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June 27, 2019

Ontario Energy Board
2300 Yonge Street
27th Floor
Toronto ON M4P 1E4

Attention: Kirsten Walli, Board Secretary

Dear Ms. Walli:

Re: Ontario Sustainable Energy Association ("OSEA") Intent to Participate in Consultation Process to Develop a Post-2020 Natural Gas DSM Framework
Board File No. EB-2019-0003

Please find enclosed Ontario Sustainable Energy Association's Written Submission in the above-noted matter.

Yours truly,

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Partner
Certified as a Specialist in Environmental Law and in Indigenous Legal Issues by the Law Society of Ontario

cc: Dan Goldberger, OSEA
Marion Fraser, Fraser & Company

Document #: 1558268

EB-2019-0003

ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15 (Schedule B), as amended

AND IN THE MATTER OF the Ontario Energy Board's Consultation Process to Develop a Post-2020 Natural Gas Demand Side Management Framework

WRITTEN SUBMISSION OF ONTARIO SUSTAINABLE ENERGY ASSOCIATION

June 27, 2019

I. OVERVIEW

1 The 2015-2020 Demand Side Management (DSM) Framework will expire on December 31, 2020. The Board initiated a consultation to consider the next generation DSM framework, with a view to ensuring that the Board's approach remains current, responsive to energy efficiency and conservation market developments and consistent with broader government policy.

2 The Ontario Sustainable Energy Association (OSEA) is pleased to provide its comments on the three specific issues outlined in the Board's consultation process to develop a Post-2020 Natural Gas Demand Side Management (DSM) Framework:

(a) Goals and objectives: What should be the primary goal(s) and objective(s) of the post-2020 DSM Framework?

(b) Principles: Do the guiding principles from the 2015-2020 DSM Framework remain appropriate? If not, what principles are needed and why?

(c) Scope: Should the Board undertake major revisions to the 2015-2020 DSM Framework or focus on specific updates that are more minor in nature?

II. DISCUSSION

A. INTRODUCTION

3 OSEA's submissions will focus on advocating for the introduction of Performance-Based Conservation (PBC) in the next generation DSM framework.

4 PBC is a data-driven methodology for identifying accurate energy savings based on actual metered data. This method applies "systematic, evidence-based principles to find the best operational and retrofit projects", and "drives continuous improvement through monitoring actual savings".[1] PBC identifies and fixes the inefficiencies in individual buildings that cause high energy use, such as errors in design and construction, equipment deterioration, or poor performance of controls and automation systems.[2]

5 OSEA supports using PBC as a more desirable framework for estimating conservation potential, program design, program implementation and evaluation with respect to commercial and institutional buildings as it uses metered data rather than estimates and assumptions.

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[1] Toronto and Region Conservation Authority, Performance Based Conservation Pilot Project, October 4, 2017 <https://www.partnersinprojectgreen.com/wp-content/uploads/2017/09/PBC-Pilot-Overview-October-4-2017.pdf>.

[2] EB-2017-0127-0128 DSM Mid-Term Review, BOMA Submissions.

6 Currently, the 2015-2020 DSM Framework does not use PBC to track energy savings and usage data. The 2015-2020 DSM Framework is premised on: (1) data derived from estimates, deemed savings and measure life and (2) evaluation methodologies from the California Standard Practice. The California Standard Practice Evaluation methodology discounts operational and behavioral improvements in favor of performing traditional equipment replacements. The 2015-2020 DSM Framework uses these data assumptions (i.e. about the estimated lifespan and efficiency of a particular piece of equipment) to track estimated energy savings and usage.

7 PBC has been developed in Ontario over the past decade and is now growing in use across Canada and in the United States. PBC enables wide-scale energy, water and greenhouse gas emissions reductions. The methodology uses progressively deeper utility data analytics, from annual to monthly interval data to:

(a) enhance customer engagement in conservation with evidence-based business cases for individual buildings and portfolios of similar buildings,

(b) drive deeper savings through identification of high-potential buildings and measures,

(c) verify actual savings and guiding continuous learning and improvement by means of ongoing monitoring and reporting of actual saving,

(d) recognize that gas savings result from ensuring the integrity of the overall system rather than simply replacing equipment (evidence has shown that replacing or adding new more efficient equipment can actually increase gas consumption), and

(e) recognize that energy, greenhouse gases and water use intensity per square foot is a more meaningful metric of energy conservation.

8 In 2006, Ontario passed the *Energy Conservation Leadership Act*.[3] A key element was the requirement for all public sector buildings to report on their energy and water use and develop plans to reduce consumption. This Act was rolled into the *Green Energy and Green Economy Act*[4] in 2009. And in the 2018 repeal of the *Green Energy and Green Economy Act*, this reporting requirement was maintained in Ontario's Made-in-Ontario Environment Plan. Since then a similar data framework has been introduced for the commercial sector starting with the largest buildings and working down to the smaller buildings.

