative structure of the programs, the goals we are seeking to achieve, the structure and amounts of the budgets, the metrics to measure success, and the form of the incentives to shareholders.

Fundamentally, the Board and the utilities should start to look at gas distribution as a legacy business, in which paced and reasonable reductions in its size, rather than continued growth, is its expected and appropriate future. DSM programs should be designed to achieve meaningful net reductions in gas throughput, not simply less growth than otherwise planned.

## **Background**

The customers of the gas distributors are spending a lot of money on DSM programs. In 2019, the total costs of gas DSM programs (including budgets, overspends, LRAM, and shareholder incentives, but not including the unallocated shared costs the programs) are expected to be about 7% of gas distribution revenues, perhaps more.

This is the latest in a steep trajectory of DSM spending. From the \$7 million total spend in 1998, the annual cost has increased to perhaps \$150 million in 2019 (depending on overspend, LRAM, and shareholder incentives). To put that in perspective, the total spend for the period 2011-2020 is likely to be about \$1.2 billion (including shareholder incentives totalling about 15% of that total). That is the total customers are spending over the current ten year period to chase the dream of reducing the environmental impacts that come with natural gas use. The next ten years will likely involve a similar level of investment, perhaps even more.

Using the standard measurement methodology employed by the gas utilities and the Board for a long time, Enbridge Gas has reported stellar successes in reducing gas use by customers. That standard methodology is a bottom-up approach to savings, relying on engineering estimates to calculate annual savings for new equipment and behavioural changes, and then assuming that those savings continue for the entire technical life of the measures (e.g. 10-30 years). Since the devil is in the details, those calculations have been an ongoing subject of dispute and litigation, including in particular (but not limited to) the extent of any causal connection between the programs and the calculated results. They also represent a substantial annual expense for measurement and verification.

The other side of this is that the ramp up in spending may or may not actually be resulting in sufficient savings to be cost-effective. Yes, the bottom-up measurement says good savings are being delivered. Top-down measurement has not been as positive. By way of example, the normalized average use per customer (NAUC) for residential customers in the EGD service territory dropped by 14.2% from 2000 to 2010 (3006 m<sup>3</sup> to 2579 m<sup>3</sup>). From 2010 to 2018, despite significantly higher DSM spending, NAUC has only dropped by 6.5% (2579 m<sup>3</sup> to 2412 m<sup>3</sup>).

The situation in EGD Rate 6, where the main bulk of commercial customers reside, is even worse. Prior to 2010, the figures are not useful in calculating a trend, because over 2007 to 2010 there was significant rate migration from larger classes, increasing the NAUC for Rate 6 from 21,264m<sup>3</sup> in 2006 to 27,949 m<sup>3</sup> in 2010. Since 2010, when rate migration had diminished, NAUC for Rate 6 has not declined. Instead, in 2018 it was 28,656 m<sup>3</sup>. It is forecast to go up an additional 2% in 2019. Hundreds of millions of dollars have been spent on DSM programs to reduce usage in Rate 6. There is no data before the Board on whether that is actually reducing the use of gas by commercial and industrial customers in that class.

Similar comparisons on the Union side are more difficult because of changes to rates M1 and M2 in Union South, primarily prior to 2010. M1 still includes many of the commercial customers that, in the EGD territory, would be in Rate 6. That having been said, the NAUC for M1 has dropped only 3.5% from 2010 to 2018 (2867 m<sup>3</sup> to 2767 m<sup>3</sup>). (Data that divided that between residential and non-residential customers would be useful information for the Board.)

For both of the Enbridge predecessors, the most telling point is throughput. EGD delivered 422 bcf in 2010, and 449 bcf in 2018. Union delivered 1373 bcf in 2010, and 1372 bcf in 2018.

These figures are not evidence the DSM programs are ineffective. There are many reasons why NAUC has not declined more quickly, including the obvious fact that there is a declining amount of low hanging fruit, offset to some extent by the accelerating impact of non-program influences, such as regulatory and code changes.

Similarly, there are many reasons why throughput has increased. Ontario has had substantial population increases (and thus increases in the number of natural gas customers), Ontario GDP has grown, leading to more non-residential use of gas, and low gas prices have resulted in fuel switching to natural gas from both electricity, and other hydrocarbon fuels.

