June 27, 2019

Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, 27th Floor
Toronto ON M4P 1E4

Attention: Kirsten Walli, Board Secretary

Dear Ms. Walli:

Re: Phase I, Post-2020 DSM Framework Joint Letter of Comment
Board File Number: EB-2019-0003

Please find enclosed our Joint Letter of Comment regarding the above noted matter.

Yours truly,

Jeff Ranson, Regional Director – Greater Toronto Area, Canada Green Building Council
Jim Baxter, Director, Environment and Energy, City of Toronto
Kyra Bell-Pasht, Consultant, Efficiency Canada
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Encl.

Efficiency Canada c/o Carleton University | Canada Green Building Council | City of Toronto | The Atmospheric Fund

Comments on Phase 1 of the Ontario Energy Board's (OEB)
Post-2020 DSM Framework Consultation (File No.: EB-2019-0003)

The 2014 Minister's Directive required the Board to establish a DSM framework designed to "enable the achievement of all cost-effective DSM."[i] The 2019 Directive reaffirmed this directive."[ii] As the 2015-2020 DSM Framework will expire on December 31, 2020, the OEB is working with stakeholders to develop the next generation of the DSM framework, starting with this Phase I consultation, which requests feedback on three high-level questions:

1. **Scope:** Should the OEB undertake major revisions to the 2015-2020 DSM Framework or focus on specific updates that are more minor in nature?
2. **Goals and objectives:** What should be the primary goal(s) and objective(s) of the post-2020 DSM Framework?
3. **Principles:** Do the guiding principles from the 2015-2020 DSM Framework remain appropriate? If not, what principles are needed and why?

Please consider the below comments submitted on behalf of the Canada Green Building Council, the City of Toronto, Efficiency Canada, and The Atmospheric Fund – organizations which share the common interests of maximizing all cost-effective natural gas DSM in order to help ensure our varied stakeholders enjoy the associated economic, health, wellbeing, and environmental benefits.

Please note that we made efforts (limited by time and resources) to coordinate our comments with other stakeholders (i.e. Pollution Probe, Clean Air Partnership, Green Energy Coalition and Environmental Defence) in order to minimize repetition and identify key alignments in our submission.

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

For the post-2020 framework to align with current government policies (namely: maximizing cost-effective conservation, growing the economy, and reducing greenhouse gas emissions), best practices relating to the valuation of the non-energy benefits of energy efficiency, while also addressing some of the weaknesses and/or failures of the existing framework, a few substantial revisions to the framework are required, namely:

- adding and clarifying objectives and principles to reflect the government's current greenhouse gas reduction and economic growth policies;
- clarifying objectives and principles to ensure that they reflect the government's policies of expanding cost-effective DSM and that the cost-benefit analysis is undertaken in accordance with best practices; and
- clarifying principles in order to improve access and participation rates among all natural gas customers, including harder to reach and low-income customers.

These revisions should be undertaken in a manner that helps ensure the continuity of existing programs and staff. If certain revisions require longer to roll out (e.g. refining the non-energy benefit values), they should be undertaken in a parallel (though still time-sensitive) process that does not hold up DSM program delivery.

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

The province's Made-in-Ontario Environment Plan commits to expanded DSM programs while prioritizing economic growth and greenhouse reductions. The most recent OEB directive also reiterates a commitment to achieving all cost-effective DSM. Our suggested updates to the Framework's goals reflect the need for a clearer commitment to these government policies.

Investing in energy efficiency creates economic benefits for various stakeholders.[iii] On one hand, investments in energy efficiency create cost-savings that have rippling effects through the provincial economy. Lower bills for businesses can foster a more competitive environment, protecting and potentially supporting expansion of jobs. Lower bills for business can also mean lower prices for consumers or more business investment. For customers, lower bills mean more disposable income, much of which is recycled into local economic activity, benefiting local businesses and service providers. That, in turn, helps protect and create jobs. In addition, Ontario's growing energy efficiency sector is also a key economic driver of jobs at all skill levels and an engine for innovation in clean technology. In short, cost-effective efficiency programs can increase the province's energy productivity, local economic development opportunities, and reduce Ontarian's energy bills.

