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October 23, 2015

**VIA RESS, EMAIL and COURIER**

Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street
Suite 2700
Toronto, ON  M4P 1E4

Dear Ms. Walli,

**Re: Enbridge Gas Distribution Inc. (the "Company" or "Enbridge")**
**Ontario Energy Board (the "Board") File: EB-2015-0049**
**Multi-Year Demand Side Management Plan (2015 to 2020)**
**Reply Argument**

Enclosed please Enbridge's Reply Argument for the above noted proceeding.

The submission has been filed through the Board's Regulatory Electronic Submission System ("RESS") and will be available on the Company's website under the "Other Regulatory Proceedings" tab at www.enbridgegas.com/ratecase.

If you require further information, please contact the undersigned.

Yours truly,

(Original Signed)

Bonnie Jean Adams
Regulatory Coordinator

Encl.

cc: Mr. Dennis O'Leary, Aird &Berlis
EB-2015-0049 Intervenors

**EB-2015-0049**

**ONTARIO ENERGY BOARD**

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

**AND IN THE MATTER OF** an Application by Enbridge Gas Distribution Inc. pursuant to Section 36(1) of the *Ontario Energy Board Act, 1998,* S.O. 1998, for an order or orders approving its Demand Side Management Plan for 2015-2020

# ENBRIDGE GAS DISTRIBUTION INC.
# REPLY ARGUMENT

# OCTOBER 23, 2015

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# ENBRIDGE GAS DISTRIBUTION REPLY ARGUMENT

## Introduction

1. This is the Reply Argument of Enbridge Gas Distribution Inc. ("Enbridge", "EGD" or "Company") to the Arguments filed by various parties and Board Staff in this proceeding. While Enbridge has made every effort to avoid repeating submissions made in its Argument-in-Chief, the Company does for the purposes of this Reply Argument repeat and adopt its earlier submissions.

2. While the Company's Reply Argument by necessity addresses areas of contention, Enbridge is overall quite pleased with the level of support its 2015-2020 DSM Plan has received from stakeholders and Board Staff. The Company is buoyed that various parties are supportive of the direction in which the multi-year plan takes DSM in Ontario, as well as the collaborative process through which much of this plan was developed. Looking beyond this application, Enbridge hopes to build on this support and collaborative approach to cement Ontario as a leader in natural gas conservation.

3. Rather than respond to stakeholder submissions by topic area, Enbridge has organized this Reply to first address several issues of fundamental concern to it; issues which in the Company's respectful submission could have a profound effect on the overall balance of its proposed multi-year DSM plan and the critical interdependencies between programs, budgets, metrics and targets. Subsequently, this Reply moves on to address additional areas where Enbridge finds responses of a less detailed nature are warranted, and finally provides an appendix which addresses an assortment of specific areas with responses of a highly abbreviated nature.

4. Before entering into greater detail on these issues however, the Company first wishes to highlight an essential theme that has been interwoven in the fabric of this proceeding. While never stated aloud in evidence or within the arguments of various parties, this theme is palpable, and inherently one of contradiction. Enbridge can only define this concept as the tension between innovation and restriction.

5. The Board heard much about the leadership and innovation that Enbridge has demonstrated historically and in the development of the plan under consideration in this proceeding. Enbridge notes that on a number of occasions, various parties have acknowledged that Enbridge has exhibited both innovation and leadership, albeit perhaps not to the new heights sought by some. This alleged insufficiency of leadership and innovation is best exemplified by statements such as "The Ontario utilities are not taking enough risk, pushing the envelope to deliver best in class results." by SEC on page 6 of their argument, or Mr. Neme stating, "…I think that both of [the utilities] have room for pushing harder and farther and in newer directions…that suggests that you'd want to create a framework that encourages some risk-taking…"[1] This theme even garnered the attention of the Board Panel, with Member Frank asking Mr. Neme, "…what would a framework look like that encouraged risk-taking…?"[2]

6. With submissions such as these, one would have anticipated that various parties would have proposed mechanisms and protocols that would provide the utilities with the flexibility and incentive to assume additional risk and push the envelope. Despite extensive calls for greater leadership, innovation and risk-taking, a great many of the requests made of the Board do exactly the opposite. Various proposals, if accepted by the Board, would run completely contrary to the desired effect. Rather than incenting innovative program development and the undertaking of untried and therefore risky new offerings, these proposals simply shift additional risks onto the shareholder, who would be downright imprudent to advocate risk-taking under such stringent and unfair circumstances.

[1] Tr. 10, pages 9 -11
[2] Tr.11, page 160

7. The following partial list of requests are prime examples of proposals which would directly discourage Enbridge from furthering its position as an industry leader, innovating and taking risks:

(a) Adjust input assumptions retroactively for the purposes of the shareholder incentive so as to move the "goal posts" of performance and to not approve the TAF (or the best in class practice identified by Synapse of maintaining planned input assumptions);

(b) Impose limitations on the success of programs and their contribution to the applicable scorecard by limiting the impact of any individual metric to 150% or another figure[3].

(c) Impose a presumption that all commercial/industrial projects with a payback period of less than two years are free riders, subject to a rebuttable which, if not accepted, would render the funds spent by utilities not recoverable[4].

(d) Decrease the shareholder incentive at the 100% target from $4.18 million to $3.2 million, and at 150% target from $10.45 million to $8 million, under the auspice that the final portion of shareholder incentive will still be available for vague, undefined performance that parties will "know when they see"[5].

(e) Subject program expenditures to an after-the-fact prudence review, notwithstanding the fact that monies were spent on customers and programs that satisfy the TRC requirements and have generated savings. Such expenditures would be at the risk of the utility[6].

[3] SEC, page 11; Board Staff, page 2; CCC, page 13; GEC, page 29
[4] SEC, page 12
[5] SEC, pages 12 and 38
[6] Ibid., pages 11-12

(f) Require each commercial/industrial custom project to be subject to an individual project cost-effectiveness test which, if not passed, would mean monies spent are not recoverable by the utility[7].

(g) Require the Utilities, at their expense, to undertake a benchmarking study on DSM budgets, including administrative, promotion and overhead costs[8], notwithstanding the fact that Synapse confirmed that Enbridge's programs are highly cost-effective and overhead costs are actually decreasing as a proportion of Enbridge's total budget throughout the term of the plan.

8. Each of the above proposals is obviously not intended to incent a party to assume additional program risks by investigating, developing and rolling out innovative program offerings. The above proposals have one purpose only: to increase the risk of non-recovery by Enbridge, not only of its shareholder incentive, but also of the cost of administering DSM, inclusive of the incentives paid to customers. Aside from the fact that many of these concepts were not raised during the Framework Consultative for consideration by all parties and the Board and were subsequently not part of the Framework, most of the above concepts were not even put to any of Enbridge's witnesses at the oral hearing. They are, for the most part, unexplained, uncertain, untested, unnecessary and patently unfair.

9. Enbridge finds the submissions of various parties to be inherently inconsistent in this respect; calling for new levels of leadership, innovation and risk-taking, while simultaneously advocating for restricting and unfair protocols that will work against these noble goals. The Company submits that taken together these proposals are not only inconsistent with the basic tenet of rate regulation that a utility can recover its reasonably incurred costs, it is also inconsistent with the basic tenet of DSM that utilities should be incented to generate DSM results to the benefit of customers and society. The Company urges the Board to bear in mind this inherent tension between innovation and restriction when deliberating its Decision in this proceeding.

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[7] Ibid., page 12
[8] Ibid., page 11

10. As noted above, this Reply begins with an address of a number of critical issues to Enbridge. These fundamental issues include:

(a) The capping of individual metrics on weighted scorecards at 150% or some other level of achievement.

(b) The institution of a minimum payback threshold for DSM projects.

(c) Proposed increases or modifications to Enbridge's targets of an arbitrary nature.

(d) Recommendations to reject the Target Adjustment Factor (TAF).

(e) Recommendations to significantly diminish the My Home Health Record offering.

**150% Metric Cap**

11. In response to the Board's guidance in the DSM Framework and Filing Guidelines Enbridge has proposed 3 weighted scorecards for each year from 2016 to 2020. Each scorecard contains a series of individual metrics for measuring the achievement of the utility in pursuit of DSM's goals, principles and priorities, with each individual metric being assigned a weighting to determine the impact it will have on overall weighted scorecard achievement.

12. Overall, if a weighted scorecard score is less than 75%, no shareholder incentive will be rewarded for that scorecard. If a scorecard score is exactly 100%, only 40% of the available shareholder incentive attributed to that scorecard will be awarded to the utility. A score of 150% will award the maximum possible shareholder incentive attributable to that scorecard. Overall weighted scorecard achievement is capped at 150%, such that there is a ceiling to the amount of shareholder incentive that can be earned, regardless of whether or not the utility continues to create positive benefits for customers and society beyond a 150% weighted score. Though there is a cap on the shareholder incentive achievable for each weighted scorecard, there is no cap on the score of individual metrics within that scorecard. Enbridge supports the current weighted scorecard methodology, and how multiple metrics included in individual scorecards interact within that scorecard. This approach provides benefits for participants in that it

ensures successful programs continue to be aggressively pursued. Conversely, this approach ensures that all metrics are pursued, lest one poor performing metric negatively affect the overall scorecard weight. Lastly, weighted scorecards also allow Enbridge the ability to optimize spending thereby achieving the best value for ratepayers. The degree to which these metrics can or cannot impact the overall scorecard in this way is determined by their assigned weight.

13. In their Arguments, SEC, CCC, and Board Staff have proposed that individual metrics should not be permitted to exceed a score of 150%. GEC has proposed that individual metrics not be permitted to exceed a score of 175%, though the figure put forward by GEC's expert Mr. Neme under cross-examination was 200%.[9] Enbridge submits that neither sufficient evidence nor argument has been put forward to justify this proposed restriction, which represents a fundamental alteration to the weighted scorecard approach first outlined in the 2012 DSM Guidelines and the subsequent scorecards proposed by Enbridge in this Application. The Company urges the Board to reject the notion of a cap on individual metric achievements, relying instead on the sufficient mechanisms of scorecard weightings, the overall cap on incentives assigned to each scorecard, and the existing restrictions on movement of budget.

***Flexibility and Perverse Incentives***

14. Enbridge believes it is a commonly accepted idea that the DSM market is fluid. This point was perhaps best articulated by Enbridge's witness Mr. Lister when he stated, "…the DSM market in itself is very fluid from year to year. There are lots of changes. There are technologies, there are different capital cycles, a lot of things happen to change the DSM market from year to year."[10] The fluid nature of the DSM market necessitates flexibility on many fronts, including the ways in which the utility may achieve its shareholder incentive on a given scorecard.

15. Enbridge believes that the current scorecard structure, in which there is a cap on the shareholder incentive achievable for each weighted scorecard but no cap on an individual metric's contribution within that scorecard, affords the utilities the flexibility

[9] Tr. 10, page 55
[10] Tr. 5, page 59

necessary to operate their DSM businesses and, most importantly, to continue to pursue successful program offerings. The Company believes this to be the case on two fronts.

16. First, one of Enbridge's primary concerns with the individual metric cap proposed is the possibility that such a mechanism would create a perverse incentive to halt successful programs because they cease to generate benefits for shareholders. Enbridge's 2014 Resource Acquisition scorecard provides a case in point of how an individual metric cap would have created negative unintended consequences had one been in place.

17. GEC offers its view on achievement in that year in the following passage; "The 2014 scorecard and results show how Enbridge achieved 1296% of its participation metric for retrofits (that had a weight of 8%) while not even reaching the lower (75%) threshold for cubic meter savings from resource acquisition (that had been weighted 92%). Clearly the capability to shift resources to that extent invites gaming…"[11]

18. Enbridge disagrees with such knee jerk recommendations to what should be an isolated situation to HEC in 2015 and 2016 and asks the question: when is the continued pursuit of a successful program not in the interests of the customers? The continued pursuit of successful programs is the very reason for the DSMVA. The 150% Cap is completely inconsistent with and counter to the long established and accepted objective of the DSMVA, let alone the government's clear interest in the pursuit of all cost-effective DSM.

19. Enbridge submits that the retrofit program example is evidence of an entirely different reality. This example demonstrates the value of a flexible scorecard which does not cap successful, cost-effective savings for customers in order to fall within an arbitrary boundary. Mr. Lister spoke to this point under cross-examination by GEC, when he suggested that "…it would have been a far worse outcome in this particular case if we had stopped a very successful program because we had reached some limit. I think it would have drawn more ire than having a hugely successful program, which everyone should be very proud of."[12]

[11] GEC p. 29
[12] Tr. 5, page 60

20. The above passage highlights the unintended consequences of creating a cap on an individual metric; that it will create a perverse incentive to move attention and resources away from otherwise successful areas. There are of course implementation concerns as well, given that it was also pointed out by Company witnesses that Enbridge is not simply able to "flick a switch" and cease to deliver a program immediately[13] but again using the retrofit program as an example, a 150% Cap would have incented Enbridge to discontinue the program once it has reached its 150% target participant levels. Thousands of participants would then become lost opportunities, an outcome that is surely not reflective of achieving "all cost-effective DSM".

21. In this particular case, the detriment of having a cap in place would have gone beyond the thousands of Ontario households that would have been denied the opportunity to realize meaningful bill savings. Mr. Lister goes on to point out that, "…that great success rate has informed how we've established targets going forward. So you will see targets that are exponentially higher than what we have had in the past, because we've learned it's a very successful program."[14]

22. Had the metric cap proposed been in place in past years, Enbridge would have achieved far less in this area and would have proposed 2016 to 2020 targets for whole home retrofits that were substantially lower than those brought before the Board in this proceeding. Instead, the appropriately flexible scorecard calculation provided by the Board in the 2012 DSM Guidelines allowed Enbridge to respond to relevant market forces and pursue positive opportunities for customers, setting the Company and ratepayers up for significant increases in residential participation in 2016 and beyond.

23. The second important element of scorecard flexibility relates to the utilities' reasonable expectation of incentive earnings. As noted above, the DSM market is highly fluid. Knowing this dynamic firsthand, Enbridge has proposed what it believes to be balanced scorecards based upon the understanding that the appropriately flexible approach established by the Board in 2012 would carry into 2016 and beyond.

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[13] Tr. 6, page 14
[14] Tr. 5, page 62

24. The Framework itself noted that stakeholders were invited to provide submissions on three shareholder incentive structures. No party made any mention through the extensive consultation period that individual metrics should be capped at some level. In fact, the Board noted generally that, "Most stakeholders did not feel that any major changes were required to the shareholder incentive amount or structure. Stakeholders generally agreed that the incentive structure and amount included in the 2012 DSM Guidelines has made DSM a vital and important part of the gas utilities' business and resulted in very strong annual and long-term results."[15] As such, it would seem inappropriate to make a change to the utilities' plans based on a knee jerk reaction from an unusual outcome in Enbridge's residential whole home retrofit offer which is limited to 2015, and not expected to carry into 2016 and beyond.