9 PBC is being used in the Sustainable Schools program in Ontario. An important element in PBC requires the utilities to change their marketing approach to building owners and managers. The traditional approach was to treat each customer individually, and in the case of schools, the utilities have traditionally relied on prescriptive product incentives marketed to the schools. However, the introduction of single technologies does not result in savings because the overall balance of the building's system may be un-impacted or worsened.

10 The success of PBC in the Sustainable Schools program results from a more comprehensive approach: treating the Board of Education as a single customer and including all the schools and working collectively to optimize each school's system.

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3 *Energy Conservation Leadership Act*, 2006, S.O. 2006, c. 3, Sched. A.
4 *Green Energy and Green Economy Act*, 2009, S.O. 2009, c. 12.

B. GOALS AND OBJECTIVES

11 In establishing the 2015 Framework, the Board stated that ratepayer funded DSM programs should focus on three objectives. OSEA comments on each:

(a) Objective 1: “Assist consumers in managing their energy bills through the reduction of natural gas consumption. Customers who participate in the DSM programs should see a decrease in their energy bills.”

(i) OSEA suggest that this should be revised to make it explicit that customers who participate in DSM should see a decrease in electricity and natural gas bills. For example, savings achieved through reduced water heating costs will mean a decrease in both electricity and natural gas bills.

(b) Objective 2: “Promote energy conservation and energy efficiency to create a culture of conservation. DSM programs should advance conservation and energy efficiency, beyond the program participants, to the broader public in Ontario.”

(ii) OSEA agrees that a culture of conservation is important, but it recognizes that there is already spillover from DSM beyond program participants to the broader public in Ontario, so it is not necessary for this to be a standalone objective in the new framework. OSEA suggests that a key objective should instead reflect the value to customers of leveraging national programs, other provincial programs and local programs.

(c) Objective 3: “Avoid costs related to future natural gas infrastructure investment, including improving the load factor of natural gas systems. Gas utilities are expected to consider DSM initiatives in the context of infrastructure planning so that reducing demand for natural gas also helps avoid or defer future infrastructure costs. This is consistent with the government policy of “Conservation First.”

(iii) OSEA suggests removing the phrase “improving the load factor of natural gas systems”, because DSM is unlike the electricity system, where there are overall benefits from peak load management. DSM does not benefit from load management as there is no time of day pricing for natural gas.

(iv) OSEA concurs that both DSM province wide programs and geographically targeted DSM programs should be considered in the context of infrastructure planning to inform system planning and provide expertise for DSM implementation. The cost of doing so should be treated as utility capital investment. Utilities should focus on investing in DSM programs to encourage conservation rather than investing in infrastructure. The reference to consistency with “Conservation First” is no longer required.

C. GUIDING PRINCIPLES

12 OSEA has abbreviated the current verbiage of the Guiding Principles from the 2015 Framework for simplicity. OSEA comments on the Principles as follows:

(a) Principle 1: Invest in DSM where the cost is equal to or lower than capital investments and/or the purchase of natural gas.

(i) OSEA suggests this principle should remain the same.

(b) Principle 2: Achieve all cost-effective DSM that result in a reasonable rate impact for customers.

(ii) OSEA suggests this principle should remain the same.

(c) Principle 3: Where appropriate, coordinate and integrate DSM and electricity Conservation and Demand Management efforts to achieve efficiencies.

(iii) OSEA suggests: Use PBC for commercial and institutional buildings which includes gas, electricity, water and greenhouse gas reductions.

(iv) Rationale: This is important to ensure that electricity and water agencies bear related costs for the benefits they share. Ultimately, integrated performance-based DSM protocols should be developed for the residential and industrial sectors.

(d) Principle 4: Gas utilities will be able to recover costs and lost revenues from DSM programs.

(v) OSEA suggests that an exception be added: “Gas utilities will be able to recover costs and lost revenues from DSM programs, except that gas utilities will not be able to recover lost revenue for DSM built into gas system planning.”

(vi) Rationale: Those costs should become part of the capital investment of the utility. Lost revenues will already be built into the analysis. Similarly, in cases of system expansion to unserved areas of the province, system planning should also include DSM so that infrastructure costs are minimized, and customers’ bills are minimized from the outset rather than becoming eligible for DSM programs after they convert to natural gas.

(e) Principle 5: Design programs so that they achieve high customer participation levels.

(vii) OSEA suggests: Design a portfolio of programs that ensures that programs are available to customers across the province, all demographic groups and all sizes of customers.

