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October 15, 2014

Kirsten Walli
Board Secretary
Ontario Energy Board
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SUBJECT: Submission of comments on File no. EB-2014-0134 (draft Demand Side Management Framework for Natural Gas Distributors) from Toronto Atmospheric Fund

Dear Ms. Walli,

Toronto Atmospheric Fund (TAF) is a non-profit corporation established by the Toronto Atmospheric Fund Act (1992, 2005) and endowed by the City of Toronto. TAF's mandate is to advance urban solutions to climate change and air pollution. For more about TAF's activities and accomplishments, please see our website at www.toronto.ca/taf

In Toronto, a primary source of greenhouse gas emissions is the use of natural gas in buildings. As such, the Minister of Energy's recent Directive to develop a new natural gas DSM framework that enables the achievement of all cost-effective conservation provides a critical opportunity to help achieve greenhouse gas reduction targets in Toronto and across the Province.

We appreciate the opportunity to submit the attached comments on the Board's draft Demand Side Management (DSM) Framework for Natural Gas Distributors (File No.: EB-2014-0134). TAF previously provided several (6) discussion papers in the context of the drafting process which we reference in this submission.

Best regards,

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Comments on the Ontario Energy Board (OEB) Draft DSM Framework

Toronto Atmospheric Fund (TAF) is mandated to advance greenhouse gas (GHG) reduction and promote air quality improvement in the City of Toronto. The use of natural gas – for space heating, water heating and industrial processes – contributes approximately 35 percent of Toronto's GHG emissions[1]. Furthermore, a recent report by Toronto's Medical Officer of Health reveals that the air pollution from natural gas use in Toronto's residential and commercial sectors is responsible for approximately 400 hospitalizations and 190 premature deaths every year[2]. The City of Toronto has adopted science-based GHG reduction targets – 30% by 2020 and 80% by 2050 compared to 1990 levels – and a sustainable energy plan which emphasizes energy efficiency.

The ability of the natural gas utilities to implement conservation programs, and their success in delivering energy savings, are key to addressing these related challenges in a cost-effective manner. Toronto's success in achieving ambitious conservation targets is key to Ontario's ability to meet its climate change and clean air objectives, and has numerous benefits, including increased energy productivity, local economic development opportunities, and financial savings for ratepayer participants.

TAF has applauded the Ontario government's "conservation first" policy and the Minister's Directive to operationalize it in a new Demand Side Management (DSM) framework for the gas utilities. On September 15th, 2014, the Ontario Energy Board released a draft DSM Framework and draft DSM Guidelines for the 2015-2020 period and invited interested stakeholders to comment. During the drafting process, Toronto Atmospheric Fund prepared and circulated six papers addressing key elements of DSM policy, which have been referenced in the consultation draft.

We submit the following comments and urge the Ontario Energy Board to establish a policy that truly operationalizes the Minister's direction: all cost-effective conservation.

1. OBJECTIVES

Ontario's new gas DSM framework should be crafted to accomplish three key objectives:

a) Achieve all Cost-Effective Demand Side Management
The new DSM framework should enable utilities to pursue all available cost-effective conservation opportunities. This is explicitly stated as a key objective in the Minister of Energy's March 31st Directive to the OEB. It should not be diluted by ifs, buts, or maybes[3].

b) Provide Ontarians with value for money in paying for utility conservation programs
The new DSM framework should provide Ontarians with confidence that the bill benefits they receive from gas demand side management programs outweigh the rate impacts of running such programs, and that all gas consumers who pay for conservation programs have the opportunity to benefit from them.

c) Maximize greenhouse gas reduction

Ontario has adopted a GHG emissions target of 15% below 1990 levels by 2020. Meeting this target will require Ontarians to use less natural gas. For perspective, using just 1% less natural gas per year starting in 2015 would reduce provincial emissions in 2020 by 2.4 megatonnes, or about 15% of the way to meeting Ontario's 2020 GHG target[4].

The draft DSM framework presented by the OEB is not likely to achieve these objectives. We recommend amendment in the following key areas:

2. COST-EFFECTIVENESS TEST

The cost-effectiveness test should value both the costs AND the benefits of DSM programs.