***Pursuit of Multiple Objectives***

25. The primary benefit of a weighted scorecard is its ability to pursue multiple objectives with varying degrees of focus. As stated by the Board in the DSM Framework, the utilities should, "…incorporate multiple performance metrics using a weighted scorecard approach…the scorecards should also include other performance metrics that will motivate the gas utilities to undertake the appropriate activities…"[16]

26. Several parties have expressed the view that, despite the weighting mechanism and overall cap safeguards in place, allowing individual metrics to overachieve beyond 150% will invite gaming wherein the utility abandons the pursuit of struggling metrics in favour of extreme over-performance on successful metrics. SEC argues that, "…it is appropriate to incent the utilities to redouble their efforts in areas in which they are lagging. Under the utilities' proposed calculation method, this is not necessary. In fact, it may be preferable to chase higher performance on the successful metric, and ignore the one that is proving harder to achieve."[17]

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[15] 2015-2020 Natural Gas DSM Framework, p. 21
[16] EB-2014-0134 "Report of the Board: Demand Side Management Framework for Natural Gas Distributors (2015-2020)" December 22, 2014, p.12
[17] SEC, p.24

27. Enbridge submits that precisely the opposite is true. In fact, the negative impact of a lagging metric will to one degree or another effectively undo successful achievement in other areas and deny or lower the shareholder incentive otherwise achievable. Clearly the "easiest" and most direct way for the utility to boost its earned shareholder incentive is to address lagging metrics. This dynamic becomes doubly true when the lagging metric is heavily weighted on the scorecard. Using the 2014 resource acquisition scorecard as an example, Enbridge was keenly aware that had it achieved its CCM scorecard target while at the same time achieve the same level of retrofit participants, its shareholder incentive would have increased materially since CCM contributed 92% to the scorecard. It was in Enbridge's direct interest to continue to pursue CCM aggressively.

28. To extend the example, it can be seen that in order to move the entire weighted scorecard upwards by a mere 1%, the deep savings metric needed to increase by approximately 12%. At the same time, a simultaneous reduction in the larger CCM metric of approximately 1% would undo that successful increase in performance on the smaller deep savings metric.

29. Contrary to what some intervenors have contended, it would have been much more advantageous for the utility to game the scorecard by under delivering the residential metric (weighted at 8%) and over delivered the C/I metric (weighted at 92%). The above example highlights an important point, being that the linked nature of a weighted scorecard pushes the utility to ensure that "no metric is left behind." In reference to this specific example, Mr. Neme expressed his view under cross-examination by SEC that overachievement on the 8% metric was, "…overwhelmingly responsible for the amount of shareholder incentive that's being earned."[18] Mathematically, Enbridge cannot agree with this interpretation. By definition a scorecard's level of achievement is a balance of all the metrics on that scorecard. While Enbridge did struggle with its 92% Resource Acquisition CCM metric in 2014, the Company still helped customers save over 664

[18] Tr. 10, page 54

million CCM[19] of gas consumption. These savings were significant and greatly benefited program participants in terms of bill savings.

30. The need to achieve on all scorecard metrics drove Enbridge to continue to deliver significant gas savings in 2014 despite working in a highly challenging market. This demonstrates that the existing scorecard structure in fact does incent the utility to achieve on all metrics without the introduction of an individual metric cap and the unintended consequences that may accompany it.

***2015 Transition Year***

31. While not all parties advocating for a cap on individual metric performance have clearly articulated whether or not their recommendations apply to 2015, SEC recommends that this policy should be put in place for the nearly complete 2015 program year. Enbridge submits that such an approach is both contrary to the Board's DSM Framework and highly prejudicial to the Company at this late stage of the year.

32. The DSM Framework, at section 15.1 instructed the utilities to roll-forward their 2014 DSM Plans into 2015 "…including all programs and parameters (i.e., budgets, targets, **incentive structure**)…" [emphasis added]

33. Enbridge submits that the above reference to "incentive structure" means the Company's 2014 metrics, scorecards, and the formulas that drive the calculation of shareholder incentive amounts. The incentive structure of the 2012-2014 framework did not contemplate a metric cap and therefore the roll over should similarly not include such a cap. As well, the 2014 year was the subject of a settlement agreement accepted by the Board. SEC is therefore asking that the Board in effect disregard both the settlement agreement, the prior framework and subsection 15.1 of the current framework and introduce a new prescriptive limitation on scorecard calculations. Enbridge submits this is inappropriate.

34. Given the clear language provided in the Board's 2015-2020 DSM Framework in section 15.1, the Company had no reason when developing its scorecards to believe that the

[19] Exhibit I.T3.EGDI.EP.2, p.7

Board might reconsider its scorecard formulas. As such the Company made detailed plans to deliver its programs and achieve on its scorecards based upon the continuation of appropriately flexible scorecard formulas that do not incorporate an individual metric cap.

35. Enbridge submits that to change this essential formula at the end of the 2015 program year amounts to changing Enbridge's targets in the 2015 program year. As the Company stated on page 3 of Exhibit B, Tab 1, Schedule 3 of its pre-filed evidence, "It would have been extremely prejudicial to Enbridge had it been required to operate its programs in 2015 without having certainty around the DSM budget and targets upon which the shareholder incentive is ultimately based." On the same page, the Company goes on to submit that, "…unless all of the program offers and all of the targets and their metrics are fully considered, and adjusted, then Enbridge submits it is inappropriate to only adjust several." Enbridge strongly believes that the statements above apply equally to scorecard formulas.

36. As stated by Mr. Neme during GEC's Examination in Chief, "…I suggest that the Board consider largely approving the utility's plans for 2015. We're almost done with the year anyway. It is hard to see what could be gained by significant revisions there." Board Staff[20], LPMA[21], and GEC[22] all appear to support the approval of Enbridge's 2015 targets, while CCC[23] notes that they are consistent in large measure with the Framework and Guidelines. APPrO, BOMA, CME, ED, IGUA, and LIEN did not, to Enbridge's knowledge, provide submissions in support of or disagreement with Enbridge's 2015 targets.

***Conclusion***

37. In summary, Enbridge believes the 150% Cap on metrics is motivated solely by the continual effort of some to minimize or altogether prevent the Company from earning an incentive. There is no evidence of gaming. Quite the contrary, the Board heard oral

[20] Board Staff, page 11
[21] LPMA, page 2
[22] L.GEC.1, page 45
[23] CCC, page 8

evidence from the Company's DSM Managers all of whom demonstrated dedication and enthusiasm for DSM program delivery.

38. It should be noted that one of the negative consequences of a 150% Cap on metrics is that, as a practical matter, it would mean that neither utility would ever be capable of achieving the 150% maximum shareholder incentive. The cap would require Enbridge to achieve exactly 150% on each metric – no less – otherwise mathematically it could not achieve the maximum incentive.

39. Finally, the 150% Cap on metrics proposal is another example of a matter which should have been identified as an issue during the Framework Consultative so that a determination could have been made by the Board in the Framework as to its need, if any, and its advantages or disadvantages. The resulting decision of the Board on such a proposal would then have been available to the utilities to inform the development of their 2016-2020 DSM Plans. As stated above, the Board did invite consultation on the issue of scorecards, and the idea of a metric cap was not considered in any way or form. Enbridge submits that it is both unfair and inappropriate to now impose a metric cap based on the opinions of certain parties, especially where the utility has noted several deficiencies and negative consequences of such a policy change.

## Payback

40. Both Utilities gave extensive oral evidence about the reasons why the introduction of an arbitrary payback threshold below which customer DSM participation would be denied is problematic as a practical matter and runs counter to the objectives of DSM. As will be noted below, there is no agreement between parties as to the appropriate payback period (Mr. Woolf, 1 year;[24] Board Staff, 1.5 years[25]; SEC, 2 years[26]). There is absolutely no evidence about what the impact of any one of these three payback threshold proposals would be on targets or free ridership rates. Clearly if you eliminate projects, you reduce savings and targets. As well, as acknowledged by Mr. Woolf and

[24] Tr. 11, p.186
[25] Board Staff, pp. 83-84
[26] SEC, p.12, s.0.5.14

Mr. Neme, and by SEC in argument, if you introduce a payback period, you need to review the appropriateness of the existing applicable free rider rate which, for Enbridge's custom Industrial offerings, is 50%. There is no evidence about how much the corresponding free rider rate for each of these payback threshold periods should be reduced.

41. As indicated by both Utilities, their targets will obviously be impacted by the introduction of a payback threshold, as will free ridership rates. As noted by Mr. Neme, this is a policy question.[27] Given the lack of evidence as to the impact on the Utilities' targets and free rider rates, Enbridge submits that the introduction of a payback period should not be considered at this time because: (i) its impact is unknown; (ii) there will be a resulting loss of non-free rider projects; (iii) it will create much uncertainty as both Utilities will need to adjust their targets and free rider rates; and (iv) there is no evidence that all of this will result in any material improvement in results or the evaluation and verification of results.

42. Before delving more specifically into the submissions of several intervenors, Enbridge first believes it important to highlight why it believes a payback threshold is not appropriate and not consistent with the goals and objectives of DSM. The evidence of the Company's witnesses was detailed and clear about the problems of imposing an arbitrary payback threshold. These include:

- Target Savings implications[28] – A payback period will have a material impact on DSM savings, which goes against the Framework's desire to pursue cost-effective DSM and reduce missed opportunities. A payback threshold was not considered in the Utilities' development of targets that were developed in response to the Framework which did not contemplate a payback threshold.

- Customer choice – It is Enbridge's explicit experience, which is also borne out in the Commercial/Industrial ("C/I") survey work that Synapse provided in response to GEC IR 12[29] that energy efficiency has to compete with other projects, and already faces many hurdles – without technical or financial assistance, many of these projects may become lost opportunities. All customers have limited pools of capital

[27] Tr.9, p.176.
[28] Tr.9, p.128.
[29] Ex. M.Staff.GEC.12 (Attachment 1, p.137): "When dealing with budget issues, money does not go to efficiency. Even easy projects with a 6 month payback can take time to convince management to participate."

(or cash) that they must decide for themselves the best way to prioritize. For example, C/I customers may choose to spend time and resources on items related to product mix, health and safety, production, quality, capacity, and labour. Residential customers also have options which are too numerous to list, but which may include items such as other renovations, vacations, luxury or other discretionary items.

- Finite Capital[30] – For every single customer, from residential, commercial and industrial, capital is finite. If the utility is not able to support a customer due to an administrative rule, they will be less inclined to pursue energy efficiency, or more inclined to pursue one of the many other alternatives or requirements they may have.

- Too simplistic[31] – It is a well-grounded financial principle that simple payback is a rudimentary financial analysis at best. While it is often used as one investment screening tool, it is not a substitute for all others nor should it be singularly considered. People and entities will consider all of the alternatives available to them to select the best investment. Payback does not consider the time value of money, nor does it consider the value of alternative future cash flows. As a result, projects with lower paybacks may not be selected, because other projects are simply better investments.

- Customer Hurdles[32] - There are a variety of other reasons why a customer might not follow through on an energy efficiency project, even if the payback is very short, such as:

    - They don't trust the technology, or the future operating costs of the technology.
    - They don't want to risk quality or reliability.
    - They don't have the internal resources to follow through .
    - Corporate approval processes may favour other types of projects or take too long.

- Efficiency Awareness[33,34] - In many instances customers are not aware of the alternatives available to them. Working with a customer either directly or through another program and then advising the customer that Enbridge can no longer support them because they don't qualify due to a payback threshold will result in lost opportunities, poor customer service, and low customer satisfaction. It is natural that these customers would then be less likely to consult the utility when they do want to consider energy efficiency projects that would otherwise not be constrained by an arbitrary payback threshold.

[30] Tr.6, pp.28
[31] Tr.6, pp.29-30
[32] Tr.9, pp.55-56
[33] Tr.9, p.55
[34] Tr. 9, p.555, pp. 157-158

- Proportion of Total Cost – There is no correlation between the payback of a project and the relative impact on the bottom line for a customer's business. For example, a customer may consider an energy efficiency project that has a short payback and decide not to proceed given that relative to other process improvement opportunities, the energy efficiency option would not have a meaningful impact on the bottom line.[35] Often, it is Enbridge's sales force and technical support that have an influence on a customer's decision to undertake an energy efficiency initiative[36], even when the payback is short. Most customers lack the time and expertise from an energy efficiency perspective[37].

- Cost of Gas[38] - Adopting payback as a threshold subjects results to the current outlook for gas prices because different price scenarios may result in different payback scenarios. During periods of low gas prices (and lower avoided costs) payback periods will be longer. During periods of high gas prices (and higher avoided costs) payback periods will be shorter. The result will necessarily mean more projects will be excluded when gas prices are high. This volatility will lower the predictability of targets and budgets going forward.

- Other Externalities – A simple payback analysis fails to capture other benefits that DSM provides such as peak demand reduction, carbon reduction, or other externalities. This will have impacts for other areas that are important in the new Framework, such as IRP and government policy (carbon) going forward.

- Diversity of Customers – Different customers have different circumstances that will lead to the same measures being applied in different ways and subject to different incentives. That is, based on the customer's age of building, operating conditions, or site specific conditions, the same technology or solution will result in different paybacks. Customers will get frustrated when the same high efficient technology that generates savings is applied in an unequal fashion.

- Customer Centric Programming – Customers are often frustrated by the administration and paper work related to participation in DSM. Enbridge foresees that walking away from a project because of an additional arbitrary administrative and inflexible rule will further frustrate and disappoint customers – especially those that have invested significant time and effort - as was outlined in the hearing by Ms. Oliver-Glasford[39]. This may result in more missed opportunities and less future DSM work with that customer.

43. Turning specifically to the comments made by intervenors, GEC argues[40] that the evidence shows that Large Volume Customers do not come close to pursuing all cost-

[35] Tr.6, p.29
[36] Tr.10, p.52; Tr.11,p.40
[37] Ex. B, Tab 2, Sch.2, p.11, 17
[38] Tr.9, p.126
[39] Tr. 5, p. 157-158
[40] GEC, p.34

effective conservation. As noted by Enbridge witness Mr. Lister,[41] Enbridge's experience is that even where payback periods are short, many customers do not pursue all cost-effective conservation.[42] To include a payback would then be inconsistent with GEC's request for the pursuit of all cost-effective conservation. Mr. Neme acknowledged in evidence[43] that a payback period will result in the loss of customers who would otherwise not have been free riders. To be clear, a payback threshold will reduce the number of energy efficiency projects, although how many is not clear.

44. SEC proposes a two-year payback threshold, with a rebuttal presumption which would allow the Utilities to attempt to prove that a participating customer with a payback period of two years or less was not a free rider. More specifically, SEC states:

> "Failing that proof, projects of two years or less would not be included in results, and incentives paid for those projects would not be recoverable from ratepayers" (p. 12)

45. In other words, if Enbridge proceeds with any customer with a payback period of two years or less, not only would any savings generated be at risk of being excluded from its results, it would also be at risk of recovering the incentives paid to the customer. Enbridge can confirm that SEC's suggestion would result in no customer participating who did not clearly exceed the two-year threshold, for several reasons.