Furthermore, energy efficiency improvements can provide valuable improvements to occupant comfort and indoor air quality, resulting in both direct and indirect health benefits for building occupants, including better mental health, better respiratory and cardiovascular health, and reduced chronic disease. By simultaneously reducing thermal discomfort and energy poverty, improvements in efficiency can support improved health and well-being outcomes, especially for vulnerable populations (i.e. children, the elderly, and people with pre-existing illnesses). Several studies have suggested that up to 75% of the overall benefits of energy efficiency retrofits are health benefits.[iv]

Buildings account for about a quarter of Ontario's GHG emissions,[v] and the use of natural gas in buildings remains a primary source of carbon emissions in Ontario. Ontario's new Environment Plan includes a provincial commitment to increase the cost-effective conservation of natural gas to simultaneously reduce emissions (3.24 Mt CO_2e by 2030), lower energy bills and stimulate the economy. As such, the post-2020 Demand Side Management (DSM) framework for natural gas must be updated to reflect these provincial policies as they are inextricably linked, and presents a critical opportunity to address lessons learned from the previous framework.

<table>
<tr><th>Goal/Objective</th><th>Recommendation</th></tr>
<tr><td>i. 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.</td><td>Amend this objective to read: “Assist consumers in reducing energy consumption, managing their natural gas bills and understanding related costs and benefits. Customers who participate in the DSM programs should see a decrease in their natural gas bills. The utility is encouraged to pursue all cost-effective conservation and promote co-benefits of reduced energy use (e.g. reduced costs, reduced carbon/air emissions, increased comfort, economic growth, etc.).”</td></tr>
<tr><td colspan="2">Comments:
The proposed amendment is adapted from and aligned with the submission from Pollution Probe. However, we believe references to energy bills should be replaced with references to natural gas bills to avoid confusion around the goal of natural gas DSM. Certain measures, such as the use of air-or-ground source heat pumps, may reduce total energy consumption, GHG emissions, and natural gas bills without necessarily reducing total energy costs. Such measures should be allowable under the framework. For example, some commercial and institutional building owners place a high value on carbon reduction and achieving certifications such as the CaGBC's Zero Carbon Building Standard. These customers should be supported in reducing natural gas consumption and carbon emissions even where it does not result in significant combined energy cost savings provided they understand the costs and benefits.</td></tr>
<tr><td>ii. 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.</td><td>Amend this objective to read: “Promote energy conservation and market transformation to further the development of the energy efficiency sector and a culture of conservation. DSM programs should advance conservation and energy efficiency, beyond the program participants, to the broader public in Ontario. Partnerships should be leveraged where practical to streamline access to incentives,</td></tr>
</table>

	optimize results and promote market transformation.
Comments: The proposed amendment is adapted from and aligned with the submission from Pollution Probe. Advancing conservation beyond program participants requires partnerships and consideration of market transformation. This wording also makes explicit one of the major direct economic benefits of DSM programs (i.e., growth in Ontario's energy efficiency sector) and helps align the DSM Framework with the government of Ontario's policies to encourage economic growth.	
iii. 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.	**Amend this objective to read: "Avoid costs related to future natural gas infrastructure investment, including *through the use of alternative lower-carbon energy sources where appropriate.*** Gas utilities are expected to consider DSM initiatives *and community energy planning* in the context of infrastructure planning so that reducing demand for natural gas also helps avoid or defer future infrastructure costs."
Comments: We support the amended objective submitted by Pollution Probe and copied with some additions, above. Our additions serve to highlight the current government policies of maximizing energy efficiency, reducing greenhouse gas emissions, and supporting cost-effective fuel switching (per the Made-in-Ontario Environmental Plan). As was discussed in the Phase I meeting, we agree that geo-targeted DSM has yet to occur in a meaningful fashion, despite its inclusion in this objective. We also agree with many stakeholders that it needs to be addressed in the utility's integrated resource planning process and in a separate guidance document, as well as in a manner that benefits from community energy planning. We believe it should also continue to be included in the DSM Framework (see discussion at Principle 10, below). Improving load factor should not be specifically referenced as part of the objective as it may conflict with reducing natural gas consumption and greenhouse gas emissions.	
***(New objective)* iv.:**	***Reduce greenhouse gas emissions by achieving all cost-effective DSM.*** *DSM should support the achievement of the Government of Ontario's greenhouse gas reduction targets.*
Comments: DSM has evolved such that reducing GHG emissions is clearly one of its primary goals. This is consistent with the Government of Ontario's Made-in-Ontario Environment Plan, which relies on expanded DSM programs as key strategy for achieving Ontario's GHG reduction commitments. The Government of Ontario's planned emissions reductions from DSM should be seen as a *minimum* standard which should ideally be exceeded through cost-effective DSM.	