How cost-effectiveness is measured determines how much cost-effective conservation exists. Best practices suggest that two key principles need to be taken into consideration:

a. Account for all relevant costs and benefits. This should include costs and benefits to utilities, but also costs and benefits in areas targeted by government policies (e.g. human health, climate change, low-income consumers, etc.).
b. Treat costs and benefits symmetrically (e.g. if *costs* to DSM program participants are included in cost-effectiveness calculations, then *benefits* to participants should also be included)[5].

We disagree with the Board's proposal to continue using the Total Resource Cost test (TRC) as the primary cost-effectiveness screening tool for DSM programs. The OEB's TRC does not treat costs and benefits symmetrically – it includes all of the costs of DSM but not all of the benefits (e.g. wholesale market price suppression, and avoided transmission infrastructure investments[6]). It also does not assign value to benefits in a variety of key areas targeted by Ontario government policies (e.g. non-energy benefits to low income consumers, human health benefits, and climate change mitigation[7]). As a result, the TRC inappropriately limits the types of programs that utilities can offer gas customers, and can prevent utilities from designing programs that offer consumers deep, long-term energy savings and significant additional benefits[8] – benefits that can be quantified using existing methodologies, and which can actually exceed the value of the energy savings associated with DSM programs[9].

***Recommendation**:* The cost-effectiveness test should value both the costs AND the benefits of DSM programs. TAF recommends that the Board either a) require utilities to assess the cost-effectiveness of DSM programs using a societal cost test (SC)[10] that accounts for the multiple additional benefits that DSM programs provide, or b) modify the TRC test to incorporate adders that account for key benefits like GHG reduction, reduced illness due to air pollution, wholesale market price suppression, and insulation against the likelihood of future fluctuations in gas price.

3. TARGETS

The targets established must be large enough to allow utilities to capture all cost-effective gas savings.

Best practice is to base DSM targets on bottom-up studies that assess the conservation potential in each utility's service territory, taking into account a full range of possible conservation measures[11], the

characteristics of each utility's customer base, and regional considerations that may make DSM more cost-effective in some areas than in others[12]. In the absence of completed DSM potential studies, however, the targets of other jurisdictions with similar climates and goals provide a useful reference. Massachusetts and Rhode Island – two cold-weather U.S. states also aiming for "all cost-effective conservation" – have set DSM savings targets equivalent to about 1.1% of gas sales. This level of savings is also consistent with the DSM targets of energy efficiency leaders Vermont and Minnesota[13].

In the new draft DSM framework, the Board proposes two options for setting 2020 DSM targets:
Option 1: The gas utilities would propose savings targets based on their most recent potential studies[14].
Option 2: The Board would develop long term DSM targets based on the Board's assessment of DSM potential, making use of studies that are available. The Board has proposed – in the absence of potential studies – that an appropriate DSM target would be 0.8% of annual gas sales[15], a figure that is approximately equivalent to the level of savings achieved by the natural gas utilities in 2011 and 2012. This essentially indicates to the gas utilities that the Board considers it unreasonable to aim for higher levels of savings during the 2015-2020 period than have been achieved previously. While past experience should inform the setting of future targets, restricting targets to past levels of achievement does not comply with the Minister's directive to enable utilities to pursue all cost-effective conservation.

Recommendation: The targets established must be large enough to allow utilities to capture all cost-effective gas savings. Given the Jan. 1st, 2015 deadline for establishing a DSM Framework and the lack of completed DSM potential studies available to inform target and budget setting, TAF recommends that the utilities establish interim DSM targets for the first year of the framework, informed by utilities' past DSM achievements and the best practices of other jurisdictions with similar climates and "all cost-effective conservation" goals. This would allow utilities sufficient time to develop long-term targets based on completed potential studies, consultation with stakeholders, and the key objectives embodied in the Minister of Energy's Directive (i.e. the achievement of all cost-effective conservation).

4. UTILITIES' BUDGETS

The utilities' budgets must be large enough to allow each of them to pursue all cost-effective gas savings.