46. First, why would any reasonable person or entity assume such a financial risk for little or perhaps no reward? Take the example where a business receives a $500,000 incentive to undertake an energy efficiency initiative which generates savings representing 2% of Enbridge's Resource Acquisition Scorecard achievement, resulting in a $50,000 potential incentive to Enbridge shareholders. What rational person would risk $500,000 to earn $50,000 when they must first prove that this business was not a free rider in a forum where parties are financially motivated to oppose the recovery of the $500,000 paid to the customer?

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[41] Tr. 6, pp. 26-31
[42] Ex. M.Staff.GEC.12 (Attachment 1, p.137): "When dealing with budget issues, money does not go to efficiency. Even easy projects with a 6 month payback can take time to convince management to participate."
[43] Tr. 9, p.176

47. Second, the costs of and uncertainty relating to attempting to rebut the free ridership presumption is such that no party should welcome such a process. This may turn clearance proceedings into mini-trials necessitating calling participating customers as witnesses and producing their confidential financial data in an effort to demonstrate they are not free riders. Enbridge would be required to alert its customers of this possibility. To be sure, none would participate under such circumstances.

48. SEC states (at page 45) that the timing is right to put a payback threshold into place. This is clearly wrong. A 2016 payback threshold would mean, for 2016, that a material percentage of Enbridge's C/I customers would be excluded and of those that continue, free ridership rates as high as 50% would continue to apply. Without the TAF proposed by Enbridge, SEC's proposal would guarantee failure, as results would be doubly adjusted to reflect the payback threshold on the front end and the applicable free ridership rate on the back end, while at the same time targets would remain unchanged. Such a result is counter to SEC's demands for leadership and innovation and appears to create a situation where the utilities are squeezed between higher demand for savings and cost-effectiveness and increasing constraints layered on to reach targets.

49. Board Staff supports the idea of a payback threshold indicating that it would make natural gas DSM consistent with the treatment of CDM. This comparison misunderstands the differences. The electric CDM framework was developed to ensure budgets were large enough to reduce the payback periods of C/I custom projects down to one year. Said another way, the CDM framework drafters sought to make project paybacks lower, where the conversation in this proceeding is essentially suggesting that paybacks should be higher. They are nearly opposite positions, and if anything support the rejection of a payback threshold for natural gas DSM. Furthermore, the CDM Net-to-Gross ratios include consideration of spillover and are significantly smaller than current natural gas free ridership rates. In 2013, the Industrial Accelerator program was found to have a 1% free ridership rate (or 0.99 NTG ratio), and the Process Systems and Upgrade Initiative program was given a 7% free ridership rate (or 0.93 NTG ratio). These rates should be contrasted with the natural gas utility Industrial free rider rates of

50% for Enbridge and 54% for Union, of which Synapse in making their recommendation of a payback threshold conceded they were unaware during the hearing[44].

50. BOMA argues that:

> "The DSM program eligibility criteria, on the other hand, should be structured so as to allow DSM programs to address the opportunities for energy savings in various types of customers in a logical and orderly manner that takes into account the customers' level of knowledge, financial capabilities, and commercial environments." (p. 8).

51. Enbridge agrees with this statement. A payback threshold would result in eligibility criteria being applied in a less orderly manner and would circumvent customers' level of knowledge, financial capabilities, and the commercial environment. The reason it would be less orderly, as pointed out in response to Board Staff Interrogatory 26[45], is that no two customers are exactly alike. This means that the payback criteria could yield different results for different customers applying the same energy solutions.

52. Enbridge submits that no payback threshold should be ordered by the Board. However, if the Board feels compelled to consider a payback threshold further, it should require that the appropriate study of the relationship between a payback period and free ridership be completed as part of the upcoming net-to-gross study. The results could then be considered as part of the mid-term review. To implement a payback threshold in 2016 would require a fundamental re-working of program design, targets and budgets.

## Target Adjustment Factor

53. In this Application Enbridge has proposed the establishment of a Target Adjustment Factor ("TAF") which would alter targets in the same proportions that changes in input assumptions or adjustment factors alter results. The purpose and intent of the TAF is to aid intervenors, Enbridge, and the Board in successfully implementing a policy of using Best Available Information to determine DSM savings, without generating the negative

[44] Tr.12, p. 181
[45] Ex. I.T7.EGDI.Staff.26

outcomes cited by Synapse as often accompanying such a policy when done retroactively for the purpose of the shareholder incentive.[46]

54. The Board has heard significant discussion about the TAF both through cross-examination and Argument. These discussions included endorsement in GEC's Final Argument of the principle of non-retroactivity of input assumption changes in appropriate circumstances, particularly where such changes are outside of the utilities' control.[47] Similarly, Board Staff's expert noted that retroactively applying input assumption changes "…could result in decreased shareholder incentives … defeating the purpose of an incentive."[48] The Board has also received submissions from certain parties who are opposed to Enbridge's TAF proposal.

55. The Company respectfully submits that no submission made by intervenors or Board Staff on this matter has pointed to evidence from other jurisdictions or Ontario which identify factual problems with the TAF. To the contrary, Synapse confirmed that the retroactive adjustment of results for determining the shareholder incentive is **not** best practice and Mr. Neme materially concurred.

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[46] L.OEBStaff.1, page 119-126.
[47] GEC, page 43.
[48] Board Staff, page 120.

***Fair is Fair***

56. A number of parties have indicated their belief that the TAF has been designed in such a way that it will unduly benefit Enbridge at the expense of ratepayers. SEC suggests that the TAF "… [focuses] too heavily on what is "fair" for the utilities, and not enough on what is fair for the ratepayers."[49]

57. In Enbridge's submission, fair is by definition fair. It is a singular definition in which all parties enjoy an equal freedom from bias or injustice; not a relative definition in which some parties can or should be treated "more fair" than others. Enbridge submits that the explicit purpose of the TAF is to maintain a fair and agreed-upon playing field both for the utility shareholder and ratepayers.

58. Board Staff's expert noted that the practice of maintaining the input assumptions used during DSM planning processes was "…consistent with basic fairness. If all parties have agreed to accepted [net to gross] values based on a given program design and that design is faithfully executed, it is reasonable not to retroactively change the playing field used for crediting energy savings accomplishments."[50]

59. A similar argument to SEC's was put forward by CME, who submitted that "…ratepayers are entitled to know, at the beginning of the year, the savings that need to be achieved by the utility for shareholder incentive to be earned."[51] In Enbridge's view, this exact concept was a driving force behind the TAF proposal; the idea that both ratepayers and the utility are entitled to know the savings <u>and related work</u> that needs to be achieved by the utility for shareholder incentives to be earned. This can only be achieved if targets and inputs are left unchanged from the outset, or if they are changed in tandem with one another. To do otherwise will create "winners" and "losers" and provides an incentive for intervenors to look for reasons to adjust results during the audit process undertaken the following year given that in the vast majority of cases, this will reduce the shareholder incentive. The Company submits that the utilities are entitled to know, the tools with

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[49] SEC, p.11, para. 0.5.7.
[50] Ibid.
[51] CME, page 8.

which, and rules under which, they must deliver the savings. It is unfair to move the goal posts after the fact for reasons beyond the Company's control.

60. In light of the Toronto Blue Jays' ("the Jays") pending 2015 World Series title, a baseball analogy may best demonstrate this issue. In 2015 the Jays led Major League Baseball in runs scored by a wide margin, crossing home plate 891 times. A significant proportion of those runs were achieved by way of home run, with the Jays hitting a total of 232 home runs during the season, or just over ¼ of their total. This impressive home run production led to Toronto's first play-off appearance in over 20 years and, if all goes according to plan, their first World Series title in that same time frame. Imagine now that in 2016 the baseball Commissioner and team owners decide to make home runs worth only 0.5 of a run and apply this rule retroactively. This would result in the Jays retroactively forfeiting their 2015 World Series title, 2015 division title and perhaps even their 1992 and 1993 World Series titles – hardly a fair outcome.

61. Enbridge submits that the above scenario, though submitted with some levity, is an apt example of how the retroactive application of input assumptions without the TAF would impact the Company. In either a baseball or DSM example, the party impacted has no opportunity to rectify the matter due to an inherent inability to change past behaviours, events and achievements. In Enbridge's submission such unmitigated retroactive changes violate the principles of basic fairness without the incorporation of a TAF. It should be recalled that in another leading jurisdiction[52], a similar situation led to a highly contentious and lengthy litigation process. This is something that Enbridge and all parties should not wish to see repeated in Ontario.

***Balance of Targets***

62. An essential concept introduced by the Company's witnesses in this proceeding is the importance of establishing balanced targets which are both challenging and achievable.

63. One of the primary purposes of the TAF is to preserve the careful balance of targets and budgets that will be approved in this proceeding recognizing that they are the result of

[52] I.T2.EGDI.STAFF.8

the extensive commitment of time and effort by all participants and careful deliberation by the Board. As stated by Mr. Ott under cross-examination by SEC,

> "…there are thousands of pages of evidence in this proceeding, and… [the Board] will take all of that information and, bearing in mind protection of the public interest and the setting of just and reasonable rates, hopefully render a decision on targets which makes them both highly challenging so the utility is stretching to achieve them but also achievable so that they are not viewed as unattainable, which would defeat the purpose of an incentive…to the degree that [a net to gross] study does change materially the challenging or achievable [nature][53] of these targets, it will not do so with any bearing on the public interest or setting just and reasonable rates or what's challenging and what's achievable; it will do so in a technical and mechanistic fashion…"[54]

64. In Enbridge's submission this careful balance of targets continues to be an essential matter that the TAF can address. Further, no evidence or arguments have been put forward by Board Staff or any intervenor in this proceeding proposing an alternative method for preserving the Board's decision establishing balanced targets. Thus a rejection of the TAF creates a situation wherein real upcoming initiatives, such as the net to gross study, persistence study, and the boiler base case study, could fundamentally change Enbridge's balance of targets to be either too easy or legitimately unattainable, both with negative outcomes for ratepayers. In a worst case scenario, such changes could provide a significant disincentive to the Company to pursue DSM.

***"Real" Savings***

65. A number of parties in this proceeding have positioned Enbridge's TAF proposal as a method through which the utility could claim credit, and thus shareholder incentives, for savings which are not "real". The Company disagrees with this characterization.

66. SEC submitted that, "Ratepayers provide money to achieve certain measured results, based on **pre-agreed** targets. They expect that those results will be **real**…If the targets are changed retroactively, they are **not real targets**. If the results are measured using

[53] The transcript reference uses the word "issue" in error.
[54] Tr.5. pp.176–177.

information that is known to be incorrect, they are **not real results**. Utilities should only be incented for meeting **real targets** with **real results**."[55] [*emphasis added*]

67. CME similarly submitted that, "Incentives should not be paid for **fictional savings** calculated on outdated input assumptions…Natural gas distributors should receive incentives only when they meet and exceed **predetermined saving targets**."[56] [*emphasis added*]

68. Enbridge finds these submissions to be fundamentally flawed, specifically with regard to the conflicting standards applied to targets and results. SEC and CME both stress the importance of targets which are set ahead of time and which are based on the best available information then available to the utilities and all parties. They both then go on to state that future changes to input assumptions may create situations where calculating savings based upon present-day input assumptions would render future savings "fictional" or "not real". However, if updated assumptions render savings results to be "fictional", then the targets against which the utility is being measured are themselves "fictional", in that they are based on the very same incorrect expectations regarding what can be achieved with a given budget. Moreover, if the targets are meant to be an advance agreement as stated by SEC and CME, then that agreement loses its validity when its foundation for reasonableness becomes fundamentally altered as the result of a study or consultant's work outside of the utility's control.

69. Stated simply, a target that is based upon best available information is real. Where the input assumptions or adjustment factors are updated in the following year, the targets are no longer "real", by SEC's definition just as those savings are no longer "real". Had the updated best available information been known and available when targets were originally being set, they would have been used and these real targets would then be the results that parties could expect. It is academically misleading to call targets which were developed using what intervenors accept as being outdated best available information "real" and to hold them static under the pretense that they are real.

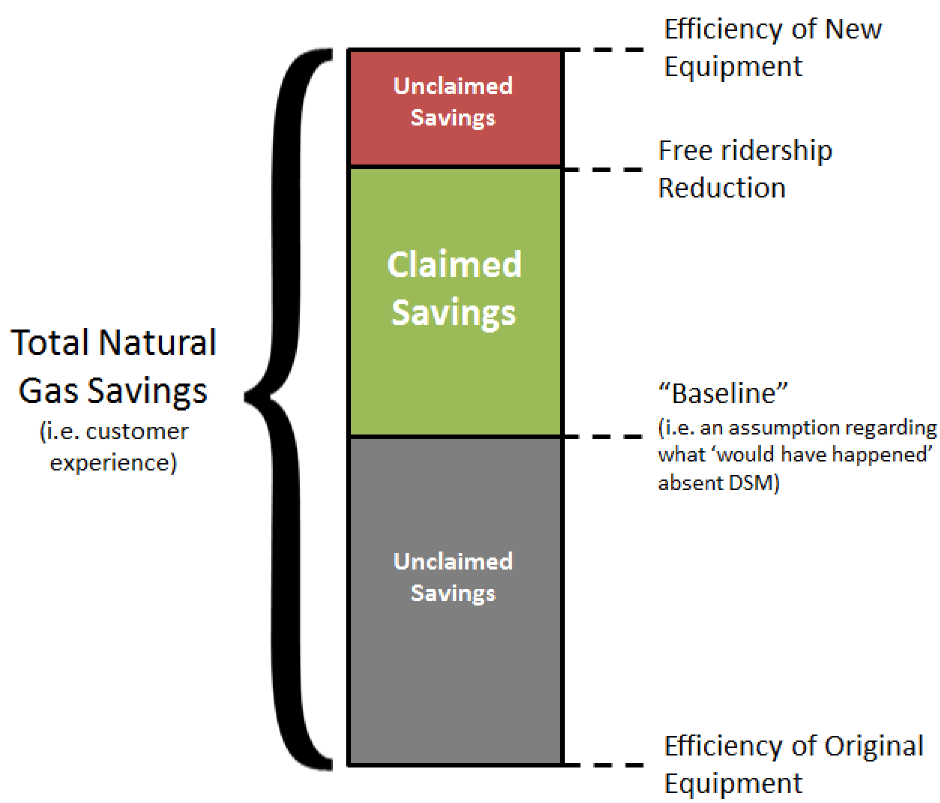
[55] SEC, p. 11.
[56] CME, p. 9.

70. Another issue with the characterization of savings as "real" or "not real" stems from the fundamental difference between gas savings claimed by a utility in a regulated atmosphere and actual customer experiences. Specifically, some submissions have painted a picture where as a result of the TAF Enbridge might reap shareholder incentives in a situation where customers see no meaningful benefit. The Company submits that this is not an accurate picture, and does not appropriately capture the effect of applying a TAF.