In some respects, the fact that gas usage is relatively flat could be seen as a success story, and some of that could be the result of DSM programs (as well as natural conservation, changes in building codes, and other causes).

But, what the data may show us (when it is reviewed in more detail), is that we are not actually reducing the total use of natural gas in Ontario. Slowing the growth of gas consumption (and hence GHG emissions) is not the same as producing net environmental benefits. If we are not delivering net benefits, then the Board is, in our view, required to ask what we can do to change that. Many customers would say that, for a cost of 7% of our distribution bills, we should be reducing overall gas throughput, and the greenhouse gas emissions that implies. The new Framework should ensure that we achieve those results.

(It is useful to note that studies have been done to look at whether DSM spending is affecting actual gas use. The PEG study in 2010 found no statistically significant relationship between most categories of DSM spending and gas use, although gas use had been trending down. Another study done in 2016 went through a peer review, but ultimately was never published. Work has also been done in this area in Massachusetts and California.)

SEC's answers to the Board's questions flow from this data. Our approach is a) look more closely at the empirical evidence of the results over the last two decades, and b) based on that review, rethink in fundamental ways how gas DSM programs are delivered in Ontario, so that we can produce absolute environmental benefits from these programs.

### **Issue #1: Principles**

***Do the guiding principles from the 2015-2020 DSM Framework remain appropriate? If not, what principles are needed and why?***

SEC believes that if the Board rethinks the fundamental structure of gas DSM in Ontario, the principles will have to be rebuilt from the ground up. Those principles assume a framework structure that has certain goals, and certain assumptions about who will do what, who will pay for what, and what constitutes success.

In our view, it is premature to engage in the analysis of changes to the principles. Step one should be to review and, if necessary based on the detailed evidence, change the fundamental structure of gas DSM. That should include a review of the goals the Board (and the customers,

through their spending) are seeking to achieve. Only then should the principles be tested against what may be new goals, and what may be a very different structure, both in terms of money and in terms of governance. This is an iterative exercise. The principles don't stand on their own.

Most of the principles would, in any new structure, still survive. They represent social or energy policy goals that are not controversial. They may be expressed differently depending on the nature of the program, but many of the underlying values will not change.

However, to emphasize the extent of review we are proposing, it is appropriate to look by way of example at two of the existing ten principles, #4 and #9.

Principle #4 says that the gas utilities should be able to recover the costs and lost revenues associated with gas DSM programs. This implies two assumptions about DSM programs: they are delivered by the gas utility, and they represent current spending by customers for future benefits. Neither is necessarily the best approach today.

Principle #9 talks about shareholder incentives, and says they are to be based on performance. However, the details then talk about targets, and about compensation for the difficulty of achieving specific targets. This target-based incentive structure not only assumes the bottom-up approach to performance measurement, but it also implies a disconnect between the actual outcomes valued by customers, and the incentives being paid by customers to the utility.

In our discussion below under Issue #3, SEC talks about possible proposals that the Board could consider in rethinking how we deliver gas DSM. Some of those proposals would change either who delivers the programs, or how (if at all) costs and lost revenues would be recovered. They would also seek to tie shareholder compensation (and perhaps cost recovery) directly to actual declines in natural gas use and thus GHG emissions.

In general, SEC submits that the principles cannot be assessed until scope and goals have been discussed, and the Board has made determinations on those issues.

## **Issue #2: Goals and Objectives**

### ***What should be the primary goal(s) and objective(s) of the post-2020 DSM Framework?***

The last Framework had three goals:

- Help program participants reduce their gas bills
- Promote a culture of conservation
- Avoid spending on new gas infrastructure

The first goal is being achieved by most programs offered by the gas utilities.

The second goal has also been achieved to some extent, although the extent to which the gas DSM programs have been the primary cause of this result is the subject of some debate. There are a lot of voices promoting a culture of conservation. The gas utilities are one of those voices, and they are having an impact. The size of that impact is uncertain.

The third goal has, notoriously, not been achieved in any meaningful way, in large part because the gas utilities have stubbornly refused to consider geo-targeted DSM as part of their system planning decision process.

