

2014 OEB Gas DSM Framework Issue Paper: Making Conservation Profitable for Utilities

Current Ontario Framework

In June 2011, the Ontario Energy Board (OEB) issued a new set of demand-side management (DSM) guidelines for the province's two gas utilities. Among the key issues those guidelines addressed was incentive payments "to encourage [the utilities] to aggressively pursue DSM savings and recognize exemplary performance" of the utilities' DSM programs.

The 2011 guidelines established a \$9.5 million cap on the incentive for budgets of \$28.1 million and \$27.4 million for Enbridge and Union respectively, with the cap scaling in proportion to the budget. The incentive caps are thus set in the range of 34% to 35% of the budgets. The incentive caps are subdivided in proportion to the percentage of the budget for each of three program clusters (resource acquisition, low-income, and market transformation).

For resource acquisition and low-income programs, the OEB decided that the incentive should be based on the following metrics:

- Cubic meters (m³) of cumulative natural gas saved;
- \$ spent per m³ of cumulative natural gas saved, as a measure of prevention of lost opportunities; and
- The number of participants that receive at least one deep measure, where "deep measures" are to be determined by a consensus process and "could include increase in insulation in more than half of the walls, basement walls, or the attic of the home."

For market-transformation programs, the OEB expressed a preference for the first two metrics above and "other outcome based metrics."

The OEB specified that the incentive structure for each metric would start at a level that the OEB describes as the 50% level (although it need not be 50% of the target level¹), rising linearly to 40% of the cap at the target, and 100% of the cap at the 150% level. See Table 1: Savings Achieved and Shareholder Incentive Earned for a visual representation.

¹ For example, the OEB's 2011 DSM Guidelines for Natural Gas Utilities explains that "50%", "100%" and "150%" targets could be set at 40 units, 60 units and 70 units, respectively (p. 32). To clarify the concepts, subsequent settlements have seen the "50%/100%/150%" terminology replaced by the terms "lower band," "target", and "upper band" (for Union) and "lower," "middle," and "high" targets (for Enbridge).

Table 1: Savings Achieved and Shareholder Incentive Earned

Savings Level	% of Shareholder Incentive Cap Earned
"150% level" (OEB) "High target" (Enbridge) "Upper band" (Union)	100%
"100% level" (OEB) "Middle target" (Enbridge) "Target" (Union)	40%
"50% level" (OEB) "Lower target" (Enbridge) "Lower band" (Union)	0%

Current Ontario Incentive Structures

Settlements among the stakeholders have refined the OEB's approach in several ways:

- The \$ spent per m³ of gas saved incentive concept has not been used. This is wise. A low \$/m³ may indicate good program management, or it may be a result of cream-skimming. A high program cost per m³ can indicate that the program is achieving deeper savings, or it can indicate poor management of contractors, over-paying for services, and paying higher incentives that necessary, all of which would use up budget that could better be used for additional installations. The OEB indicated that part of the motivation for this kind of metric would be to provide an inducement for utilities to maximize the effectiveness of their spending. However, that objective should already be sufficiently encouraged by combining sufficiently aggressive performance metrics, rigorous evaluation and budget constraints.
- Union split the resource acquisition category between industrial customers with opt-out options and other customers, and split the deep-savings metric for the latter between residential and non-residential customers.
- For the low-income programs, incentives are split between single- and multi-family m³, and Enbridge added a metric for the percentage of customers on the Low Income Building Performance Management (LIBPM) who enroll in the DSM program.

The Rationale for Incentives

Utilities often act as though their primary interest is in growing their rate base. Load growth requires installation of more mains, which increases rate base and total earnings, but also requires that the utility raise more capital, spreading those earnings over more shares. Increasing rate base will not benefit shareholders if the OEB sets the return on equity at a level that is just high enough to allow the utilities to attract capital. In that situation, increased

investment would increase earnings but require the utility to raise more capital, and the existing shareholders would be no better off once the higher earnings are spread over both the existing and new shareholders. In the presence of an effective LRM, DSM would not harm LDC earnings per share.

If the OEB allows a return on equity higher than the actual cost of equity, shareholders would benefit from increasing rate base. For example, if new equity could be attracted with a return of about 8%, but the OEB allowed a 10% ROE², the DSM incentive would need to provide utility shareholders with an offsetting benefit equivalent to about 2% of the equity, times the avoided capital costs of LDC investments attributable to the DSM.

Since the Ontario LDCs have never acknowledged that any distribution capital projects are avoidable through DSM, let alone estimated the avoided investment, it is difficult to determine what incentive would be required to overcome the disincentive of the hypothetical lost-ROE windfall.