71. In its Final Argument SEC draws upon an exchange with Enbridge's Panel 1 regarding the TAF. In that exchange, Mr. Ott begins to outline the distinction between savings claimed by the utility in the regulatory world and the customer experience when he states, "…right now we're talking about utility performance targets and measurement of results, and that's the context we're in here, but…if we went out and switched a hundred boilers, those hundred boilers have been switched, and customers are reaping the benefits of that…"[57] Mr. Lister goes on to further this point, stating that "…if we go out and accomplish that goal by replacing boilers, we still replace the boilers. They might end up being measured differently because of new input assumptions…"[58]

[57] Tr. 5, p.180.
[58] Tr. 5, p.181.

73. SEC interprets this exchange such that, "…Enbridge falls into an obvious error here. The deliverable is not boiler replacements. The deliverable, in this example, is gas savings."[59] In Enbridge's respectful submission, SEC misses the point of this discussion. As highlighted by the figure below, the reality is that the savings that customers see are in most instances entirely different than what the utility claims in a regulated environment, largely due to the variety of adjustments which are made to utility claims.




74. Of particular note are "baselines" and free ridership adjustments. In reference to baselines, Enbridge does not claim the full savings experienced by a customer as a result of upgrading their inefficient, circa 1980 boiler, to a brand new highly efficient boiler. Rather, Enbridge claims the difference between the new, highly efficient boiler which it incented the customer to install, and "what would have happened" absent the utility's involvement. Free ridership adjustments function in the same manner, as a free ridership reduction to claimed results after the fact clearly does nothing to alter what the

[59] SEC, p. 22.

customer actually experiences as a result of a DSM measure or project. Any other after the fact adjustment, such as persistence, would have a similar lack of effect for customers.

75. To be clear, the Company is not suggesting it should receive credit for these 'unclaimed savings'. However, many applications of the TAF will relate to changes in input assumptions or adjustment factors affecting only the figurative savings claimed in the regulatory world, and not the actual gas reductions experienced by customers. To Mr. Ott and Mr. Lister's points, customers would experience the same savings whether or not a target adjustment was made.

***Precedent***

76. Board Staff's consultant, Synapse, submitted evidence in this proceeding regarding the challenges inherent to applying Best Available Information retroactively when calculating utility savings claims. Specifically, Synapse wrote that "Relevant literature consistently recommends that best practice with regard to regulatory reporting is to maintain the planned input assumptions, at least for the savings on which performance incentives are based…"[60] Synapse goes on to note that 31 U.S. states apply evaluation results on a going-forward basis, and that New York, the New England States and Massachusetts all only apply net to gross value changes to future planning efforts. [61]

77. Synapse states that the inherent idea behind these best practices is that "…utilities should not receive reduced incentives for factors outside of their control."[62]

78. Synapse goes on to discuss the matter of free ridership specifically, noting that it involves "…inherent uncertainty…"[63], and is both "…inherently difficult to estimate…"[64] and "…more of an art than a science."[65] In Enbridge's submission, values to which a

[60] L.OEB.Staff.1, page 119.
[61] Ibid, p.120
[62] Ibid, p.119.
[63] Ibid, page 124
[64] Ibid, page 123
[65] Ibid, page 123

qualified expert assigns the above descriptions are clearly not values which the utility can reasonably estimate.

79. Despite Board Staff adducing expert evidence which unequivocally states that best practice for the purpose of the shareholder incentive is to not apply changes to input assumptions retroactively or hold utilities accountable for factors outside of their control, Synapse ultimately endorses the retroactive application of changes to assumptions, but only under the justification of this practice being the current precedent. Synapse notes that, "Prior to 2012, the gas utilities used updated input assumptions for LRAM calculations, but maintained planned input assumptions for the shareholder incentive calculations. For the 2012-2014 plans, the Board adjusted this framework by agreeing with Staff's Discussion Paper that shareholder incentives should also use updated input assumptions…"[66]

80. CCC expresses a similar opinion in its Final Argument, questioning, "…why the Utilities are now seeking to overturn a long-standing policy of applying best available information as appropriate. Both Union and Enbridge have been operating along these lines for many years."[67]

81. In response to CCC, Enbridge questions whether any policy first initiated in 2012 could reasonably be defined as "long-standing", or whether 3 years constitutes "many years" when the prior policy was in effect for at least twice as many years.

82. Regardless of the length of time, Enbridge questions whether precedent is a sufficient justification for the continuation of a policy that is not consistent with "basic fairness". Board Staff are in effect asking the Board to disregard best practices. Enbridge submits that best practice should not be trumped by a practice which has been confirmed by an independent third party (Synapse) and Mr. Neme to not be best practice simply because it is the current practice.

83. This is particularly true when one considers whether or not implementation of this precedent has ever been truly tested. Board Staff's counsel brought this matter forward

[66] L.OEB.Staff.1, page 122.
[67] CCC, page 13.

to Enbridge's Panel 1, questioning how it was that the Company was able to manage in the 2012 to 2014 period without any TAF. Ms. Sigurdson's response was that "…For those years you were referring to, we did not have what we would consider potentially very large impact studies, evaluation studies such as net-to-gross, boiler baseline study, as well as the TRM manual."[68] The company also did not have targets set three years, or even six years out.[69] Instead it negotiated targets for 2012, and then negotiated again for 2013 and 2014 targets. 2013 and 2014 targets were set with a short time horizon in which input changes might occur, thereby creating greater certainty and comfort for the utilities.

84. Given that the above noted studies and other external factors are likely to present themselves throughout the longer term horizon of Enbridge's 6 year DSM Plan, the Company submits that the current precedent does not justify the rejection of its TAF proposal.

85. Finally, it is appropriate to note the reason why precedence is at times a relevant factor. Where change will create much uncertainty and require much time and effort to adapt, it may not be appropriate to change. That is not the situation here. There has not been even a suggestion of such concerns; indeed the practice until 2012 was the best practice. The whole purpose of considering the practice utilized in other jurisdictions is so that Ontario can improve its practices. Why undertake this exercise at all if what is currently precedence cannot be changed simply because it is the precedence?

***Approval and Implementation of the TAF***

86. Enbridge submits that approval of the TAF as filed is appropriate and supported by the evidence brought forward in this proceeding. This is particularly true in light of a renewed desire for innovation, for as Synapse points out in their evidence the practice of applying changes to assumptions prospectively can, "…reduce the program administrator's perception of risk, and thus encourage more innovative programs."[70]

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[68] Tr. 6, p. 144
[69] Tr. 6, p. 178
[70] L.OEB.Staff.1, page 119

87. It should be noted that Enbridge does conduct annual third party reviews of a statistically significant number of its Custom projects to verify their savings. To the degree those projects save more or less than originally calculated, an adjustment upwards or downwards is applied to Enbridge's Custom project portfolio. These verification adjustments will continue, and will not trigger use of the TAF.

88. It should also be noted that the TAF would not operate without significant oversight. With the evaluation of program results now being overseen by the Board and its newly created Evaluation Advisory Committee ("EAC"), the appropriateness of adjusting targets and the resulting impact of these adjustments on the shareholder incentive will be fully considered by the EAC and ultimately the Board. This should provide certainty and comfort to parties as it means that the TAF would be applied in a very transparent fashion and as intended.

89. In the event that the Board is persuaded of the need for a TAF, but not inclined to approve Enbridge's proposal as filed, the Company recommends in the alternative consideration of a "ring-fenced" TAF as a bare minimum. While the mechanics of the TAF could be approved as filed, the Board could order that the use of the TAF be more limited than as originally proposed.

90. Specifically, application of the TAF could be limited to instances where the impact of changes to input assumptions and adjustment factors are both material (e.g. +/- a 5% change in results) and outside of Enbridge's control. At a minimum, the TAF should be used in respect of any material changes arising as a result of major studies such as the net to gross study, boiler base case study, and persistence study. To the degree that the impacts of 2017 Ontario Building Code changes are not accounted for in these studies, such changes should be eligible for use of the TAF.

91. Lastly, GEC submits that "…any change to targets due to assumption changes should be accompanied by a stakeholder comment opportunity that allows for disputes to be brought before the Board for resolution in a simple written process."[71] Enbridge submits that no further process is required. Changes to input assumptions are already the

[71] GEC, p.43.

subject of the utilities' joint annual input assumption update filing and application. GEC can make submission in this application. Parties also have the ability to participate in the Company's annual clearance of DSM accounts proceeding. In addition, Enbridge notes that Mr. Neme is a member of the new EAC and thus GEC will have a direct role in offering advice to the Board on the appropriateness of proposed changes. Clearly no further process is needed.

## Target Setting

92. Below, Enbridge responds to the several submissions made by parties which relate to the targets it has proposed for the 2015-2020 DSM plan. Enbridge will first respond to those comments which are of a general nature or have more general application. This will be followed by intervenor comments specific to programs or program offerings, some of which are positive and support what has been proposed.

### *General Comments*

93. A discussion in respect of targets should start with a reminder of what the Board stated on page 12 of the Framework, which reads:

> "*The Board is of the view that the natural gas utilities possess a significant amount of relevant and critical information that will allow them to appropriately develop and propose performance targets for the Board's consideration as part of their multi-year DSM plan applications. The Board expects that the gas utilities will rely on their most recent achievable potential studies, experience-to-date and projected market opportunities and constraints to inform the development of their annual and long-term natural gas savings targets.*"

94. Consistent with the Framework, Enbridge began building its targets on an offering-by-offering basis based on market potential, experience, and Framework direction. Enbridge then conducted a top down analysis to ensure the resulting budgets were aligned with Board direction. These targets were then presented to the Board and

intervenors by way of this application. As stated in Exhibit B, Tab 1, Schedule 4, the targets established by the Company were informed by:

- The potential study
- Consultation with customers and business partners
- Consultation with intervenors
- Experience with past results
- The Board's guiding principles and key priorities
- Guidance from the Framework on budget and rate impacts
- Knowledge of the market and customer base

95. In addition, as noted in evidence[72], which deals with past and prospective stakeholdering, Enbridge undertook considerable stakeholdering prior to and after the Framework was released. This significant degree of stakeholdering was confirmed by the submissions made by numerous intervenors all of whom expressed the view that more stakeholdering might have been beneficial, had time permitted. While this may have been true, the extent of the stakeholdering that was completed contributed to the development of Enbridge's DSM Plan.

96. Enbridge's multi-year DSM plan and the targets proposed therein were to a large degree influenced by the guiding principles and key priorities of the Framework. This includes increasing participation rates, particularly amongst harder to reach groups, additional focus on small customers, both residential and commercial/industrial, more benchmarking and behavioural programs, and a continued and enhanced commitment to achieving deep and long lasting savings.

97. The evidence in support of the targets proposed is both detailed and thorough. It confirms that targets were devised and informed by Enbridge's more than twenty years of experience, its historical results, especially the most recent of results, and the design of its specific program offerings. Enbridge believes that its overall plan includes "something for everyone".

98. Despite this level of detail and evidentiary support, and notwithstanding the extent of stakeholdering that has been undertaken, several ratepayer groups submit that certain or all targets are too low and should be arbitrarily increased. Whether such submissions

[72] Ex. B, Tab 3, Sch. 1; Ex. B, Tab 3, Sch. 2

are simply a repetition of the efforts of some ratepayer groups to minimize any shareholder incentive or the result of an unsupported suspicion that the Company has deliberately set targets which can be easily achieved, there is no reason to adjust the proposed targets. There are numerous compelling reasons why requests of this nature should be rejected.

99. First, DSM is subject to greater and more direct intervenor involvement than most regulated activities. Whether it is the design of programs, the updating of input assumptions, the auditing and review of program results, the design and roll out of new Frameworks, or the consideration and review of detailed multi-year DSM plans, intervenors are inextricably involved at every step. Enbridge submits that this level of involvement and scrutiny, which includes an annual detailed review of past results, must give rise to a presumption of reasonableness in what the Company has filed. While it remains open to any party to question Enbridge about the manner in which specific targets were devised and to express program specific concerns, Enbridge submits that under the circumstances, it is simply unfair and ungrounded to make broad brush statements suggesting Enbridge's targets as a whole are too low.

100. Second, to the extent that certain program offerings will continue during the multi-year plan, targets have been informed, at least in part, by prior results. While 2015 is the exception given that targets were rolled over from 2014 and increased on a formulaic basis without regard to historical results, 2016, 2017 and 2018 do reflect the Company's experience. As well, Enbridge has proposed that the targets for 2019 and 2020 be reviewed during the mid-term review for reasonableness. Stated differently, Enbridge is of the same view as intervenors who want to ensure that the targets are appropriate and thus it has indicated in evidence that its targets for 2019 and 2020 should be perceived as placeholders. It would not do this if targets were set at an easily achievable level.

101. Third, the history of Enbridge's results does not support the theory that the Company has been understating targets. As noted in evidence,[73] Enbridge has never earned the maximum shareholder incentive. Over the last three years, it has earned an average of 63% of the available maximum reward due to success in respect of some targets and

[73] Tr.13, page 40

disappointment in respect of others, despite best efforts. There is certainly no evidentiary basis to conclude that Enbridge has at any time manipulated targets to be unreasonably low in order to earn higher rewards.

102. Finally, Enbridge submits that certain ratepayer groups would have requested higher targets regardless of what the Company proposed or filed. Enbridge asks that the Board recognize this during its consideration of the multi-year DSM plans filed by the Utilities.

103. SEC devoted a total of three paragraphs of its submissions to the 2016-2020 targets. It states, without further explanation, that some of the issues raised by the LPMA in respect of Union's targets apply to Enbridge. While Enbridge did not participate in the development of Union's targets and cannot speak to them, one obvious distinguishing feature is the fact that Enbridge's targets are set at the 75%, 100% and 150% levels, whereas Union's targets are set at the 75%, 100% and 125% levels. Much of LPMA's submission appears directly responsive to the levels chosen by Union which are obviously inapplicable to Enbridge. Undoubtedly, this led SEC to conclude that the issues in relation to Enbridge's targets are "*not as severe*" (page 28). As a result, SEC submits that Enbridge's targets should be adjusted upwards exactly half of the percentages proposed by LPMA for Union.

104. Recognizing that LPMA's submissions in respect of Union's targets is no evidentiary basis for adjusting Enbridge's targets, SEC states in the very next sentence that it "is very conscious that this is not a rigorous approach to the Enbridge targets." SEC goes on to acknowledge:

> "There were many important issues in this proceeding, and only a very limited time to deal with them. Getting into nuts and bolts of each proposed target would have taken more time than was available. Although the targets are very important, it was not practical to focus sufficiently on the details of each."

105. This statement is confirmation that there is no evidentiary record which would support a blanket adjustment upwards of Enbridge's targets. No analysis was requested or considered by any party during the course of the proceeding to understand the impact of the adjustments. No attempt is made to explain why half versus a smaller or larger percentage of the LPMA proposed adjustments is appropriate. The adjustments

proposed by SEC are arbitrary. Enbridge submits this is not a proper basis for the Board to consider accepting SEC's proposal.