Goals are a way of answering the question: “Why are we doing this?” In response to that question, SEC believes that a new, overriding goal should be added: Reduction of total natural gas use in the province of Ontario.

This is important for at least three reasons.

***What Outcomes do Customers Want?*** First, it is clear that today climate change is an important element of conservation relating to carbon fuels. Customers don’t want to just hold our own on GHG emissions and other environmental impacts of carbon fuels; customers want to reduce adverse environmental impacts. To do that, gas use must actually decline. Setting up a counterfactual of persistent increases in environmental damage, and then saying that the damage is not as bad as it would have been, is no longer sufficient to achieve customers’ goals for their substantial investments in DSM. This is about the outcomes that customers want. They don’t want more GHG emissions; they want less.

***The Ontario Environment Plan Relies on Reductions in Gas Use.*** Second, the government’s Environment Plan commits to achieving 30% below 2005 emissions by 2030, consistent with the Paris Agreement. In setting out the details, the Plan says, at page 24, that DSM programs from the natural gas utilities, as approved and overseen by the Ontario Energy Board, will deliver 18% of this reduction. It is not possible to deliver absolute reductions in GHG emissions by allowing gas use to continue to rise, or even stay flat. Gas use must actually decline over time.

***The Changing Role of Natural Gas.*** Third, gas utilities achieve growth in their revenues and profits by increasing natural gas use. This is a financial imperative that, ultimately, is inconsistent with a culture of conservation. It is time to change the goal of DSM programs so that the gas utilities cannot seek to have their cake and eat it too. It is time to see gas distribution as a legacy business. It will be around a long time, perhaps (just like the tobacco industry), but ultimately climate change and other environmental imperatives will require a shift away from the combustion of fossil fuels, including natural gas. This is inevitable.

Of course, a collateral benefit of any program designed to achieve this goal is that system planning will value investments in DSM equally with investments in pipes. This is consistent with the “legacy business” concept, and should limit the size of the stranded assets problem that we know is coming, and that otherwise could be enormous.

SEC notes that adding this goal would mean that the other three existing goals would be strengthened, not undermined. Further, the \$150 million a year (or, potentially, more, as the Environment Plan indicates) spent on gas DSM programs would actually result in net environmental benefits.

(SEC notes that there may be circumstances in which natural gas use is independently allowed to rise in order to displace other fuels or energy sources that have more severe environmental impacts. This should be considered quite separately from the continuing growth of natural gas

for its traditional uses, and should in any case be seen as a transitional solution to a carbon-free energy system. For traditional natural gas uses, the target should be net reductions, period.)

### **Issue #3: Scope**

#### ***Should the OEB undertake major revisions to the 2015-2020 DSM Framework or focus on specific updates that are more minor in nature?***

SEC believes that this is the appropriate time to look once more at the Board's fundamental approach to DSM. If the Board opens this process up to major change, there will be a broad range of creative and potentially transformative changes proposed by the parties. The Board will be able to learn from what is being tried in other jurisdictions (instead of sticking with a conceptual approach that, however much it has evolved, is still twenty years old), and will be able to develop new approaches that represent the leading edge of conservation programs.

We offer four examples of ideas that parties will likely want to discuss, and perhaps propose to the Board in one form or another, for the next framework.

- A. ***Structural Change.*** Creation of a non-utility entity to deliver DSM programs in place of the gas utilities. This has been done in other jurisdictions, with positive impacts. In Ontario, it could be done through legislation, or through the exercise by the Board of its jurisdiction to require the gas utilities to establish an independent conservation entity, which the Board would regulate through them, or through the Board establishing a new organization within the Board's governance structure. In addition to aligning the method of delivery of gas conservation with the method of delivery of electricity conservation, such a change could also help to overcome the utilities' mixed incentives: building infrastructure vs. reducing demand for gas.
- B. ***Rate Base Investments in DSM.*** DSM investments are just that, investments. They represent spending today for long term benefits. Like investments in physical infrastructure, it may be appropriate to treat these investments as long term investments on which the utilities get a return. Not only would this immediately reduce customer distribution bills by 7%, but it also aligns the rewards of DSM with the rewards of investing in new pipes. The utility – at least in theory - becomes indifferent to whether they meet the needs of customers with DSM, or with hard assets.