DSM budgets should be based on the likely costs of the programs required to achieve the savings targets. The DSM budgets of utilities in the leading U.S. jurisdictions mentioned above suggest that to achieve savings that approach the level of "all cost-effective conservation", Ontario utilities would need to spend at least $200 million per year[16].

In the draft DSM framework, the Board proposes the following two options for setting DSM budgets:
Options 1: The gas utilities would propose DSM budgets based on the amount of funding needed to meet their long-term DSM targets.
Option 2: The Board would establish a guideline for maximum DSM budget levels. The Board then goes on to propose that 2020 DSM budgets should be a maximum of 6% of the utilities 2013 distribution revenues[17] - a figure that seems to be based on the average DSM spending in British Columbia, Manitoba, and Ontario in 2012.

First, this level of funding falls short of what U.S. experience indicates would be necessary to achieve a level of savings approaching "all cost-effective conservation." Second, and of greater concern, is that the proposed budget is arbitrarily tied to distribution revenue – a variable that does not reflect significant differences in the two utilities' customer makeup and is not always a good proxy for DSM potential, as the past DSM achievements of Enbridge and Union indicate.

As Table 1.0 illustrates, although Enbridge earned about 40% more distribution revenue than Union in 2013, Union was able to achieve twice the level of gas savings with the same level of DSM spending. This was due to differences in the customer makeup of the two utilities – specifically, Union's ability to achieve larger, cheaper savings from its large industrial customers than Enbridge was able to achieve from its residential and commercial customers.[18]

Table 1.0: Ontario Utility Distribution Revenue vs. DSM Spending and Savings in 2012[19]

Utility	Distribution Revenue	DSM Spending	DSM Savings
Enbridge	$1,015,000,000	$30,910,000	60,135,753 m^3
Union	$727,000,000	$30,954,000	137,438,488 m^3

Recommendation: The utilities' budgets must be large enough to allow each of them to pursue all cost-effective gas savings. Given the Jan. 1st, 2015 deadline for establishing a DSM Framework and the lack of completed DSM potential studies available to inform target and budget setting, TAF recommends that the utilities establish interim DSM budgets for the first year of the framework – informed by their past DSM funding needs and the best practices of other jurisdictions with similar climates and "all cost-effective conservation" goals. Utilities should then work to develop long-term savings targets based on completed potential studies and consultation with stakeholders, and should propose budgets for the remaining DSM framework years based on the programs required to achieve those targets.

5. FINANCIAL RETURN ON CONSERVATION INVESTMENTS (the Shareholder Incentive)

Make DSM the utilities' most profitable course of action.

If selling gas is more profitable than achieving DSM savings, then utilities have a disincentive to engage in conservation. To ensure that utilities achieve all cost-effective DSM savings, DSM should be their most profitable course of action. Both utilities should earn a return on their investments in DSM that is at least equal to what they earn on investments in new supply and other distribution activities, and should receive additional shareholder incentives for meeting and exceeding their DSM targets. To be effective, shareholder incentives should be high enough to attract the attention of senior management and structured so that utilities only earn the maximum incentive for truly exemplary performance[20].

The current shareholder incentives under the existing framework have been adequate to drive utilities to achieve their DSM savings targets[21], and are in line with incentive levels in leading U.S. jurisdictions on a per m^3 of gas sales basis[22]. We therefore disagree with draft DSM framework's proposal to lower the available incentive from the current maximum of $10.5 million per utility per year in 2014[23] to just over $8 million per utility in the year 2020[24], as it would likely have the consequence of reducing the utilities' motivation to pursue all cost-effective DSM savings.

Recommendations: Make DSM the utilities' most profitable course of action. We recommend maintaining the current shareholder incentive levels, but increasing utilities' DSM savings targets and budgets. We also support the draft framework's proposal to provide a higher percentage of incentives for programs that are more challenging to achieve or that address key objectives, as this differentiated structuring of incentive earnings encourages the pursuit of deeper, longer-term savings as opposed to just low hanging fruit.

6. PARTICIPATION AND ACCESS TO CONSERVATION PROGRAMS

All ratepayers who pay for DSM should have access to DSM programs.