106. Energy Probe, at page 21 of their final argument, proposes an increase in the resource acquisition targets by 10% across the board. Stated on pages 21 and 22, it appears that there are several reasons why Energy Probe makes this submission. First, while it accepts that the cost per cubic meter of savings will increase in future, thereby resulting in fewer savings per dollar, Energy Probe does not appear to accept that resource acquisition targets have been informed by both this reality and the Company's historic results. The fact is that the resource acquisition C/I targets in recent years were set too high and were not achievable. It makes no sense to perpetuate the fictions of the past into the future.

107. Energy Probe appears to understand the impact of what it is proposing, in that if the 100% target is increased by 10%, under the methodology which Enbridge used to develop its 150% stretch target (i.e., it simply increased the 100% target by 50%), this would make the stretch target absolutely unachievable in that the new 150% stretch target would be 50% higher than 110% or 165% of what Enbridge proposes. Accordingly, Energy Probe suggests that the Board order Enbridge to set its stretch target at 125% presumably believing that this is a more reasonable level having arbitrarily increased the RA target by 10% already. While there is no evidentiary basis for either the 10% increase nor the 125% stretch target it appears that the latter is proposed to be consistent with the target levels that Union has proposed. Again, while Enbridge is not in a position to speak to how Union developed its targets and target levels, Enbridge submits that it has complied with the Framework, used its experience, historical results and the potential study to inform its targets, and has set challenging targets going forward.

108. GEC proposes[74] that the targets for 2015 and 2016 be approved but that Enbridge submit an updated plan for 2017 and 2018 based upon increased budgets in each of these years of $20 million and $25 million respectively. GEC asks for an early mid-term review so as to approve budgets at yet even higher levels for 2018 (this is its preferred

[74] GEC, pp.15-16

option) and higher budgets yet again in 2019 and 2020. CCC proposes that budgets and targets be approved for the years 2015 through 2017 now, but that an early comprehensive mid-term review allowing for full discovery and an oral hearing determine the budgets, targets and programs set for the years 2018 through 2020 (page 5). It should be made clear that CCC, however, does not support the increase in budgets proposed by GEC – only the desire for an early mid-term review.

109. Leaving aside the rate impact issues which arise by reason of GEC's proposed budget ramp ups, Enbridge opposes the requests by GEC and CCC, for several reasons. For a review to take place so as to increase budgets and targets for 2018 as suggested, the review would need to be completed by mid-2017, which means that it would need to commence in less than one year from now. Aside from the cost and additional administrative burden and regulatory oversight, these requests are inconsistent with the Minister's Directive that there be a six-year plan with a mid-term review.

110. What becomes apparent from this proceeding, which is inconsistent with GEC's suggestion that updating targets for 2017 and 2018 could be easily stakeholdered and approved, is the fact that setting targets is a time-consuming and detailed task <u>and</u> even when fully documented in writing, a consensus amongst the various stakeholder groups is difficult to achieve. There are rate payer groups that appear very much concerned by the rate impacts of GEC's proposals and so significant differences between stakeholders on the amount to be spent on DSM has and will continue to exist.

***Responses Specific to Intervenors***

*SEC proposes revising 2015 targets if the 150% cap proposal is not accepted*

111. Enbridge deals with the inappropriateness of the 150% cap proposal elsewhere in this Reply Argument. In respect of SEC's submissions regarding 2015 targets, SEC first states that because 2015 was a rollover, the fact that some targets overstate while others understate what is likely to occur is reasonable (page 27). SEC goes on to suggest that its views are based in part by the 150% cap proposal. Enbridge submits that because 2015 was a rollover, there is no basis for, nor should the Board contemplate applying a 150% cap to any metric for a year that is almost now complete.

112. In terms of adjusting 2015 targets, aside from this being contrary to what the Framework requires, SEC has not specifically stated the adjustments that would be required. This is probably due to an awareness of the fact that if you adjust for one target, it is necessary to then adjust all targets. This point was explained in the evidence at Exhibit B, Tab 1, Schedule 3, and then again in the Hearing.[75] The whole purpose of the rollover and the expected expedited treatment for 2015 would be lost as it would then become necessary, after the fact, to propose new targets, negotiate same and eventually receive approval for these new targets. This should not take place.

*Energy Probe proposes returning the resource acquisition scorecard back to a single combined scorecard (p. 21)*

113. Enbridge provided its reasons in evidence[76] in support of the proposed scorecards. It continues to believe that splitting the scorecard to value larger and smaller volume customers differently provides the appropriate focus on the priority areas as identified by the Minister's Directive and the Board's Framework. Enbridge believes that this is an example of its thoughtfulness and an innovative approach to its program offerings. It appears that there is support from other stakeholders for this proposal.

*GEC recommends that the Board direct the Utilities to allocate extra funds to C&I program areas and propose revised targets for 2017 and beyond (p. 16)*

114. While GEC's proposals were discussed at a higher level earlier, it is appropriate to deal with this request specifically as it would necessarily require Enbridge to redevelop targets for its C&I program offerings. While it is related to the budgetary increases which GEC seeks, it appears that it is grounded in the evidence of the joint panel who opined at a high level that with additional resources, the C/I sectors have some promise.[77] While Enbridge may very well direct additional resources at its commercial sector if its budgets were increased, the fact that the potential may exist does not override the clear determination made by the Board that budgets should be informed by rate impacts. Further, this recommendation must bear in mind the realities of market potential, cost-effectiveness, and other natural limitations of DSM which may effectively increase the

[75] Tr. 6, p.64
[76] Exhibit B, Tab 1, Schedule 4, page 15
[77] Tr.13, pp.49-50

average cost of savings achieved in the event that C/I budgets are significantly increased.

*GEC proposes that the small volume CCM target be increased by 10% due to low m3/$ of the Direct Install Program (p. 31)*

115. Enbridge supports its currently filed targets and the budgets that support them. However, the Company recognizes that it may have been conservative in estimating targets for its Direct Install offer, given that this is a new and untested offer in its portfolio without the historical context upon which to build challenging yet achievable targets with a great degree of certainty.

116. To the degree that the Board is persuaded that the Direct Install offer can accommodate larger targets with the same budget, Enbridge strongly asserts that this does not warrant increasing by 10% the much broader CCM metric for small volume program offerings on its Resource Acquisition scorecard. Enbridge's interrogatory response to GEC 14[78] confirms that in addition to Direct Install, the Small Volume bucket consists of Custom, Prescriptive, Residential Thermostats and the HEC programs offerings. The possibility that a modest change of 10% to Direct Install targets may be appropriate does not warrant increasing the larger target for all Small Volume customers by 10% .

*GEC proposes that the Utilities should implement an upstream delivery model, and stakeholders can revise targets in the 2017 deliberations (p. 38)*

117. There are a few issues with this recommendation. First, GEC reiterates its desire to have intervenors bypass the direction laid out by the Board in the Framework by suggesting that new targets can be established for 2018 to 2020 through deliberations with intervenors. The Framework indicates that the Board expects targets to be the subject of its review and not settlement agreements. Next, GEC is critical of the utilities for not introducing an upstream delivery model. Enbridge described in an interrogatory response[79] and in an undertaking[80] that it is open exploring this delivery channel.

[78] I.T2.EGDI.GEC.14
[79] I.T5.EGDI.GEC.24
[80] JT1.14

118. GEC claims, without evidence, that the utilities are resistant to an upstream model because they are "*just risk averse and value the direct contact with their customers more than their ability to increase participation and savings.*"[81] Of course the utility values its relationship with the customer as it is certain the Board and the intervenors do as well. Enbridge has had direct historical experience with the upstream model and understands that it presents as many challenges as it does opportunities. These challenges are well documented by the Company in the references cited above. Again, as noted above**,** Enbridge will explore opportunities with this delivery model, but rejects the notion that there should be an increase in targets and that a new 'deliberation' process should be undertaken toward this end.

*CCC (HEC) proposes for 2016 and 2017 an increase in residential targets because the Utilities have exceeded them in the past (p. 11)*

119. Enbridge takes issue that prior success should be used to penalize the Company going forward. In fact, this is the best way to create a disincentive to being successful in future. It is noteworthy that there have been many cases where the Company has not achieved targets. As explained throughout this case, the Company has used many inputs to develop its targets. Virtually all of the targets are higher than historical results and they grow considerably over time.

*CCC Accepts Adaptive Thermostats program as proposed (p. 12)*

120. Enbridge agrees the Board should approve the Adaptive Thermostat offer as proposed. The targets and incentive levels for 2019 to 2020 can be revisited in the mid-term review to assess whether they remain appropriate.

*(Energy Probe – HEC) The Board should approve proposed budget for HEC offers and incentives. (Enbridge takes this to mean targets as well.)*

121. Enbridge agrees the Board should approve the Home Energy Conservation offering as proposed. The targets for 2019 to 2020 can be revisited in the mid-term review to assess whether they remain appropriate.

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[81] GEC, page 38

*(VECC – HEC, Adaptive Thermostats) VECC has no issues with proposed CCM or participant targets for RA Residential programs (page 20)*

122. Enbridge agrees the Board should approve the proposed CCM or participant targets for its resource acquisition residential offers.

*CCC and Energy Probe propose that Home Labelling be discontinued until it is required by legislation (pp. 15 and 33)*

123. Enbridge submits that the program is appropriate to fill the gap between present day and the time when Home Labelling may become mandatory in the province. GEC - Increase target by 1,000 homes immediately (presumably from 2016 forward, and then for all years (p. 31)

124. There is no evidentiary basis for the 1,000 home increase proposed by GEC. Such an increase could not be accommodated by the existing budget, but could be achieved if the Company had additional resources. However, Enbridge is cognizant of the Framework and the rate impact views of the Board. Accordingly, this proposal should be denied.

*(GEC – CEM) This target grows very slowly, and should be adjusted as part of the 2017 deliberations.*

125. Enbridge takes GEC's recommendation to mean that it does not dispute the targets for 2016. Since Enbridge does not believe there should be a 'new set of deliberations', this should also extend through to 2018. The offer targets can be revisited or reevaluated at the mid-term review as appropriate.

*(GEC – SBD Commercial) The target should be adjusted upwards in the 2017 deliberations.*

126. See response contained in the above paragraph #116.

*(VECC – SBD Residential) Number of completed units should increase, given proposed budget increase. Participation levels should be increased.*

127. The target for participants increases from 18 builder enrolments in 2015 to 30 enrolments in 2016, a near doubling. This is more than EGD has ever achieved in the past and will take an incredible effort to deliver (never mind achieving the stretch of 45 participants). VECC's submission is not based on any evidence, nor is it defensible by

any standard. The target for the Homes Built metric of 2,501 is higher than has been achieved in any historical year. In addition, using a simple 3-year average as proposed by VECC does not make sense beyond 2017, when it is known that there will be changes made to the Building Code in 2017. The code changes and the number of participants targeted going forward, therefore, require due consideration and must be taken into account, as Enbridge has done, in establishing the target for the Homes Built metric. Enbridge firmly believes that the metrics proposed are aggressive targets based on what the building industry can build through the influence of the SBD program.

**Market Transformation and Energy Management ("MTEM") Metrics**

128. While no other party raised an issue with respect to the content of each of the scorecard 'buckets' proposed by Enbridge, GEC recommends moving several offerings out of Enbridge's proposed MTEM program and into the RA program. Specifically, GEC proposes to move the My Home Health Record, School Energy Competition, Run it Right, Comprehensive Energy Management, and New Construction Commissioning from MTEM to RA.

129. Enbridge explained in its evidence, at Exhibit B, Tab 1, Schedule 4, its proposal to include Energy Management programs within the sphere of Market Transformation. Essentially, the Board in its Framework and Guidelines expressed a definition for Market Transformation as including behavioural aspects. Similarly at Exhibit B, Tab 2, Schedule 1, page 49, Enbridge provided the ACEEE's view of Market Transformation as follows:

> "Market transformation, unlike resource acquisition, has a much longer-term focus, and aims to address structural barriers to energy efficiency such as outdated building codes or lack of vendors offering an emerging technology. **Its goal is to change marketplace behavior to increase acceptance of energy efficiency technologies and practices, but this can take time (often 5 to 15 years).** Savings often grow slowly in early years, but when savings start to accrue, they are more likely to be persistent without relying on direct intervention like resource acquisition does." [Emphasis added].

130. There are 2 primary reasons why Enbridge set up the MTEM Program and Scorecard as proposed:

i. Behavioural aspects are consistent with the definition of Market Transformation. Both the Board and the ACEEE have defined Market Transformation as including behavioural components. This makes sense since changing behaviours transforms the market.

ii. Behavioural change is not the same as acquiring resources. The offerings in question are not exclusively about acquiring resources. They may result in opportunity identification and retrofit activity; however, at their core, these offerings are about driving enhanced behaviours by identifying opportunities and providing enhanced data driven decision making.

131. The line of reasoning that GEC appears to be applying is that the resource acquisition program is defined exclusively as those offerings that result in defined, measurable savings (i.e. CCM). This is not how the program definitions have been set in the past, nor should they be going forward. The buckets as Enbridge has applied them are geared towards what the offerings are intended to achieve, rather than how they will be measured.

132. GEC further recommends that once the offerings are moved to the RA bucket, the remaining New Construction programs will have a higher weight apportioned to them. This recommendation would upset the balance of the scorecard that EGD has proposed. Smaller weights to the programs being moved into RA and larger weights to the remaining MTEM offerings and a smaller MTEM budget proportion will have the unintended consequence of ensuring that Enbridge continues to focus on the same CCM generating offerings. The MTEM offers all require significant effort, time, and resources. If the maximum award on them is capped or minimized, then the utility will turn its attention and focus where it can earn an incentive. The scorecard design as proposed produces a balance between programs, and a focus that the Company believes is important.

133. GEC's recommendation seems to imply that DSM is only successful if it generates direct CCM. In Enbridge's view all of the programs drive enhanced energy performance and ultimately savings. It is worth noting that Mr. Shepherd made the following point at page 7 of the SEC's Final Argument about DSM more broadly:

> This is not about CCM. This is about identifying the most difficult - the highest - barriers, and then surmounting them. Over time, parties and the Board have turned DSM into an activity of "chasing the incentive", where utilities maximize their CCM through easy projects that generate shareholder incentive dollars, and eschew "the hard stuff" because it is not as lucrative.

134. EGD agrees that DSM should not be only about CCM. Enbridge believes that the next generation of DSM requires evolution in thought about what DSM will achieve. This includes more focus on participation, energy literacy, benchmarking, and behavioural aspects, rather than just CCM. Changing culture cannot be brought about by simply counting CCM each year.

## My Home Health Record (OPower)

### *What is My Home Health Record (OPower)?*

135. By providing customers with better information on their energy use and personalized energy saving advice, customers are encouraged to measurably and verifiably use less energy and thereby save money on their monthly bills. This is the basis upon which Enbridge started discussions with OPower almost two years ago.