Other factors may also encourage the utilities to favor throughput over DSM. Management may benefit both financially and in less tangible ways from higher sales and investments. In addition, both Enbridge Gas Distribution and Union are affiliates of pipeline companies, which may be able to increase earnings by increasing pipeline throughput to their affiliated LDCs.

If, for any reason, the DSM incentives that are adequate in many leading jurisdictions are not sufficient to motivate effective DSM planning and implementation in Ontario, the OEB should consider alternatives, including moving responsibility for DSM to an independent entity, similar to those in Vermont, Nova Scotia, Oregon, and a handful of other North American jurisdictions.

Shareholder Incentive Levels

As a basic principal, utility shareholder incentives should be large enough to engage senior management, to attract good staff to work on DSM and to make (along with lost revenue adjustments and other policies) the pursuit of all cost-effective efficiency at least as profitable for the utility as not promoting efficiency would be. Of course, the incentives should also be no larger than necessary to accomplish those objectives. Needless to say, it is not always simple to determine exactly where that fine line is.

² Pollution Probe posited such a situation in EB-2002-0484, Pollution Probe Final Argument, p. 3.

With those objectives in mind, it may be useful to benchmark the current Ontario gas incentives against those in place in other jurisdictions. One commonly used benchmark is the size of the incentives in comparison to DSM budgets. As Table 2 shows, the incentives offered to the Ontario gas utilities are at the high end of continent-wide practice for gas and electric DSM incentives using that benchmark.

Table 2: Energy-Efficiency Incentive Caps as Percent of Spending

Jurisdiction	Covered Program Administrators	Fuels	Incentive Cap as % of Budget
Arizona	APS		20%
Arkansas	All	Electric & Gas	7%
California	PG&E	Electric & Gas	10.1%
Colorado	Xcel, Black Hills	Electric	20%
Connecticut	All IOUs	Electric & Gas	8%
District of Columbia	DC Efficiency Utility	Electric & Gas	4.2%
Georgia			No cap
Kentucky	Duke, Kentucky Power		10%
Massachusetts	All IOUs	Electric & Gas	5.5%
Michigan	All IOUs	Electric & Gas	15%
Minnesota			30%
Nevada			5%
New Hampshire			12%
New York	All LDCs	Gas	2.3%
North Carolina	Duke		No cap
Ohio			15%
Oklahoma			15%
Rhode Island	National Grid	Electric	4.4%
Texas	All IOUs	Electric	20%
Vermont	Efficiency VT	Electric & Gas	4.1%

However, that benchmark is only relevant if the DSM budgets of the comparison jurisdictions are also comparable to those in Ontario. Put another way, a large percent of a small budget may be less effective in attracting management attention and offsetting lost earnings from supply-side investments than a smaller percent of a much larger budget. As demonstrated in TAF's paper on DSM budgets and goals, Ontario gas DSM spending in recent years has been much lower than spending in leading jurisdictions. Thus, as shown in Table 3, though the Ontario utilities' maximum shareholder incentive is more than twice that of the Michigan utilities and nearly ten times that of the Massachusetts' utilities when expressed as a percent of DSM budget, it is actually fairly similar to both jurisdictions when normalized to each

jurisdiction's annual gas sales.³ This suggests that shareholder incentives could be held to current levels, or perhaps increased only very modestly, even if future budgets and spending are increased fairly dramatically as the Savings Goal and Budget Setting paper suggests would be appropriate.

Table 3: Energy-Efficiency Gas Incentive Caps per Unit of Gas Sales

	Total Gas Sales (m3)	Gas Sales Reference Year	Total DSM Budget	Budget Reference Year	DSM Budget per m3 Sales	Max Utility Incentive % of DSM Budget	Max Utility Incentive per 1000 m3 Sales
<i>Ontario Utilities</i>							
Enbridge	11,300,100,000	2012	\$30,910,000	2012	\$0.0027	\$10,450,000 34%	\$0.92
Union	14,617,390,000	2012	\$30,910,000	2012	\$0.0021	\$10,450,000 34%	\$0.71
<i>Other Examples</i>							
Massachusetts	6,319,346,456	2012	\$191,766,032	2015	\$0.0303	\$6,930,855 4%	\$1.10
Michigan	13,366,672,182	2012	\$ 73,487,238	2013	\$0.0055	\$11,023,086 15%	\$0.82

Types of Performance Metrics

The types and general structure of performance incentive metrics that the OEB promoted through its 2011 DSM Guidelines and that the utilities and other stakeholders refined through settlement negotiations and subsequent DSM plan filings are very good and consistent with best practice across North America. In particular, as in Ontario (for gas utilities) today:

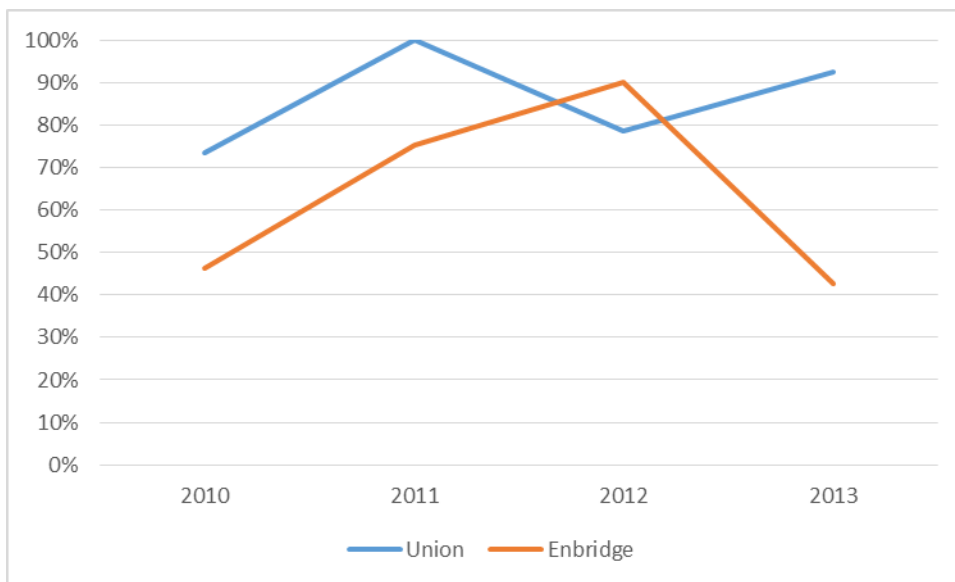
- Leading jurisdictions typically have multiple performance metrics to address multiply policy objectives;
- Consistent with the point above, total energy savings, low income savings (and/or participation levels) and market transformation are objectives for which it is common to see specific, targeted performance metrics;
- The industry has begun to focus greater attention on total lifetime energy savings rather than just first year savings;
- Many leading jurisdictions establish a minimum level of performance below which no shareholder incentive is earned – that minimum level is typically in the range of 75% to 80% of budgeted goals;
- Many leading jurisdictions establish continuums between the minimum threshold required to earn any incentive, the budgeted goal levels and exemplary performance

³ Comparisons to Massachusetts and Michigan are provided because anecdotal evidence suggests that utilities in both jurisdictions find their performance incentives to be substantial enough to have attracted management attention and interest.

levels (often on the order of 115% to 125% of budgeted goals), with incentives increasing as performance improves along those continuums.

In general, utilities should only be earning the maximum incentives for performance that is truly exemplary. Put another way, incentive targets that the LDCs find easy to reach should move steadily upward. As Figure 1 shows, in recent years Union Gas has achieved or come close to achieving its maximum incentive most years. On the other hand, though Enbridge Gas has earned an incentive, its earnings have been lower – less than half of the maximum it has been eligible to earn in two of the past four years. These trends warrant careful examination to determine whether the differences are attributable to much better performance by Union or just to more aggressive goal-setting for Enbridge.

Figure 1: % of Maximum Incentive Earned By Union Gas and Enbridge Gas⁴



Computation of the Incentive Scorecards

In addition, as discussed below, there are some quirks in the way the 2011 DSM Guidelines established the “scorecard” approach to weighting the importance of different performance metrics that likely had unintended consequences and should be revisited.

⁴ Values unadjusted for recent Board decisions on Union’s 2011 results and Enbridge’s 2012 results. 2013 values for Union are prior to any audit adjustments or possible OEB adjustments; 2013 values for Enbridge also are prior to any possible OEB adjustments.

Incentive for uneven attention to metrics

Under the Board's 2011 Gas DSM Guidelines,

No incentive will be provided for achieving a scorecard weighted score of less than 50%. Metric results below 50% will be interpolated using the 50% and 100% targets, metric results above 150% will be interpolated using the 100% and 150% targets⁵.

In other words, each program group (scorecard) stands or fall on its own. If a utility misses the minimum incentive mark for a program group, it loses the opportunity to earn the portion of the incentive allocated to that program group; if it exceeds the performance required for the allocated incentive cap for the program group, it gets no incremental incentive for that group. However, individual program groups (scorecards) often contain multiple performance metrics. Under the existing guidelines, a utility can totally fail one metric, exceed the high target on another metric, and still get the maximum incentive for the program group.

The treatment of the metrics above the upper bands encourages the utilities to pile on resources for the metrics that prove easy to achieve and to neglect the metrics that are harder to achieve. This is particularly true where the increase in incentive per unit of performance above the middle target is larger than the decrease in incentive per unit of performance below the middle target.