DSM programs should be available to all classes of gas consumer that pay for DSM (including low-income consumers, consumers in all areas of the province, and the multi-residential rental market). In order to ensure that the bill-reduction benefits of DSM outweigh DSM-related rate increases, DSM targets and budgets should also be large enough – and program offerings comprehensive enough – that over time, the majority of ratepayers are able to participate in DSM programs and reap the full benefits of participation[25].

Consequently, TAF welcomes the draft DSM framework's guidance to utilities to design programs to achieve high customer participation levels and to ensure that low-income programs are accessible across the province[26]. However, freezing DSM savings targets at their current levels sends the opposite message – it will limit utilities' ability to expand program participation. Furthermore, although TAF supports the DSM Guidelines' direction that DSM programs should be provided to private low-income multi-residential buildings, the draft Guidelines' low-income program eligibility criteria seem to effectively exclude this customer segment from participation[27].

Recommendations: All ratepayers who pay for DSM should have access to DSM programs. TAF recommends that DSM savings targets be increased to allow increased participation in DSM programs. We also recommend that offering DSM programs to large volume consumers should be mandatory, not optional, given the amount of gas consumed by this class of customer[28]. Furthermore, TAF endorses the EB-2014-0134 comments of both BOMA and the City of Toronto with respect to the need to better align low-income program eligibility criteria with the goal of allowing private low-income multi-residential buildings to participate in DSM programs.

7. PERFORMANCE EVALUATION MONITORING AND VERIFICATION (EM&V)

Program performance should be regularly and impartially measured and evaluated.

In a major departure from the existing DSM framework, the new draft framework proposes that the Board take on the role of managing the program evaluation process itself. While TAF has no preference regarding the evaluation process, we support at least two aspects of the EM&V proposed. First, TAF agrees with the draft DSM framework's proposal to remove utilities from the role of hiring and overseeing the firms that evaluate utilities' large custom C&I programs[29]. Second, TAF agrees with the draft DSM framework's suggestion that in addition to annual evaluations of program results, multi-year impact assessments of select DSM programs should be conducted periodically (e.g. every three years)[30].

Recommendations: Program performance should be regularly and impartially measured and evaluated. TAF urges the Board to explicitly require that impact assessments be performed on DSM programs on a three year cycle. In addition, TAF recommends that the Board place more emphasis on on-site measurement for large commercial and industrial (C&I) programs[31].

8. COORDINATION AND INTEGRATION OF GAS AND ELECTRICITY CONSERVATION

Gas utilities should be encouraged to collaborate with electricity utilities on DSM efforts.

Consideration should be given to the most effective ways to deliver DSM programs. Collaboration between gas and electric utilities can have multiple benefits, including lower program costs, enhanced reach, greater clarity in the market, and greater customer satisfaction[32]. Coordination with municipalities can also yield similar benefits (e.g. through pairing utility DSM programs with municipal LIC financing[33], and through leveraging municipalities' existing capacity to engage their communities). The draft framework has very promising language around coordination and integration of gas and electricity conservation efforts – even including this goal as one of the framework's guiding principles. The draft DSM framework clearly lays out the Board's expectation that gas utilities will pursue coordination with electricity utilities on program design and integration of program delivery where appropriate. It also directs the gas utilities to review the experiences of other jurisdictions and describe in their own DSM plans how they have employed best practices in coordinating and integrating the design and delivery of gas and electricity conservation programs.

Another consideration in coordinating gas and electricity conservation efforts is the role that fuel-switching can play in reducing overall energy use and GHG emissions. The existing DSM Guidelines clarify that utilities may pursue fuel-switching away from natural gas[34] (e.g. through the use of heat pumps, solar thermal, biomass, and renewable natural gas). Unfortunately, the new draft DSM Guidelines do not retain this clarification, nor do they include fuel-switching or multi-fuel measures in the draft Guidelines' discussion of program types.

Recommendations: TAF recommends that the new DSM Framework and Guidelines should require utilities to examine fuel-switching options and should encourage utilities to pursue those opportunities that are cost-effective and reduce greenhouse gas emissions.