136. As identified in evidence OPower is a leader in behavioural energy efficiency solutions for the utility industry. Currently OPower is working with more than 95 utilities, in 36 U.S. states and 9 countries to deliver personalized energy usage insights to over 50 million residential households. OPower's Home Energy Report ("HER") offers have helped customers save over $1 billion dollars and over eight terawatt-hours of energy.

137. OPower's HER offer is more than just mail - it is a sophisticated software platform that utilizes advanced data analytics and behavioral science to provide residential customers with better energy information through personalized mailed reports, emailed reports, and an integrated web portal to empower them to make better energy usage decisions. OPower is currently analyzing 40 percent of all residential energy data in the United States and so they are uniquely positioned to identify patterns and trends that no one else can.

138. As a result, there are multiple public benefits associated with OPower's HER program, including but not limited to:

a. Cost effective energy savings: OPower HER programs create consistent and sustainable energy savings on the range of 1.5 - 2.5% savings for electric customers and 0.75 – 1.5% savings for gas customers. These energy savings results have been verified through over 50 independent evaluations of programs across millions of households for 33 US states.[82] This leads to reduced energy costs and lower bills for families who participate in the program.

b. Widely distributed benefits: OPower HER programs enable widespread energy savings over a large customer population. HER programs have the added benefit of delivering energy savings to residential customers regardless of demographics, including age and income. On average, seniors, renters, and low-income customers save just as much, if not more, than homeowners and customers in average- to high-income groups, respectively.[83]

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[82] See, for example, the following select independent evaluations. (These were all entered into the record on September 3, 2015 in response to Undertaking J8.3. They were included in Appendix 1 to the document entitled, "OPower Home Energy Reports: Program Design and Measurement and Verification of Savings)

(i) Dougherty, Anne, July 2012. "Massachusetts Three Year Cross-Cutting Behavioral Program Evaluation Integrated Report." *Opinion Dynamics with Navigant Consulting*;
(ii) Gunn, Randy, May 2012. "Evaluation Report: Home Energy Reports." *Navigant Consulting*;
(iii) April 2012. "Puget Sound Energy's Home Energy Reports Program: Three Year Impact, Behavioral, and Process Evaluation." *KEMA Energy & Sustainability*;
(iv) Allcott, Hunt, October 2011. "Social Norms and Energy Conservation." *Journal of Public Economics* Vol 95 (9-10), pp. 1082 – 1095;
(v) Todd, Annika, Steven Schiller, and Charles Goldman, October 2011. "Analysis of PSE's Pilot Energy Conservation Project: Home Energy Reports." *Lawrence Berkeley National Laboratory*;
(vi) Dougherty, Anne, June 2011. "Massachusetts Cross-Cutting Behavioral Program Evaluation." *Navigant Consulting and Opinion Dynamics*;
(vii) Davis, Matt, May 2011. "Behavior and Energy Savings: Evidence from a Series of Experimental Interventions." *Environmental Defense Fund*;
(viii) Cooney, Kevin, February 2011. "Evaluation Report: OPOWER SMUD Pilot Year 2." *Navigant Consulting*;
(ix) Wilhelm, Bobbi, October 2010. "Puget Sound Energy's Home Energy Reports Program." *KEMA*;
(x) Ivanov, Chris, July 2010. "Measurement and Verification Report of OPOWER Energy Efficiency Pilot Program." *Power System Engineering*;
(xi) Macke, Rich, June 2010. "Measurement and Verification Report of Lake Country's OPOWER Energy Efficiency Pilot Program." *Power System Engineering*;
(xii) Allcott, Hunt and Sendhi Mullainathan, March 2010. "Behavior and Energy Policy." *Science*. Vol. 327;
(xiii) Allcott, Hunt, February 2010. "Social Norms and Energy Conservation." *Working Paper, Massachusetts Institute of Technology*'s *Center for Energy and Environmental Policy Research*;
(xiv) Ayres, Ian, et al., September 2009. "Evidence From Two Large Field Experiments That Peer Comparison Feedback Can Reduce Residential Energy Usage." *NBER Working Paper*;
(xv) Klos, Mary, September 2009. "Impact Evaluation of OPOWER SMUD Pilot Study." *Summit Blue Consulting, LLC*

[83] See, for example, the following select independent evaluations. (These were all entered into the record on September 3, 2015 in response to Undertaking J8.3. They were included in Appendix 1 to the document entitled, "OPower Home Energy Reports: Program Design and Measurement and Verification of Savings)

(i) Gunn, Randy, December 2010. "Energy Efficiency / Demand Response Plan: Plan Year 2 (6/1/2009-5/31/2010), Evaluation Report: OPOWER Pilot." Navigant Consulting.
(ii) Gunn, Randy, May 2012."AEP Ohio EE/DR Plan Year 3. Program Year 2011 Evaluation Report - HER Program". Navigant Consulting

c. Heightened awareness of efficiency: OPower delivers energy savings by providing personalized energy information and insights. Through OPower's program, households become more aware of their energy usage and opportunities for conservation – through both changes in behavior and the purchase of energy efficient products. Through extensive customer surveys of tens of thousands of utility customers participating in HER programs, results show that the OPower HER program has proven open rates and recall rates of the personalized energy reports at greater than 75 percent.[84]

***Cost Effectiveness***

*Board Staff Comment: "Enbridge's behavioural offering was demonstrated to be marginally cost-effective while Union's behavioural offering was shown not to be cost-effective at all. The accuracy of the TRC-plus benefits is also questionable, given the inconsistency of the savings estimated by each utility. Additionally, Staff notes that the cost of delivering the behavioural offering for Enbridge is almost five times higher than its Home Energy Conservation offering, which costs just over $0.10 per CCM."*

139. *Response:* The My Home Health Record offer is cost effective with a TRC of almost 1.2 and will help Enbridge reach the vast majority of its residential customers with no and low cost energy savings opportunities. Between 2016 and 2020, the My Home Health Record program will scale up to reach 1,350,000 customers (nearly 70% of the residential customer base) while the Home Energy Conservation program will reach up to 13,478 customers at its peak in 2020.[85] Both of these residential programs benefit customers in different ways, with the My Home Health Record program extending meaningful savings to a broad group of customers and the Home Energy Conservation helping a smaller, select group of customers with deep energy savings. The MHHR offering is one of the only offers that is able to reach a critical mass of customers across the province and one of the only offers capable of driving the culture of conservation

(iii) Gunn, Randy, May 2012. "Evaluation Report: Home Energy Reports." Navigant Consulting
(iv) December 2012. "Program Year 1 (2011-2012) EM&V Report for the Residential Energy Efficiency Benchmarking Program." Navigant
(v) May 2013. "Home Energy Reports Program: Program Year 2012 Evaluation Report." Navigant Consulting
(vi) January 2014. "First Annual Report to the Pennsylvania Public Utility Commission for the Period June 2012 through May 2013, Program Year 4" The Cadmus Group, Inc.

[84] This information on open rates and recall rates is included in the response on September 3, 2015 to Undertaking J7.6 as part of the OPower presentation entitled, "Enbridge Stakeholder Meeting"

sought in the Long Term Energy Plan, the Minister's Directive, and the Board's Framework.

***Savings Assumptions***

<u>*Board Staff Recommendation:*</u> *"Staff has observed that Enbridge and Union used different assumptions to calculate year-over-year savings resulting from their residential behavioural offerings, despite having worked with OPower to establish their savings estimates. As a result of the differing assumptions, Union anticipates saving achievement levels to rise without adding new participants. Enbridge assumes that savings will last for three years and anticipates that savings achievement levels will fall after 2017 while adding new participants in 2018. It is unclear to Staff why the savings estimates differ, and which approach is correct."*

140. <u>*Response*</u>: The energy savings accounting proposed by Enbridge utilizes the most current approach based on independent evaluations of savings persistence over time. The durability of these savings have been confirmed by the over fifty independent evaluations that have verified the multi-year impact of OPower's HER programs and are discussed in detail in the Cadmus whitepaper "Long Run Savings and Cost-Effectiveness of Home Energy Reports Programs" that was included in the April 1st filing .[86] [87] The Cadmus report and these independent evaluations show how HER programs maintain or improve savings over multiple years as long as HERs continue to be sent.[88] One such independent evaluation concluded when evaluating the durability of savings at a long-running deployment: "What remains is a durable treatment effect: for the group that continues to receive reports throughout our four-year sample, the effects continue to grow."[89] In fact, OPower's longest running HER programs have been running for six and seven years and continue to show persistent, durable savings.

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[86] An annotated bibliography of independent evaluations of OPower HER programs was entered into the record on September 3, 2015 in response to Undertaking J7.5
[87] Khawaja, M.S. and J.I. Stewart, 2014. Long Run Savings and Cost-Effectiveness of Home Energy Reports Programs. Cadmus White Paper, 2014. Available at http://www.cadmusgroup.com/papersreports/long-run-savings-cost-effectivenesshome-energy-report-programs/ (This was entered into the record as part of the April 1st filing)
[88] Integral Analytics (November 2012). *Impact and Persistence Evaluation Report: Sacramento Municipal Utility District Home Energy Report Program*. (This citation was included in Cadmus Whitepaper)
[89] Allcott, Hunt, Todd Rodgers, October 2012. "The Short-Run and Long-Run Effects of behavioral Interventions: Experimental Evidence from Energy Conservation." National Bureau of Economic Research, Working Paper 18492, p.3. (This citation was included in Cadmus Whitepaper)

### *Long-term Savings vs. Short Term Savings*

*Board Staff Comment:* *"Staff is also of the view the behavioural savings are short-term savings. If the offerings were to cease beyond 2020, there is risk that most of the achieved savings would be quickly lost if customers do not continue receiving the energy reports."*

141. *Response:* As explained in the Cadmus report "Long Run Savings and Cost-Effectiveness of Home Energy Reports Programs" that was included in the April 1st filing, independent evaluations and analysis of OPower's long-running programs demonstrate that savings persist for at least two years post treatment, and this persistence increases the longer a program is run.[90] [91] As a result, there is broad consensus among North American energy regulators as to the value and robustness of behavioral energy savings. In fact, behavioral programs have been incorporated into long-term energy efficiency strategy and resource planning in several utilities. For example, U.S. utility MidAmerican Iowa elected to upgrade its behavioral offering from a short-term pilot to a residential program for a period of five years as part of its 2014 to 2018 residential portfolio.[92]

### *Program Lift*

*Board Staff Comment:* *"Furthermore, there is no guarantee there will be continued leads to other offerings beyond the period of the program, as there have been no independent evaluations that specifically analyzed the long-term effects of the promoted program lift."*

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[90] Allcott, Hunt, Todd Rodgers, October 2012. "The Short-Run and Long-Run Effects of behavioral Interventions: Experimental Evidence from Energy Conservation." National Bureau of Economic Research, Working Paper 18492, p.3 (This citation was included in Cadmus Whitepaper)

[91] Khawaja, M.S. and J.I. Stewart, 2014. Long Run Savings and Cost-Effectiveness of Home Energy Reports Programs. Cadmus White Paper, 2014. Available athttp://www.cadmusgroup.com/papersreports/long-run-savings-cost-effectivenesshome-energy-report-programs/

[92] MidAmerican (1 February 2013): 2014-18 Energy Efficiency Plan Docket No. EEP-2012-0002, pp.37-40. (This citation was all entered into the record on September 3, 2015 in response to Undertaking J8.3. It was included in the document entitled, "OPower Home Energy Reports: Program Design and Measurement and Verification of Savings)

142. *Response:* The program lift from OPower's behavioral energy efficiency programs is proven and discussed in the whitepaper "Impact of Home Energy Report Programs on Program Participation Lift" submitted as part of this proceeding[93]

143. Specifically, this program lift has been documented across 13 independent evaluations, covering 44 participant waves at 12 utilities.[94] The findings of these evaluations show:

- The program participation lift of HER recipients for gas programs (14.7%) is moderately higher than program lift for electric programs (10.3%).
- Program participation lift varies by program category. The programs seeing the most impact from program participation rate lift are home performance and home energy audit which account for 26% and 16% of the overall lift respectively. So for a home performance program that has a 5% participation rate, the addition of the HER program could lift the participation rate to 6.3%.
- Energy savings from lifted programs constitute a modest 1.4% of first-year HER savings
- The energy savings from lifted programs are much higher when evaluated over the lifetime of the lifted program
- OPower's own internal analysis finds that participation lift can increase significantly, as much as 30-60% when the program is promoted through the HER program.

***Ramp Rate***

*Board Staff Comment: "Although both utilities expect that the behavioural offerings can be used to cross promote other offerings, they do not seem to have considered using a gradual participant ramp-up rate throughout the program period consistent with the DSM budgets available. As a result, Staff is concerned that the utilities could increase demand in other offerings such as home energy retrofits without having sufficient funds in those offerings to meet the demand."*

144. *Response:* While OPower has proven its ability to drive participation lift in other programs, the amount of this lift is certainly manageable. OPower works closely with its utility clients to design the behavioral programs to achieve desired outcomes. These outcomes range from achieving behavioral energy savings to designing campaigns to segment and target specific program offerings to customers that have a propensity to participate. More impactful than a program ramp rate is the promotion of specific

[93] Document on OPower program lift, entitled "The Impact of Home Energy Report Programs on Program Lift", was submitted on September 3, 2015 in response to Undertaking J8.9
[94] Citations for each of the independent evaluations were entered in record on September 3, 2015 in response to Undertaking J8.9 as part of document entitled "The Impact of Home Energy Report Programs on Program Lift"

program offerings - this promotion can be dialed up or turned off completely. These decisions are done in close coordination with each utility based on the goals they are trying to achieve in other programs.

***Pilot***

<u>Board Staff Comment:</u> ***"****Staff requests that rather than launching these offerings, Enbridge and Union should cooperate in undertaking a two-year pilot to develop better multi-year savings based on actual measurement data. Depending on the results of the pilot, utilities can develop a revised behavioural offering for review and approval by the OEB at mid-term review."*

145. *<u>Response:</u>* The results of the existing pilot program have proven that OPower's forecast model for savings is accurate. The savings achieved in the first year of the program were 0.8 percent and fall within the average savings achieved by OPower gas programs of 0.75 – 1.5% savings for gas customers. In addition, energy savings continue to ramp well beyond the first year of a program. Based on over 500 program years' worth of data and experience from HER program deployments, OPower builds energy savings forecasts with a high degree of accuracy and always factors in a level of conservatism. Given this experience and ability to generate consistent savings across geographies, utility types, and customer segments, an additional pilot would lead to an unnecessary delay in energy savings for customers, the utility, and in achieving province-wide conservation goals.

***Joint Program Delivery with Union and Electric LDCs***

<u>Board Staff Comment:</u> *"Staff submits that a jointly-delivered residential behavioural offering for Ontario would enable the gas utilities to negotiate more flexible contract options, streamline future administration and marketing costs and eliminate potential redundancies. In addition, Staff believes there is significant value in exploring a province-wide residential behavioural offering in collaboration with electricity distributors."*

146. *<u>Response:</u>* There are complexities associated with running a joint program across different utilities, including data integration and data availability based on the frequency of meter reads. Furthermore, joint programs may create confusion for customers given

that they will have to be co-branded between multiple utilities and there will also be confusion such as sorting out who customers should call with questions.