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

Principle	Recommendation
1. Invest in DSM where the cost is equal to or lower than capital investments and/or the purchase of natural gas.	**Eliminate this principle.**
Comments: The Province has directed that the DSM framework should be designed to achieve all cost-effective conservation.[vi] This principle is in conflict with that directive, as cost effectiveness testing generally considers a wider range of factors than are noted in the principle. The principle of cost effectiveness is already embedded in the current principle 2, and the details of how to assess cost effectiveness and rate impacts should be dealt with elsewhere in the framework.	
2. Achieve all cost-effective DSM that result in a reasonable rate impact.	**Amend this principle to read: "Achieve all cost-effective DSM *and increase participation in programs."***
Comments: The Province has directed that the DSM framework should be designed to achieve all cost-effective conservation. Addressing rate impacts introduces a further restriction which is difficult to interpret and operationalize. In practice, this may lead to budget caps that are incompatible with achieving all cost-effective conservation. There is no consensus on what a 'reasonable' rate impact is; however, it is clear that improved participation rates reduce bill impacts to non-participants. Additionally, the focus on "rate impact" under the current analysis ignores other benefits to consumers, including those that may lead to rate reductions compared to what would have occurred absent DSM. Over time DSM results in passive deferral of infrastructure investments and wholesale market price suppression. Alternatively, if a qualifier related to energy bills is retained, we would support the recommendation from Environmental Defence and the Green Energy Coalition to substitute "bill impact" for "rate impact". In order to better highlight what is meant by "cost-effective," the OEB should examine how to more effectively account for non-energy Benefits (the complexity of accounting for these benefits should not be an excuse for their absence in the calculation.) This may involve applying a different screening test altogether (e.g., societal cost test, resource value test), an increase to the existing adders, or measure- and/or program-specific NEB values.[vii] Either way, there needs to be a more detailed review of the value of the following non-energy benefits: • Economic benefits, such as increased jobs, GDP,[viii] and less money leaving the province to purchase natural gas;[ix] • Energy security; • Increased competitiveness for businesses; • Health benefits[x]; • Comfort; and • Aesthetics.[xi]	

Furthermore, we note that concerns over short-term rate impacts of DSM could be addressed by amortizing program spending over the life of the savings, and encourage consideration of this option (see the recommendations of Environmental Defence and Green Energy Coalition submitted in the Mid-Term Review Stakeholder meeting, September 6, 2018).	
3. Where appropriate, coordinate and integrate DSM and electricity CDM efforts to achieve efficiencies.	**Amend this principle to read: "Where appropriate, coordinate and integrate DSM with electricity CDM *and other resource conservation* efforts to achieve efficiencies*, maximize energy conservation potential and improve customer participation rates."***
Comments: This principle is sound and has the potential to provide numerous benefits (such as increased cost savings, participation and fuel-neutral energy efficiencies) but has produced few programs to date. Barriers to collaboration were highlighted in the Environmental Commissioner of Ontario's 2019 energy conservation report; these should be addressed in the details of the post-2020 Framework. Furthermore, this principle should be expanded in scope to include other energy-or-water conservation programs in addition to electricity CDM. For example, the framework should incentivize coordination and integration of programs administered by municipalities (e.g. Toronto's Home Energy Loan Program), provincial entities (e.g. programs that may be administered by the proposed Ontario Carbon Trust), or national entities (e.g. programs administered by the Federation of Canadian Municipalities), given that often the same customer may be eligible for benefits from multiple entities. Program coordination and/or integration effectively reduces red tape for participants.	
4. Gas utilities will be able to recover costs and lost revenues from DSM programs.	**Support continuation of this principle.**
Comments: If gas utilities are to pursue all cost-effective DSM, they must be able to recover the costs of doing so.	
5. Design programs so that they achieve high customer participation levels.	**Amend this principle to consolidate with principles 6 and 8 such that it reads "*Design the DSM program portfolio to achieve high customer participation and minimize lost opportunities, while prioritizing achievement of deep and long-term energy savings.*"**
Comments: The current principles 5, 6, and 8 include three program design criteria, each of which is important. However, there are trade-offs between these principles, and not every DSM program can be designed to achieve all three. The proposed amendment clarifies that gas utilities should address all three program design criteria with respect to the overall DSM program portfolio. Alternatively, if	