Potential for unintended over-weighting of metrics

Under the current approach, the stakeholders may agree on a new metric, to encourage the utility to move in a new direction, but without any clear idea of how difficult that metric will be to achieve. Even if the incentive mechanism gives that metric a low weight, such as 5%, that single metric may turn out to be easy to exceed and the utility may exceed the metric several times over. The 5%-weighted metric can end up contributing 25% or more to the utility's achieving the overall scorecard target. This feature of the weighting greatly reduces the meaningfulness of the metric weights, and can easily distract the utility from metrics that are given higher nominal weights towards relatively minor metrics on which the utility finds it can run up the score.

⁵ OEB, 2011, DSM Guidelines for Natural Gas Distributors, p. 32.

Inconsistent distinctions between program groups

The distinctions between the program groups and the metrics are not consistent or logical. For example, in the 2013 Draft Evaluation Report, Enbridge treats three metrics for the low-income programs (single- and multi-family m³ and LIBPM participation) as a single program group, but splits the six metrics in the market transformation programs into four smaller program groups. While the over-performance on low-income single-family m³ and LIBPM are able to offset some of the under-performance on low-income multi-family m³, the over-performance on drain-water heat recovery and commercial Savings By Design (SBD) cannot offset any under-performance on other market transformation metrics. The over-performance on the number of realtors committed to home labelling can offset the shortfall in ratings performed (since they are both part of the home-labeling component), but not the failure to earn the maximum incentive for the residential SBD program.

Recommendation

The incentives would be more consistent and effective if each metric were allocated a portion of the incentive cap, without any opportunity for performance above the high target or upper band to offset any failure to meet the high target for other metrics. This is already the case for Enbridge's incentives for drain-water heat recovery and commercial SBD and Union's incentives for Large Industrial scorecard. That approach should be extended to the other metrics.

Additional and Modified Metrics

Deep Savings

Some of the metrics for deep savings do not appear to represent very deep savings, such as Union's 2012 commercial/industrial target of 5.5% average savings. Deep-savings incentives should be directed to increasing penetration of truly deep savings, such as reductions of more than 30% in existing buildings and construction of new buildings to 20% below the requirements under existing codes and standards.

Since deep savings for a particular non-residential facility or multi-family building can take a few years of sequenced improvements, providing incentives for truly deep savings may require that the metric be defined over a longer period than one year. For example, the metric might count the m³ saved in buildings that have saved 30% or more over the previous five years.

Lost Opportunities

More fundamentally, the incentive scheme should restore a form of the Board's lost-opportunity metric, based on after-the-fact independent evaluation of whether programs are encouraging participants to go as far as is cost-effective (i.e., maximizing inches of attic insulation, furnace AFUE or window U value) or achieving substantial increases in market shares for key efficiency technologies or practices (e.g. Energy Star-certified new homes).

Geo-targeting

Finally, the Board should consider, where appropriate and relevant, introducing a geo-targeting metric to reward the utilities for identifying and relieving areas that will otherwise require transmission and distribution reinforcement. In the recent GTA transmission cases, it was revealed that Enbridge has long known of emerging load-related capacity constraints on its transmission system, which would require hundreds of millions of dollars for the GTA projects in segment B, and \$10–\$20 million annually in load-related reinforcements in parts of the GTA, but had not reflected any of those savings opportunities in DSM planning. A geo-targeting metric should consist of an external evaluation of the utility's process for identifying potential reinforcement requirements over the next decade, designing enhanced DSM efforts to avoid those reinforcements, and implementing those enhancements.

Conclusions

Recent trends in the gas utilities' incentive earnings should be examined to determine whether incentive thresholds are set at appropriate levels, and to ensure that utilities are only earning the maximum incentives for truly exemplary performance. Comparison with other North American jurisdictions suggests that incentive levels in Ontario should be held to current levels or increased only very modestly even if utilities' DSM budgets increase dramatically. Existing performance incentive metrics are generally consistent with best practice across North America, but could be made more effective if each performance metric were allocated a portion of the incentive cap, if incentives encouraging deep savings were more appropriately targeted, and if metrics to encourage geo-targeting and avoidance of lost opportunities were introduced or reintroduced.

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This brief has been prepared for TAF by Paul Chernick, Resource Insight, and Chris Neme, Energy Futures Group, with research support from TAF Policy Researcher, Rebecca Mallinson. Please treat this material as 'draft' as elements may evolve during the course of discussions and in the formulation of input to the formal OEB consultation. Please note that the views and ideas expressed in these briefs are presented by the Toronto Atmospheric Fund to support the discussion around developing a new gas DSM policy framework. We welcome your views about these or other issues related to natural gas conservation policy in Ontario.