Of course, to do that the method of providing a return on DSM investments must be both attractive to the utility, and tied to achieved results. If it lacks the former, then the utility will not invest in DSM. If it lacks the later, that just delays the spending by the customers (and increases it), with no way of ensuring that it will produce actual net reductions in gas use. A method for calculating the benefits of DSM investments based on measured actual results could provide that return. Done properly, it leaves it up to the utility to decide how much to invest in DSM, based on the level of benefits it believes it can achieve by those investments.

Restructuring DSM spending as a kind of performance contracting will not be easy. However, it should not be rejected out of hand just because the details are challenging. If the concept is appealing (which we believe it is), then it is worth the effort to try to develop a method of implementing it.

- C. **Measured, Actual Top-Down Results.** Instead of forecasting future results of DSM activities based on bottom-up engineering estimates, it may be time to measure results, as they happen, based on actual reductions in average use, or similar methods of calculation. This could be done in various ways, including on an overall volumetric basis, on a rate class or customer category basis, or even as a pilot on a more targeted basis. This is not new. The Sustainable Schools initiative already does this, measuring the actual use of energy by each school. There are other sectoral initiatives, in Ontario and elsewhere, which measure actual results. Of course, to make sure that the results are measured in a useful way, they will probably have to be adjusted for major exogenous factors affecting gas use: customer numbers, weather, economic activity (e.g. GDP), etc. Identifying and implementing those adjustments are complex, but ultimately tractable problems.
- D. **Roadmap Approach.** To date, utility programs have been driven by the desire to chase “achievable potential”. That starts from the notion that we figure out what is possible, and then get as much as we can. Perhaps that is the wrong way around. Another approach is to set a target (e.g. 18% of 2005-2030 emissions reductions by 2030), and develop a detailed roadmap to get there. If we determine, for example, that meeting the goal in the Environment Plan means a net reduction in Ontario throughput of, say, 50 bcf, what are the potential ways we can do that? Let’s make a plan to achieve that goal, revising it periodically as it is implemented, we learn more, and technologies and techniques evolve. Annual budgets and targets (and, indeed, program components) flow out of the roadmap, rather than the other way around. There is a lot of merit in goal-driven planning, and it may be that we have not seen enough of this in our approach to gas utility DSM programs.

SEC anticipates that, if the Board allows a broad scope in this consultation, the result will be additional proposals, particularly if the Board ensures that it starts with a process to build a strong evidentiary foundation on which to base its decision.

In our submission, that evidentiary foundation is a key to the success of this process. There is a lot of valuable data on gas use, efficiency technologies, and trends. There are also other jurisdictions that have reviewed these issues, or similar issues, extensively. There may be things we can and should invent or improve, but there are also many things out there we do not need to reinvent.

### **Procedure**

SEC notes that, in order for the utilities to launch appropriate programs in time for the beginning of 2021, they will have to have approval of their plans no later than about March, 2020 (and that may actually be a little late). To get their plans approved, they will need a Framework by September, 2019, so they can develop plans and file an application for approval of those plans. Even that would be very tight, but in any case SEC sees no likelihood that either of these dates can be met.

Rather than truncate this process, or narrow the scope so that it can be done faster, SEC believes that the Board should extend the current plans for one year, perhaps as part of a parallel application by Enbridge to be filed by the end of this year.

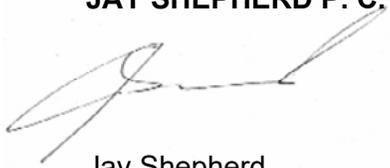
While SEC believes that fundamental change is an urgent requirement, we do not believe that it can be done by the end of next year. Rather than wait another five years, until the next framework, for that rethinking exercise, SEC believes that an extra year in this process will allow changes that can dramatically improve the programs, and produce the outcomes that the customers want.

### **Conclusion**

SEC therefore submits that the Board should order a broad scope for this Framework process, including in particular adding a goal that gas DSM programs should reduce the absolute level of natural gas use in the province.

All of which is respectfully submitted.

Yours very truly,  
**JAY SHEPHERD P. C.**



Jay Shepherd

cc: Wayne McNally, SEC (email)  
Interested Parties