these are kept as separate principles the language should clarify that they apply to the overall portfolio of programs rather than separately to each individual program. Additionally, we believe that the principles should specifically prioritize deep energy savings (e.g. >30%). See our commentary on principle 8 for further explanation and rationale.	
6. Minimize lost opportunities when implementing energy efficient upgrades.	**Consolidate with principle 5 as noted above.**
Comments: We also agree that this principle should apply in the new construction context as well in existing buildings. The existing subordinate text references equipment replacement, but we note that many of the biggest lost opportunities occur in new construction or major renovations, and relate to building envelope in addition to mechanical equipment. We support the comments to this effect in the submission from Environmental Defence.	
7. Ensure low-income programs are accessible across the province.	**Amend this principle, or the subordinated text, to clarify that regionally specific low-income programs are acceptable as long as all eligible customers have access to a program, and that program availability reflects the region and rate-class' need.**
Comments: All eligible customers should have access to low-income programs. And, the availability of these programs should be commensurate with this community's disproportionately high need and greater non-energy benefits (as was mentioned by Jay Sheppard during the Phase I consultation meeting). The merger of Enbridge and Union has resulted in a much larger and more diverse service territory. Particularly in this context, there may be a case for regionally specific low-income programs that may not be as cost-effective if they were to be applied broadly across the province. To maintain the cost-effectiveness principle, the framework should not discourage regional programs so long as the overall portfolio of low-income programs is accessible across the province.	
8. Programs should be designed to pursue long-term energy savings.	**Consolidate with principle 5 as noted above.**
Comments: If retained as a standalone principle it should be amended to clarify it applies to the overall portfolio of programs and not each individual program. Additionally, it should reference 'deep' savings as well as 'long-term' savings. Deep savings entail comprehensive building energy improvements which have the potential to improve occupant comfort, building durability and lower energy costs. They are more likely to be noticeable and material to participating customers and are also less likely to be achieved in the absence of DSM programming.	

9. Shareholder incentives will be commensurate with performance and efficient use of funds.	**Support amendment of this principle such that it reads "Shareholder incentives *should align consumer and utility interests and encourage maximizing total net benefits for consumers*."**
Comments: We support the amended principle submitted by Environmental Defence and the Green Energy Coalition and copied above. Alternatively, the subordinate text could be improved to clarify how performance factors other than DSM targets should be considered (e.g., coordination with electricity utilities and other energy efficiency programs, and progress towards GHG reduction targets).	
10. Ensure DSM is considered in gas utility infrastructure planning at the regional and local levels.	**Support amendment of this principle to strengthen and clarify intent. E.g. "*Wherever possible, utilize DSM to avoid, reduce or defer investment in gas utility infrastructure.*"**
Comments: We understand that Enbridge has recommended dealing with this issue in a separate policy document and through the integrated resource planning process. We support this approach, and we believe it should also be included as a principle in the DSM framework, both to ensure alignment between the IRP process and DSM planning, and because it is an integral part of the value proposition for DSM, so should be considered in designing the DSM program portfolio. However, the principle should focus on outcomes (i.e. avoid, reduce or defer) rather than process (consider). We further note that operationalizing this principle may require engaging in DSM with participants that will not ultimately be customers of the gas utility. For example, in the new construction context, incentivizing the use of heat pumps as an alternative to gas combustion equipment.	
11. *(New principle)* Design and operate DSM programs with a view to maximizing greenhouse gas emissions reductions and other non-energy benefits.	
Comments: The value of non-energy benefits can be equal to or greater than the value of the energy conserved. Non-energy benefits are already considered in cost-effectiveness testing, and this principle clarifies that these benefits should be considered throughout the design and administration of DSM programs. While some stakeholders have argued that GHG emissions reductions are outside of the scope of the OEB's mandate, we do not agree. The OEB act specifies that the OEB should promote energy conservation and energy efficiency in accordance with the policies of the Government of Ontario. The Government of Ontario has a policy goal of using gas DSM to reduce carbon emissions, as outlined in the Made-in-Ontario Environment Plan. Therefore, DSM should be undertaken with a view towards reducing GHG emissions, including through energy efficiency measures that involve full or partial fuel-switching, or the use of renewable natural gas, where appropriate.	