In addition, given the potential synergies from coordinating utility and municipal DSM efforts, TAF recommends that utilities' DSM reports should also describe experiences and lessons learned from collaborating with municipalities. Furthermore, consideration to the costs of such collaboration may be required in the DSM Guidelines' rules around budgets and accounting treatment.

CONCLUSIONS

A robust, best-practice DSM Framework is essential for Ontario's natural gas utilities to be active and motivated participants in achieving the many benefits of conservation, including savings for ratepayers, the government's climate change targets and the Minister's "all cost-effective conservation" Directive. Discussions with colleagues at the City of Toronto (note that TAF does not represent the City and the views and recommendations in this submission are TAF's alone) and with other interested stakeholders

have revealed strong interest in advancing such a policy and we are grateful for the range of feedback and assistance in refining our position. We look forward to participating in the development and implementation of natural gas conservation policies and programs where our expertise might add value[35] and can advance TAF's mandate of reducing urban greenhouse gas (GHG) emissions and air pollution.

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[1] City of Toronto, June 9, 2014, *Staff Report, Action Required: Toronto's 2012 Greenhouse Gas and Air Quality Pollutant Emissions Inventory*, p. 7, http://www.toronto.ca/legdocs/mmis/2014/pe/bgrd/backgroundfile-70321.pdf

[2] Toronto Medical Officer of Health, 2014, *Path to Cleaner Air: Toronto Air Pollution Burden of Illness Update – Staff Report*, http://www.toronto.ca/legdocs/mmis/2014/hl/bgrd/backgroundfile-68506.pdf

[3] The Minister's directive calls on the Board to establish a DSM policy framework that "enable[s] the achievement of all cost-effective DSM and more closely align[s] DSM efforts with CDM efforts, as far as is appropriate and reasonable having regard to the respective characteristics of the natural gas and electricity sectors" (Chiarelli, 2014, *Minister's Directive to the Ontario Energy Board*, p. 2, http://www.ontarioenergyboard.ca/oeb/_Documents/Documents/Directive_to_the_OEB_20140326_CDM.pdf). It is important to note that the dependent clause "as far as is appropriate and reasonable having regard to the respective characteristics of the natural gas and electricity sectors" is clearly intended as a qualifier for "more closely align DSM efforts with CDM efforts", as the characteristics of the electricity sector are not relevant to the direction to "enable the achievement of all cost-effective DSM".

[4] TAF (2014). *Are Gas Efficiency Programs Worth the Money?*, p. 4, http://www.towerwise.ca/wp-content/uploads/2014/08/DSM-Issue-Paper-6-Are-Utility-Efficiency-Programs-Worth-the-Money-July-21-2014.pdf

[5] TAF (2014). *2014 OEB Gas DSM Framework Issue Paper: Screening Programs for Cost-Effectiveness*, p. 9, http://www.towerwise.ca/wp-content/uploads/2014/08/DSM-Issue-Paper-4-Cost-Effectiveness-Screening-June-25-2014.pdf

[6] The potential for DSM to cost-effectively avoid or defer investments in transmission infrastructure has not been adequately accounted for in the gas utilities' recent infrastructure planning and assessments of the cost-effectiveness of DSM. For example, in the recent Board decision on Enbridge Gas Distributions GTA Pipeline application, the Board concluded that "targeted DSM programs and/or rate design options might in some circumstances mitigate the need for Segment B" of the proposed GTA pipeline, and that for future planning, "further examination of integrated resource planning for gas utilities is warranted", and that the "potential for targeted DSM and alternative rate designs to reduce peak demand" should be examined (OEB, January 30, 2014, *Decision and Order for EB-2012-0451: Enbridge Gas Distribution Inc. Leave to Construct the GTA Project*, pp. 45-46, http://www.rds.ontarioenergyboard.ca/webdrawer/webdrawer.dll/webdrawer/rec/424174/view/). The Board further stated that in future, it "expects applicants to provide a more rigorous examination of demand side alternatives, including rate options, in all gas leave to construct applications" (p. 47). Nevertheless, the Board also found that Enbridge's approach not to engage in integrated resource planning was reasonable given the context of the regulatory framework and the DSM framework within which it conducted its planning and assessment of alternatives. Therefore, the draft DSM Guidelines' retention of the same TRC cost-effectiveness test from the previous DSM Guidelines is inconsistent with the new draft DSM Framework's goal that DSM programs should "avoid costs related to future natural gas infrastructure investments" (OEB, Sept. 15, 2014, *Draft Report of the Board: Demand Side Management Framework for Natural Gas Distributors*, p. 5, http://www.ontarioenergyboard.ca/oeb/_Documents/EB-2014-0134/Draft_Report_of_Board_DSM_Framework_20140915.pdf).