147. Joint programs are worth investigation, but should be considered for a later phase of the program evolution. Customers can benefit now from the launch of the residential behavioural offering, and these savings and other benefits should not be delayed.

## Variance Accounts (DSMCEIDA, DSMPIDA, DSM IT Upgrade)

148. The Company proposes to introduce three new variance accounts to deal with specific issues that have arisen. Each of these proposed new accounts was addressed at Exhibit B, Tab 1, Schedule 6.

### *DSM Participant Incentive Deferral Account ("DSMPIDA")*

149. As described in the evidence, the purpose of the DSMPIDA is to record the variance in incentive payments earned and paid to DSM participants versus the budgeted annual amounts for programs that span a multi-year horizon between when a customer becomes eligible for an incentive and the time when the customer earns the incentive.

150. Energy Probe expressed a concern that "out of period costs are being put into rates, especially given the changes occurring to the Residential Savings by Design Program." (page 35). Enbridge wishes to assure Energy Probe and the Board that these concerns are not valid.

151. The Residential Savings by Design offer has always been, and continues to be, a multi-year program. As stated in the Interrogatory response to SEC 12,[95] a difference has arisen over time between budgets and incentives since 1) Enbridge is not able to predict the precise timing of when a builder will build; and 2) actual performance against the target will vary from year to year.

152. Contrary to Energy Probe's statement, the budget methodology as proposed by Enbridge does not contain "out of period" costs. Costs budgeted in 2013, for example,

[95] Ex.I.T5.EGDI.SEC.12

for incentives not earned by participants in that year were returned to ratepayers through the DSMVA. Incentives earned in 2015 and beyond are not out of period – they are current (i.e. 2015) costs. Enbridge based its forecast on the projected level of incentive it will incur for each given year. That is no different from any other budget item. The Company intends only to true up, collect or reimburse, for funds that are actually required to meet the incentive obligations when they become due. What makes this offering unique is that performance today affects budget up to 3 years hence (5 years in the case of Commercial). Therefore, the Company does cannot reasonably know the impact of over-performance today on future budgets, and as a result, the impact that would have on the ability to generate savings for other customers. The best way to deal with this interrelationship is to isolate this budget amount to ensure that the program funds the period costs as they occur.

153. Aside from Energy Probe expressing the above concern in its final argument, no party provided any opposing position to this account throughout the case or in final argument.

**DSM Information Technology Capital Spending Variance Account (‘DSMITCSVA’’)**

154. The DSMITCSVA will record the revenue requirement implications of the capital spending on the replacement of the DSM IT systems. The account would record the depreciation, interest, taxes and return on equity costs based on the actual capital cost of the replacement IT system. These amounts will then be brought forward for review by the Board as part of the annual DSM clearance of accounts application, and any variance from the amounts embedded in rates will be cleared through to rates as either a credit or debit.

155. Only two parties had any comments about the DSMITCSVA. Energy Probe asked a series of questions in its final argument, while Board Staff endorsed the DSMITCSVA. Enbridge responds to the questions asked by Energy Probe in their final argument below.

i. Should the IT upgrade be treated as a Z-factor under the IRM plan?

EGD responded to this same question in the interrogatory response to Energy Probe 28 Enbridge believes that the Z-factor criteria would not apply to the IT system upgrades, and that these costs are correctly considered in light of the new DSM Framework direction provided by the Ministry and the Board. Please see the response to Exhibit I.T10.EGDI.EP.28 for more details on this response.

ii. Should the IT project have been advanced and started in 2015 using the Incremental Budget which EGD now indicates may not be used in 2015 and requests in part be carried forward to 2016.

The work on the DSM IT was commenced in 2015. The 2015 Incremental Budget has been and will be used for other purposes and should be completed in or around 2016.

iii. There is no provision for On-Bill Financing beyond the current CIS capability and until the requirements are known better, whether there will be incremental requirements and cost.

The Company has not included additional costs to facilitate changes to the design and application of On-Bill Financing since it cannot reasonably anticipate such changes, if any. The Company has proposed a working group to see if changes are required, the costs, and how the costs should be recovered. It is anticipated that the outputs and recommendations from this working group could be reviewed during the mid-term review.

156. The only other party to comment of the DSMITCSVA was Board Staff. Board staff supports the use of the DSMITCSVA[96].

***DSM Cost Efficiency Incentive Deferral Account (DSMCEIDA)***

157. Energy Probe asked the Board to, “clarify the purpose and accounting rules for the DSMCEIDA account, including whether it applies to Program spending or other budget surpluses etc. and request the necessary Accounting Orders from the Companies” (page 35). Board Staff and BOMA both made suggestions for the application of this mechanism.

158. BOMA suggests that if the utility can produce results at less than budget, it must mean that the targets were too low. As a result, “The objective is clear – increase results.”

[96] Board Staff, p.27

(page 11). Enbridge disagrees with this statement as it presumes that inadequate targets are the only explanation effectively assuming that there is no way a utility could ever be cost effective or efficient. It follows from BOMA's view that there is no justification for the CEI. This is inconsistent with the Board's view in the Framework.

159. Board Staff make several recommendations in respect of the DSMCEIDA which Enbridge accepts. In respect of any monies carried forward through this account, they should be used in a subsequent year on programs at the discretion of the Utilities. It is appropriate that Enbridge should be able to apply the additional funding to those programs that will generate the greatest results. Second, Enbridge is relatively indifferent to use of a deferral account or an informal "tracking account", as suggested by Board Staff. Enbridge does believe that a deferral account is a preferred means of measuring, monitoring, and tracking relevant amounts but acknowledge that a tracking account could also work. Finally however, Enbridge does not accept that any amounts eligible for carryover be reduced by amounts used for performance over 100% which are added to the DSMVA.

160. Enbridge submits that this recommendation:

(a) creates a perverse incentive to cease overachievement through DSMVA spending in order to access the CEI;

(b) is not practical. This is a very specific scenario where the 100% target has been achieved or exceeded, but not by any great degree else the DSMVA would have been accessed;

(c) as a practical matter, defeats the purpose of the CEI by in effect simply allowing the utility to utilize DSMVA funds at an early stage. For example, if the Company achieves its program 100% target at 85% of budget, under the CEI, this 15% could be rolled forward into the following year. Under Board Staff's proposal, if the Company then accessed the DSMVA to achieve Program results above 100%, these monies would then reduce the CEI monies that could otherwise be rolled forward. The practical effect of this is that the Company is really using DSMVA monies earlier than is permitted under the rules applicable to the

DSMVA. It also greatly reduces the likelihood that there will ever be a CEI roll over; and,

(d) simply fails to recognize that the CEI was intended to be an incentive. This new limitation robs the CEI of any value to the utilities.

161. Enbridge requests that the CEI be based on the delta between the 100% budget and the actual spending which was required to reach 100% of target. DSMVA amounts should be excluded from this calculation to encourage aggressive results. DSMVA monies remain available to achieve results above the 100% target level.

162. Enbridge is further concerned about Board Staff's recommendation that for the Utilities to qualify for the CEI, they must have met their overall annual natural gas savings target (page 33). Enbridge submits that this would significantly limit the application of CEI. Enbridge believes the CEI should be triggered if it is able to accomplish its weighted scorecard (i.e., resource acquisition, low income or market transformation) target rather than the aggregate of its annual natural gas savings target. This accomplishes two objectives: first, it recognizes that performance is measured by the weighted scorecard; and second, it recognizes that not all elements of the scorecard measure CCM.

163. Enbridge also submits that there is a practical difficulty with Board Staff's suggestion that the CEI only be available post audit. As audits can occur substantially late in the following year, it means that the use of the CEI in the subsequent year could be significantly limited. It should be noted that in some years, clearance applications are only finalized late in the following year.

**On-Bill Financing**

164. Enbridge believes it has demonstrated its commitment to activity as well as further investigation of financing mechanisms. As such, Enbridge supports continuation of its utility-led approach in this area as articulated in its evidence. Enbridge will continue to support the efforts of municipalities who have either launched or intend to launch Local Improvement Charge ("LIC") plans that encourage customers to improve the energy

efficiency of their home. It is anticipated that the utility would continue to lead discussions and have documentation prepared in time for the mid-term review.

## Collaboration, Innovation, Leadership Incentive and Scorecard

165. Given the performance expectations outlined in its DSM Plan Application, Enbridge is confident in the appropriateness of the shareholder incentive as proposed and as contemplated in the Framework. While Enbridge is open to the concept of an incremental incentive to drive leadership and innovation, the Board should not allocate any portion of the current shareholder incentive to some yet to be defined or understood innovation incentive. From Enbridge's perspective, SEC's proposal effectively amounts to a lowering of the existing potential shareholder incentive. By reducing the maximum incentive available where a utility reaches its 150% stretch target to $8 million, this means that the 100% target incentive is reduced to 40% of this amount which is a mere $3.2 million. In Enbridge's respectful submission, this proposal will not drive the desired innovation. Furthermore, there is no evidence in this proceeding on this proposal to-date.

166. Enbridge submits that SEC's proposal should not be entertained at this time, which is not to say that this could not be a topic of discussion at the mid-term review.

## Avoided Costs and Net Bill Impacts

167. The methodology and calculation of avoided costs has been the subject of various approvals by the Board in past applications. As recently as the last multi-year DSM plan proceeding (2012 to 2014) (EB-2011-0295), the Company confirmed in evidence that it would be updating its avoided costs for 2012 using the methodology approved by the

Board in EB-2006-0021, Part III[97]. This proceeding and the subsequent update (EB-2012-0394) were both the subject of complete settlements, which included GEC.

168. Indeed, in the 2013-2014 update (EB-2012-0394), Enbridge presented its updated avoided costs calculations. Enbridge specifically identified that it used the SENDOUT model to develop unit avoided gas costs forecast. Enbridge provided in evidence the details of the input parameters used in the SENDOUT model.[98] Again, GEC was a signatory to the Settlement Agreement.[99]

169. Enbridge engaged Navigant to update its distribution infrastructure avoided costs. Enbridge also confirmed its intention to update avoided commodity costs in Q4 of this year. Enbridge has and continues to be willing to use the most appropriate and reasonable methodology and inputs for purposes of calculating avoided costs.

***No Need to deal with Avoided Costs at this time***

170. To this end, Enbridge has a representative member on the DSM Technical Working Group ("TWG") that was initiated by the Board in EB-2015-0117 that will support the completion of the natural gas efficiency potential study in compliance with the Minster of Energy's Directive.[100] Enbridge notes that the Board has recently issued an RFP to third party consultants[101] and that in addition to the work associated with the potential study, the technical working group will consider issues surrounding avoided costs and DRIPE, also in compliance with the Minister's Directive.[102] Enbridge further notes that GEC is a member of the TWG. It therefore appears that issues raised by GEC in respect of avoided cost methodologies and DRIPE will be dealt with in the potential study proceeding (EB-2015-0117). Enbridge submits that the formation of a secondary technical group as proposed by GEC to consider these same matters would be redundant and wasteful. Avoided costs, carbon and DRIPE are being considered by the

[97] EB-2011-0295, Ex.B/T1/S2, p. 10, and Ex.B/T2/S2
[98] EB-2012-0394, Ex.B/T2/S2, pp. 1-10
[99] EB-2012-0394, Ex.B/T2/S9
[100] Order in Council 467/2014, Minister of Energy Directive to the Board, March 26, 2014
[101] Relevant sections of the RFP are attached to this submission
[102] Minister of Energy Letter to Rosemarie Leclair, Chair, OEB, dated March 31, 2014.

Board in the EB-2015-0117 proceeding. Any decisions in respect of these areas being studied should await the determinations made in that proceeding.

***GEC Positions should be rejected***

171. Enbridge believes that it was unfortunate that the avoided costs issue preoccupied as much of the hearing as it did, especially since avoided costs was an issue considered during the Framework consultative (EB-2014-0134). Stakeholders to the Consultative had an opportunity to comment on the avoided costs section of the draft Framework and Filing Guidelines. The Board then issued the Framework and Filing Guidelines in December 2014, which the Utilities have relied upon for the purposes of the development of their plans. GEC made detailed submissions during the Framework consultative on a number of related points. To the extent that GEC was not satisfied that its submissions were accepted by the Board and included in the Framework, it is repeating many times in this proceeding.

172. An example of this is GEC's position that the 15% TRC adder is inadequate to reflect environmental externalities and the future price of carbon. During the Consultative, GEC advocated use of the societal cost test.[103] In the alternative GEC proposed that if the TRC test was to be utilized, it should include placeholder values for:

i. avoidable costs of distribution and transmission pipelines;

ii. a carbon adder of $20 to $40/tonne;

iii. DRIPE;

iv. a 10% adder to recognize the risk mitigation benefits of efficiency; and

v. a 15% adder for non-energy benefits.

173. The Board determined that for purposes of the Framework, the TRC-Plus test, which includes a 15% non-energy adder should be used by the Utilities for the cost-effectiveness screening of DSM programs. Despite GEC's submissions having been made in October 2014, and the Board's release of the Framework in late December 2014, GEC is advocating essentially the same position in this proceeding.

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[103] Exhibit KL.2, p. 33

174. GEC's position in respect of avoided costs and, as a result, its advocacy in favour of substantially increased budgets fails to reflect the balance that the Board is statutorily required to make when approving just and reasonable rates. The Board has already made a determination following its review of numerous detailed submissions that the rate impact on non-participant residential customers should be about $2.00 per month. It is clear that what GEC is proposing by the requested increase in Enbridge's DSM budget of more than $45 million by 2018 will increase the monthly rate impact on non-participating residential customers to a point substantially in excess of $2.00 per month.

175. If GEC's request for significantly expanded budgets is accepted by the Board, this will require the Utilities to spend significant additional time drafting an amended multi-year plan, stakeholdering, preparing evidence, and seeking Board approval, likely through another hearing. In addition to the direct costs of these activities, there would be the loss of focus and attention on delivering program results.

176. Currently, there is no approved methodology to calculate the positive bill impact benefits to non-DSM participants as suggested by GEC and there is no cap and trade regime operating in Ontario today.

177. In fact, the Minister's letter to the Chair of the Board[104] requires the DSM Potential Study which is being undertaken by the Board to also consider "how such potential DSM benefits as carbon reduction and natural gas price suppression may be used to screen prospective DSM programs and inform future budgets."

178. Mr. Chernick's evidence about price suppression is simply a hypothesis not supported in relevant evidence. His analysis relied upon the manipulation of a model for U.S. gas consumption in which total consumption was reduced by one quad of natural gas, which is not dissimilar from the entire amount of gas used in Ontario in any given year.[105] The difference in magnitude between that amount and the aggregate of DSM savings in Ontario, which is a magnitude of between 100 to 200, could have a significant impact on the validity of Mr. Chernick's analysis.