Sincerely yours,

Jeff Ranson, Regional Director – Greater Toronto Area, Canada Green Building Council

Jim Baxter, Director, Environment and Energy, City of Toronto

Kyra Bell-Pasht, Consultant, Efficiency Canada

Bryan Purcell, VP Policy & Programs, The Atmospheric Fund

About the Undersigned

Efficiency Canada is the national voice for an energy efficient economy, advocating to make our country a global leader in energy efficiency. We convene people from across Canada's economy to work together to advance policies required to take full advantage of energy efficiency. And we communicate the best research out there to build a more productive economy, sustainable environment, and socially just Canada. Efficiency Canada is an operating unit of the Carleton Sustainable Energy Research Centre, a cross-disciplinary initiative between the School of Public Policy and Administration and the Faculty of Engineering and Design.

The Atmospheric Fund (TAF) is a public agency established in 1991 by the City of Toronto and endowed by the City and the Province of Ontario. TAF works closely with stakeholders across the Greater Toronto and Hamilton Area (GTHA) to test and advance innovative programs to reduce carbon emissions and air pollution. However, the views expressed in this submission do not necessarily represent those of the City of Toronto, the Province of Ontario or other GTHA stakeholders.

Toronto is Canada's largest city, the fourth largest in North America, and home to a diverse population of more than 2.9 million people. It is a global centre for business, finance, arts and culture and is consistently ranked one of the world's most livable cities. For information on non-emergency City services and programs, Toronto residents, businesses and visitors can visit http://www.toronto.ca, call 311, 24 hours a day, 7 days a week, or follow us on Twitter at http://www.twitter.com/cityoftoronto, on Instagram at http://www.instagram.com/cityofto or on Facebook at http://www.facebook.com/cityofto.

The Canada Green Building Council is a national, non-partisan, not-for-profit industry association that has been working since 2002 to advance green building and sustainable community development practices in Canada. The CaGBC is the Canadian license holder for the voluntary, third-party LEED green building rating system and the Zero Carbon Building Standard, Canada's first green building program to make carbon emissions the key indicator for performance.

The CaGBC membership includes over 1,200 industry organizations and more than 2,500 individual Chapter members involved in designing, building and operating buildings, homes and communities. Since 2005, LEED buildings have eliminated 2,490,000 CO2e tonnes of GHG emissions annually, diverted nearly 3 million tonnes of waste from landfill, and saved 24 billion litres of water per year.

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[i] Minister's Directive, March 26, 2014, para. 4(i).
[ii] Minister's Directive, March 21, 2019, para. 5.
[iii] See for example Dunsky Energy Consulting, The Economic Impact of Improved Energy Efficiency in Canada (April 2018); Environmental Commissioner of Ontario, 2019 Energy Progress Report (March 2019) Chapter 1.
[iv] International Energy Agency, Capturing the Multiple Benefits of Energy Efficiency, 2014.
[v] When including emissions from electricity used in buildings as well as natural gas and other fuels combusted on site.
[vi] Minister's Directive, March 26, 2014, para. 4(i); Minister's Directive, March 06, 2019, para. 5.
[vii] Valuable current guidance on properly valuing NEBs include:

- National Efficiency Screening Project, National Practice Manual for Assessing Cost-Effectiveness of Energy Efficiency Resources (Spring 2017)
- Northeast Energy Efficiency Partnerships, Non-Energy Impacts Approaches and Values: an Examination of the Northeast and Mid-Atlantic (June 2017)
- Lisa A. Skumatz, Non-Energy Benefits / NEBs – Winning at Cost-Effectiveness Dominos: State Progress and TRMs, 2016 ACEEE Summer Study on Energy Efficiency in Buildings

[viii] Dunsky Energy Consulting, The Economic Impact of Improved Energy Efficiency in Canada (April 2018) at 16.
[ix] Environmental Commissioner of Ontario, 2019 Energy Progress Report (March 2019) at 20.
[x] The Atmospheric Fund, Improving Indoor Environmental Quality in Mulit-Unit Residential Buildings, 2019. Available at https://taf.ca/publications/improving-indoor-environmental-quality-in-multi-unit-residential-buildings/
[xi] Environmental Commissioner of Ontario, 2019 Energy Progress Report (March 2019) at 25.