[7] The existence of government policies in each of these key areas suggests that the cost-effectiveness of DSM programs should be assessed from a societal perspective (i.e. using a societal cost test), or at the very least, given Ontario's aggressive GHG reduction targets, should incorporate an adder to place a value (price) on GHG emissions (TAF, 2014, *2014 OEB Gas DSM Framework Issue Paper: Screening Programs for Cost-Effectiveness*, p. 9, http://www.towerwise.ca/wp-content/uploads/2014/08/DSM-Issue-Paper-4-Cost-Effectiveness-Screening-June-25-2014.pdf).

[8] For example, building envelope improvements yield deep long term savings but have difficulty passing the current TRC test. If the TRC were to assign value to a wider range of benefits associated with such DSM measures (e.g. increased thermal comfort for occupants, improved environmental air quality, and increased building resiliency in the face of extreme weather events), this would assist utilities in offering consumers programs designed to pursue long-term savings, as utilities are instructed to do by the draft DSM framework's 8th guiding principle (OEB, Sept. 15, 2014, *EB-2014-0134: Draft Report of the Board - Demand Side Management Framework for Natural Gas Distributors*, p. 9, http://www.ontarioenergyboard.ca/oeb/_Documents/EB-2014-0134/Draft_Report_of_Board_DSM_Framework_20140915.pdf).

[9] According to a recent publication by the International Energy Agency, the value of the non-energy benefits of energy efficiency (e.g. increased economic development, increased health and well-being, and improved industrial productivity) can be up to four times greater than the value of the energy savings delivered by DSM programs. In addition, methods for quantifying these benefits already exist (International Energy Agency [IEA], 2014, *Capturing the Multiple Benefits of Energy Efficiency: Executive Summary*, http://www.iea.org/Textbase/npsum/MultipleBenefits2014SUM.pdf).

[10] TAF (2014). *2014 OEB Gas DSM Framework Issue Paper: Screening Programs for Cost-Effectiveness*, http://www.towerwise.ca/wp-content/uploads/2014/08/DSM-Issue-Paper-4-Cost-Effectiveness-Screening-June-25-2014.pdf

[11] A full range of possible DSM measures should include all measures that reduce natural gas consumption. Thus, measures considered in DSM potential studies should include fuel-switching away from natural gas to multi-fuel technologies and local renewable energy generation that displaces gas use, such as solar thermal, biomass, biogas, and geothermal systems.

[12] For example, in areas like the City of Toronto, which face the combined pressures of population growth and constraints on transmission and distribution infrastructure, higher avoided transmission costs make DSM more cost-effective and more valuable than in less constrained areas.

[13] TAF (2014). *2014 OEB Gas DSM Framework Issue Paper: Setting Savings Targets and Budgets*, pp. 3-4, http://www.towerwise.ca/wp-content/uploads/2014/08/DSM-Issue-Paper-1-Savings-Goal-and-Budget-Setting-June-25-2014.pdf

[14] Targets proposed by the utilities would be approved by the Board as part of the DSM Plan application hearing process.

[15] 0.8% of the average gas sales over the 2011-2013 period is equivalent to about 200 million m^3 per year from 2015-2020 (Ontario Energy Board, Sept. 15, 2014, *EB-2014-0134: Draft Report of the Board - Demand Side Management Framework for Natural Gas Distributors*, p. 15, http://www.ontarioenergyboard.ca/oeb/_Documents/EB-2014-0134/Draft_Report_of_Board_DSM_Framework_20140915.pdf).