(viii) Rationale: OSEA is concerned that the current approach ignores smaller customers who need more help and assistance, while the utilities prefer to deal with large customers with whom they have long standing relationships. The reward system for the utility and its

employees should reflect the diversity and equity inherent in this principle. The PBC approach described above markets to segments in a meaningful way which enhances program delivery.

(f) Principle 6: Minimize lost opportunities when implementing energy efficient upgrades.

(ix) OSEA suggests this principle should remain the same. OSEA suggests using PBC for private and public sector buildings to integrate capital upgrades into the mix of measures used to maintain the integrity of the systems. With respect to new construction of homes and buildings, OSEA suggests utilities make better use of the market channels serving these projects.

(g) Principle 7: Ensure low-income programs are accessible across the province and screened at lower thresholds than other programs, as determined by the Board.

(x) OSEA suggests this principle be modified to require that budgets, targets and program design for low-income programs sufficiently address the needs of low-income customers. OSEA suggests that budgets for low-income programs are ring-fenced, and that utilities continue to offer programs to low-income residential and private sector gas users as well as low-income public sector housing gas users.

(xi) OSEA suggests using PBC for private and public multi-residential buildings systems.

(h) Principle 8: Programs should be designed to pursue long-term energy savings.

(xii) This principle in the current DSM Framework has been applied in a way that restricts energy efficiency of improvements by primarily using equipment changes or capital upgrades. OSEA suggests using PBC. PBC maintains savings over the long term with the integration of equipment changes and capital upgrades, system-wide improvements, and ongoing metering and monitoring of the savings.

(i) Principle 9: Shareholder incentives will be commensurate with performance and efficient use of funds.

(xiii) OSEA suggests qualifying this principle so that only the metered savings achieved by a utility count towards shareholder performance incentives.

(xiv) Rationale: For the commercial and institutional buildings sector, the current approach is based on engineering estimates, deemed savings and measure life. The metrics for measuring program results that count towards shareholder incentives should be changed to ongoing metering and monitoring of the savings on a

pay for performance basis on annual savings, rather than life time savings.

(j) Principle 10: Ensure DSM is considered in gas utility infrastructure planning at the regional and local levels for natural gas.

(xv) OSEA suggests this principle be revised to state: "Ensure natural gas plus DSM is considered in energy infrastructure planning and the regional and local levels."

(xvi) Rationale: For the commercial and institutional buildings sector, efforts should be focused on areas of the natural gas system where there is a need for infrastructure to determine if infrastructure investment can be delayed in favour of conservation and reduction.

D. ADDITIONAL PRINCIPLES SUGGESTED

13 OSEA suggests the following three additional principles:

(a) Principle 11: Use Performance Based Conservation for buildings in the commercial and public sector, making use of the data available through government regulation to estimate potential, design and target programs and evaluate results.

(i) OSEA suggests that utilities change their performance metrics to reflect their effectiveness in improving the performance of the least efficient buildings rather than focusing on good performers who will make use of incentives to finance their next project.

(b) Principle 12: Determine how best to apply Performance Based Conservation to the industrial and residential sectors.

(ii) Rationale: PBC has been proven in the buildings sector for almost 10 years. The Board should consider how to implement a similar measurement and monitoring regime that is based on energy intensity per dollar of output for industrial plants and energy intensity per square foot for homes.

(c) Principle 13: Allow large industrial customers to opt out of DSM if they agree to disclose their greenhouse gas emission reductions.

(iii) Rationale: Large industrial customers who have achieved a certain threshold of greenhouse gas emission reductions should be allowed to opt out of DSM. While customer service for the large industrial customers will remain an important aspect of the utilities' responsibilities, DSM will be less critical given greenhouse gas emission reduction targets take precedent.

E. SCOPE OF CHANGES TO DSM

14 The Board requested that intervenors consider whether the Board should undertake major revisions to the 2015-2020 DSM Framework or focus on specific updates that are more minor in nature.

15 OSEA submits that the Board should undertake major revisions to the 2015-2020 DSM Framework, namely by implementing PBC in phased approach.

16 As noted above, the current 2015 DSM Framework uses data based on estimates, deemed savings and measure life and the methodology from the California Standard Practice. However, by using metered data PBC is a much more effective methodology to frame DSM.

17 PBC improves performance, measurement and accountability, and optimizes the energy system in a building so that all component parts work together. PBC also encourages better management of energy and water use. PBC allows continuous improvement using the feedback from the system and the metered energy data to adjust performance, which is superior to the traditional method of simply replacing equipment or performing a retrofit.

18 OSEA suggests that PBC be implemented in phases. The first phase would target the public sector, because all public sector buildings are already required to report on their energy and water use and develop plans to reduce consumption. This data already exists.

19 The second phase would target commercial customers and large buildings. The third phase will be to implement PBC in residential houses. The Board should continually improve upon lessons learned from each phase.