[16] i.e. Enbridge and Union would collectively need to spend $200 million annually, or $100 million each annually (TAF, 2014, *2014 OEB Gas DSM Framework Issue Paper: Setting Savings Targets and Budgets*, p. 4, http://www.towerwise.ca/wp-content/uploads/2014/08/DSM-Issue-Paper-1-Savings-Goal-and-Budget-Setting-June-25-2014.pdf).

[17] 6% of 2013 distribution revenues is approximately $110 million in 2020. This would be the level of funding in the year 2020, ramped up ramped up over the 2015-2020 period from the current $65 million level (OEB, Sept. 15, 2014, *EB-2014-0134: Draft Report of the Board - Demand Side Management Framework for Natural Gas Distributors*, p. 21, http://www.ontarioenergyboard.ca/oeb/_Documents/EB-2014-0134/Draft_Report_of_Board_DSM_Framework_20140915.pdf).

[18] OEB (2014). *Natural Gas Demand Side Management Summary Report – 2012 Results*, p. 8, http://www.ontarioenergyboard.ca/oeb/_Documents/RRR/2012_DSM_Summary_Report.pdf

[19] OEB (Sept. 15, 2014). *EB-2014-0134: Draft Report of the Board - Demand Side Management Framework for Natural Gas Distributors*, p. 19, http://www.ontarioenergyboard.ca/oeb/_Documents/EB-2014-0134/Draft_Report_of_Board_DSM_Framework_20140915.pdf

[20] TAF (2014). *2014 OEB Gas DSM Framework Issue Paper: Making Conservation Profitable for Utilities*, p. 6, http://www.towerwise.ca/wp-content/uploads/2014/08/DSM-Issue-Paper-2-Performance-Incentives-July-24-2014.pdf

[21] "The Board determined an amount similar to that which was approved in the past was reasonable, given that the incentive levels in the past result in the desired behaviours of the gas utilities actively pursuing DSM and dedicating the necessary resources to achieve the intended goals" (OEB, Sept. 15, 2014, *EB-2014-0134: Draft Report of the Board - Demand Side Management Framework for Natural Gas Distributors*, p. 25, http://www.ontarioenergyboard.ca/oeb/_Documents/EB-2014-0134/Draft_Report_of_Board_DSM_Framework_20140915.pdf).

[22] TAF (2014). *2014 OEB Gas DSM Framework Issue Paper: Making Conservation Profitable for Utilities*, pp. 4-5, http://www.towerwise.ca/wp-content/uploads/2014/08/DSM-Issue-Paper-2-Performance-Incentives-July-24-2014.pdf

[23] OEB (Sept. 15, 2014). *EB-2014-0134: Draft Report of the Board - Demand Side Management Framework for Natural Gas Distributors*, p. 25, http://www.ontarioenergyboard.ca/oeb/_Documents/EB-2014-0134/Draft_Report_of_Board_DSM_Framework_20140915.pdf

[24] The draft framework calculates the figure of just over $8 million by taking 15% of the Board's proposed 2020 DSM budget of $110,460,000 (OEB, Sept. 15, 2014, *EB-2014-0134: Draft Report of the Board - Demand Side Management Framework for Natural Gas Distributors*, p. 25, http://www.ontarioenergyboard.ca/oeb/_Documents/EB-2014-0134/Draft_Report_of_Board_DSM_Framework_20140915.pdf) . However, just over $8 million is the amount of incentive that the utilities actually earned in 2011 and 2012 – out of the $9.5 million that was available to them if they had achieved 150% of their targets (OEB, June 30, 2011, *Demand Side Management Guidelines for Natural Gas Utilities: EB-2008-0346*, p. 31, http://www.ontarioenergyboard.ca/oeb/_Documents/Regulatory/DSM_Guidelines_for_Natural_Gas_Utilities.pdf). (N.B. In 2014, the incentive available to utilities for achieving 150% of their targets is $10.5 million per utility (OEB, Sept. 15, 2014, *EB-2014-0134: Draft Report of the Board - Demand Side Management Framework for Natural Gas Distributors*, p. 25,

http://www.ontarioenergyboard.ca/oeb/_Documents/EB-2014-0134/Draft_Report_of_Board_DSM_Framework_20140915.pdf)).
Therefore, the draft framework's proposal of a maximum incentive amount of just over $8 million in incentives seems to be calculated to align with the level of incentive utilities actually claimed in 2011 and 2012 rather than the maximum amount that was available to them if they had achieved 150% of their targets. This adjustment of the maximum incentive level constitutes a de facto lowering of incentives for DSM performance.

[25] SEE Action (2011). *Analyzing and Managing Bill Impacts of Energy Efficiency Programs: Principles and Recommendations*, pp. 3-4, https://www4.eere.energy.gov/seeaction/system/files/documents/ratepayer_efficiency_billimpacts.pdf

[26] These two objectives are included in the draft framework's list of guiding principles (OEB, Sept. 15, 2014, *EB-2014-0134: Draft Report of the Board - Demand Side Management Framework for Natural Gas Distributors*, p. 9, http://www.ontarioenergyboard.ca/oeb/_Documents/EB-2014-0134/Draft_Report_of_Board_DSM_Framework_20140915.pdf).

[27] OEB (Sept. 15, 2014). *Draft Filing Guidelines to the Demand Side Management Framework for Natural Gas Distributors – EB-2014-0134*, pp. 4-8, http://www.ontarioenergyboard.ca/oeb/_Documents/EB-2014-0134/Draft_Filing_Guidelines_2015-2020_DSM_Framework.pdf

[28] Large volume customers consume at least 50,000 m^3 of natural gas annually. Therefore, at a minimum, their annual use would be more than 700 million m^3 (OEB, *2013 Yearbook of Natural Gas Distributors*, p. 11, http://www.ontarioenergyboard.ca/oeb/_Documents/RRR/2013_Yearbook_of_NaturalGas_Distributors.pdf).

[29] Verification of the savings from large custom industrial and commercial (C&I) programs is commonly called Custom Project Savings Verification, or "CPSV". (OEB, Sept. 15, 2014, *Draft Filing Guidelines to the Demand Side Management Framework for Natural Gas Distributors – EB-2014-0134*, p. 24, http://www.ontarioenergyboard.ca/oeb/_Documents/EB-2014-0134/Draft_Filing_Guidelines_2015-2020_DSM_Framework.pdf)

[30] OEB, Sept. 15, 2014, *EB-2014-0134: Draft Report of the Board - Demand Side Management Framework for Natural Gas Distributors*, p. 33, http://www.ontarioenergyboard.ca/oeb/_Documents/EB-2014-0134/Draft_Report_of_Board_DSM_Framework_20140915.pdf

[31] This requires adequate funding for evaluation activities – typically at least 3% of a utility's DSM budget (TAF, 2014, *2014 OEB Gas DSM Framework Issue Paper: Measuring Program Performance*, p. 7, http://www.towerwise.ca/wp-content/uploads/2014/08/DSM-Issue-Paper-3-Performance-Measurement-June-25-2014.pdf).

[32] TAF (2014). *2014 OEB Gas DSM Framework Issue Paper: Integrating Gas and Electricity Conservation Efforts*, pp. 2-3, http://www.towerwise.ca/wp-content/uploads/2014/08/DSM-Issue-Paper-5-Gas-Electric-Integration-July-24-2014.pdf

[33] LIC financing refers to municipalities providing property owners with low interest loans for energy efficiency retrofits, whereby the loans are paid back over time through a special charge on the property tax bill (a 'local improvement charge' or LIC).

[34] The existing DSM Guidelines state that "natural gas utilities may pursue DSM activities that support fuel-switching away from natural gas where these activities align with the [DSM Guidelines'] three DSM objectives and contribute to a net reduction in greenhouse gases" (OEB, June 30, 2011, Demand Side Management Guidelines for Natural Gas Utilities, p. 4, http://www.ontarioenergyboard.ca/oeb/_Documents/Regulatory/DSM_Guidelines_for_Natural_Gas_Utilities.pdf).

[35] For example, through sharing TAF's expertise on energy efficiency financing, or sharing TAF's data on energy efficiency retrofit projects.