[104] February 4, 2015
[105] L.GEC.2, page 13

179. FRPO further called into question the validity of Mr. Chernick's DRIPE values, submitting that, "In summary on Basis DRIPE, clearly, there are many factors that influence the price of gas at Darn that are not directly tied to demand as a result of heating load or consumption. The buying practices of major participants, utilities, and direct purchase customers, can have a very significant effect. This effect would be difficult to isolate in any analysis of Basis DRIPE."[106] FRPO goes further in discussion of Continental DRIPE, noting that Mr. Chernick's placeholder value is based on an analysis of Henry Hub[107], and that "…ongoing structural changes and their impact on price at Dawn makes it inappropriate to apply a forecasted value from other markets to the Dawn market."[108]

180. Enbridge contends that the average versus marginal cost of natural gas supply is already captured appropriately. The SENDOUT runs are conducted in a manner that is consistent with the derivation of annual rate applications that have been approved by the Board[109]. As noted earlier, it remains Enbridge's intention to update commodity avoided costs at a later time. These updated values will be used in future TRC-Plus screenings.

***Distribution Avoided Costs***

181. Enbridge retained Navigant to calculate its distribution infrastructure avoided costs. As Mr. Chernick confirmed in his evidence,[110] the material difference between Navigant's distribution infrastructure avoided costs and Mr. Chernick's is the value he used for the purposes of his calculations. Navigant was provided with the value of avoided distribution infrastructure by Enbridge. Enbridge through its various leave to construct applications knows what facilities were required because of increased load and Ms. Thompson in evidence clearly indicated that the Company is diligent in its tracking of this. Mr. Chernick, in contrast, came up with his own figures for avoided distribution costs. It is important to recognize that Mr. Chernick's expertise with avoided cost calculations has no relevance or bearing whatsoever in terms of determining whether an Enbridge distribution asset was or was not required to meet new load. He is not in a

106 FRPO, page 10
107 Ibid
108 Ibid, pages 12-13
109 Tr. 7, p. 51
110 Ex.L.GEC.2, p41-42

position to speak to such matters and therefore his evidence in this respect is without a factual foundation and should be rejected.

182. Despite this, in support of GEC's advocacy for ramped-up budgets, Mr. Chernick unilaterally increased the avoided distribution infrastructure costs of Enbridge from approximately $245 million to $558 million[111]. Ms. Thompson in evidence confirmed that these increases were incorrect and do not reflect infrastructure built to address new load[112] which, as Mr. Neme confirmed in GEC's evidence, is the only basis to determine that distribution infrastructure has or could be avoided.[113]

183. GEC asked Enbridge in IR 52 "whether the GTA Reinforcement would be considered a transmission project or distribution project." Enbridge's answer confirmed that Segment A would be 60% transmission and 40% a distribution asset. The answer also stated: "The GTA project's Segment B, the NPS36, will be a distribution asset."[114] Mr. Chernick referred to this interrogatory response as the basis for his conclusion that Segment B was entirely classified by Enbridge as related to distribution load. Enbridge's response did not say this, and there is no evidence in this proceeding or any other proceeding which supports such a conclusion.

184. Despite being taken to the specifics of the Board's Decision under cross-examination, Mr. Chernick continued to refuse to accept the Board's determinations. A clear case in point is the evidence of Enbridge that Segment B was required in part to avoid a bottleneck. The evidence in the GTA proceeding is that the bottleneck arose by reason of Enbridge's desire to have the capability of sourcing supply from different sources thereby giving it the opportunity to choose the lower cost supply option. This is not a load-related reason for Segment B. Mr. Chernick however, was adamant that the evidence in respect of this bottleneck was all due to new load.

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[111] Ex.L.GEC.2, p. 41-42. The $245 Million figure is inclusive of the $55 million inadvertently not provided to Navigant
[112] Tr. 7, p. 32-33
[113] Ex.L.GEC.1, p. 41
[114] Ex.L.GEC.2., p. 35 and Ex.I.T9.EGDI.GEC.52

***Mr. Neme's Table 3***

185. Mr. Neme included in his evidence calculations about the alleged beneficial impact on the bills of non-participating residential customers, relying upon Mr. Chernick's calculations.[115] These calculations are found in Mr. Neme's Table 3 to which there was much attention during the hearing. During cross-examination, Enbridge put to Mr. Neme a further version of the same Table using recalculated figures for carbon, DRIPE, and distribution infrastructure avoided costs. (K.11, p. 50) Mr. Neme accepted that the Table put to him in cross-examination was mathematically correct. The purpose of this Table was simply to demonstrate that even if the Board were to accept that these alleged avoided costs do, as asserted by GEC, have some positive impact on bills, the impact on non-participating residential ratepayer bills is immaterial.

186. Member Duff asked during the course of the proceeding whether Enbridge accepted the values included in the Table put to Mr. Neme in cross-examination. The response given remains "No". The correct value and calculation of the impact on non-participating residential ratepayers bills of these avoided costs is zero for obvious reasons. There is no carbon value currently being paid by ratepayers. DRIPE and the marginal cost of gas price suppression remain hypothetical and are therefore uncertain. No credible value has been established. Distribution infrastructure avoided costs, while suitable for TRC screening purposes, cannot be translated into customer bill impacts, because the distribution infrastructure has been built, and all ratepayers are contributing to these capital costs.

## <u>Program Recommendations</u>

***Low Income Energy Networks (LIEN) Suggestions***

187. Intervenors were largely supportive of the Low Income program plans and budgets. The targets and budgets for Enbridge's Low Income program offerings were thoughtfully developed based on historical participation, current market conditions and outlook, professional expertise and a decade of experience in Low Income DSM

[115] Ex.L.GEC.1, p.18

programming. Enbridge considers these targets to be aggressive yet achievable through determined and committed efforts by Enbridge and its business partners.

188. Enbridge is open to exploring suggestions directed at enhancing these offers, such as the direct installation of bathroom and kitchen aerators. This specific recommendation would entail having contractors install bathroom and kitchen faucets aerators for Low Income customers who are participating in the Home Winterproofing Program, rather than those measures simply being left at the home for self-installation. Enbridge does not oppose the inclusion of this enhanced service as part of the delivery of the program and estimates that the cost of including such an enhancement to be in the $50,000 per year range.

189. Enbridge will continue to explore opportunities to demonstrate leadership and engagement with Low Income stakeholders through formal and informal discussions with a view to ensuring the program continues to balance responsiveness to the needs of Low Income customers and achievement of optimal energy savings.

## Mid-term Review

190. For any discussion about the timing, format, and breadth of the mid-term review, it is appropriate to start with the terms of the Minister of Energy's Directive to the Board dated March 26, 2014 (the "Conservation Directive"). The Conservation Directive, at Section 4, directed the Board to establish a DSM policy framework. At clause 4(i), the Conservation Directive states that the Framework: "…shall span a period of six years … and shall include a mid-term review to align with the mid-term review of the Conservation First Framework", which, as noted in the preamble to the Conservation Directive, is the updated electricity conservation policy framework.

191. By a Directive dated March 31, 2014, to the OPA, the Minister gave the OPA direction in respect of the Conservation First Framework. This Directive, at subsection 6.1, directed the OPA, in consultation with the Ministry of Energy and electric distributors, to no later than June 1, 2018 have completed a formal mid-term review of:

i. The 7TWh target and the overall budget for achieving that target;

ii. Allocation of budgets and Distributor CDM Targets;

iii. Lessons learned on cost recovery and performance incentive mechanisms, and;

iv. CDM contribution to regional planning.

192. In a subsequent Directive to the OPA dated October 23, 2014, the Minister added to the above list by providing that the 15% value added to the TRC test attributable to non-energy benefits would be subject to review at the mid-term review.

193. It is therefore clear that the Minister does not contemplate that the mid-term review to be undertaken by the OPA will consist of a complete review of all aspects of the CDM Framework and the Minister's Directive to the OPA. It is limited to the items identified above.

194. While it is recognized that differences exist between how the Ontario Power Authority ("OPA") [i.e. IESO] and electric distributors are required to deliver CDM and natural gas DSM,[116] there are important determinations that can be made having regard to the Minister's Directives. These include:

(a) The DSM mid-term review is required to align with the mid-term review the Minister has directed the OPA to conduct by June 1, 2018. Moving the mid-term review substantially forward in time, as advocated by GEC, would be inconsistent with the Minister's Directive to the Board in respect of DSM unless this was aligned with an earlier mid-term review by the OPA.

(b) The Minister's Directive to the OPA does not contemplate that the mid-term review would involve a reconsideration of all aspects of the Minister's Directive to the OPA.

(c) The term of multi-year plan is six years, not two three-year plans, which is the practical implication of those intervenors that are requesting a full oral hearing with unlimited discoveries as part of the mid-term review.

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[116] For example, the OPA was directed to achieve 7 TWh of electricity savings and to allocate this target amongst electric distributors, but neither the Minister nor the Board has set a natural gas savings target for the gas utilities.

195. The Framework specifically deals with the mid-term review. The Framework provides, at section 1.3:

> The mid-term review will allow the Board to assess the gas utilities' performance, and the appropriateness of the long-term DSM targets. The review will examine annual metrics, budget levels, impact on customer rates and shareholder incentives. The mid-term review will ensure that the DSM framework is reasonable and contributing to effective natural gas conservation programs to Ontario customers, while achieving annual and long-term targets for reduced consumption.
>
> The mid-term review will further provide the Board with an opportunity to review the gas utilities' progress towards implementing priorities outlined in the Conservation Directive, LTEP and DSM framework. It will also allow the Board to consider the DSM framework relative to the overall energy conservation landscape, including any new or revised government direction. The DSM framework's June 1, 2018 mid-term review coincides with the mid-term review of the electricity Conservation First framework.
>
> ...
>
> The mid-term review will be informed by a study of achievable potential for natural gas efficiency in Ontario to be completed by June 1, 2016. More details on the scope, timing and nature of the mid-term review will be provided at a later date.

196. The Framework in other areas expands upon the Board's expectations in respect of the mid-term term review. These include reviewing the pay-for-performance option (page 24), a review of shareholder incentive components to ensure they are producing the anticipated and expected results and have helped to appropriately align the efforts of the gas utilities with the guiding principles and key priorities (page 25), and the review of the integrated resource planning study, the scope of work of which was filed as part of Enbridge's DSM plan (page 36).

197. These provisions in the Framework suggest that the Board, similar to the Minister, does not anticipate that the mid-term review will consist of comprehensive examination and re-opening of the Framework and the Utilities' multi-year gas plans.

198. It should be noted that the Framework was the result of a public hearing process which invited detailed submissions from stakeholders in respect of all DSM issues of concern and on the draft Framework which was issued by the Board for comment. While the terms of the Framework (which includes the Report of the Board and the Filing

Guidelines) provide the gas utilities with certain flexibility as to what they could ultimately propose in their DSM multi-year plan, the Framework constitutes more than what certain parties suggest is simply a "guideline". The Framework proceeding (EB-2014-0134), the evidence filed during that proceeding (which includes the Concentric Energy Advisors Inc. report dated September 15, 2014), and the written submissions of 24 stakeholder groups culminated in the Framework which articulated not only the Board's expectations but also its determinations on certain matters, such as the rate implications of DSM, as the Board is required to do under the *Ontario Energy Board Act.*

199. In Enbridge's view, all of the above stands for the proposition that the mid-term review should not involve a complete re-opening of the Framework and the Utilities' multi-year plans. Certain material issues may arise, such as the province's regulation dealing with carbon cap-and-trade, the potential study completed in 2016, the IRP study, the review of the reasonableness of Enbridge's proposed 2019 and 2020 targets, and these may all be relevant for a future Board panel to consider within the context of the 6-year plan. Enbridge submits, however, that the mid-term review should not require all parties to start from scratch in determining key elements of the Framework.

200. Enbridge appreciates that there is a natural hesitancy for certain intervenors to agree that any issue will not be on the table for the purposes of a subsequent proceeding. This hesitancy, however, has not prevented a number of significant multi-year custom IR applications from being approved which embed amounts, conditions and rules which apply throughout the term of a multi-year custom IR. While there are various applications which may take place dealing with, for example, Z factors, off-ramps, earnings sharing, and rate adjustments during the term of the multi-year plan, the overall custom IR is not open for re-negotiation. The multi-year DSM plans, once approved, should be similarly treated.

201. Enbridge requests that the Board set a schedule for the mid-term review by the second quarter of 2017 so that an issues list consistent with the Board's decision in this proceeding, the Framework or the approved plans, and the Minister's Directive can be set which will then facilitate the timely filing of appropriate evidence or submissions.

**IRP Study Scope**

***Enbridge's IRP Leadership***

202. Enbridge is committed to conducting an Integrated Resource Planning study and as such responded to the Framework by filing, as required, at Exhibit C, Tab 1, Schedule 3, a well-conceived, Scope of Work and Transition Plan.

203. Enbridge brought together key personnel from the Distribution Planning, Gas Supply, and DSM Groups to inform, plan, and discuss the concept of IRP and to develop the study outline. Enbridge proactively reached out to other utilities both electric and gas in the United States and Canada, in an effort to gain insight and learn more about their efforts with integrated resource planning ("IRP"). As well Enbridge has invested in the education of key employees in both the Distribution Planning and Demand Side Management groups with respect to the concepts, methodologies, and specifics of IRP by sponsoring their attendance at course offerings and conferences specific to IRP. As such, it is most unfair to suggest that Enbridge has not made a genuine attempt to move the issue forward appropriately.

204. Enbridge notes that there were no major issues raised by stakeholders during the hearing process related to its IRP Scope of Work. As well there have been no submissions made or references provided by any of the stakeholders that indicate that targeted gas IRP has been done in any other jurisdiction. Indeed, GEC's expert, Mr. Neme, notes in the study dated January 9, 2015, which he co-authored and which is found at Exhibit M.GEC.EGD.7, Attachment 1, pages 14 and 15, that: "*We are not aware of any publicly available documentation of examples in which a gas utility has used geographically-targeted efficiency programs to actively defer a T&D investment."* Mr. Neme goes on to indicate that there is growing interest in the topic and refers to the Enbridge/Union GTA proceeding as the sole example. Mr. Neme notes that the deferral of T&D investments as a result of gas efficiency programs "*have either not been widely studied or not being widely publicized."* Mr. Neme can only point to Vermont Gas Systems as an example.

205. Elsewhere in its evidence, GEC pointed to a utility in Michigan that is in the process of implementing a pilot project. However, this project involved an electric utility – not a gas

utility (GEC response to Union Gas IR#5[117]). While this case study will certainly be considered by Enbridge, it is clear that Enbridge is at the cutting edge of gas IRP and, recognizing that it is both a priority of Enbridge and a statutory objective of the Board to protect the reliability and quality of gas service, it is important that gas IRP be thoroughly and carefully considered. As it will be the gas utilities that are ultimately accountable for the reliability and quality of gas service, it is appropriate that the gas utilities undertake the required study.

***Study Timing***

206. Board Staff's consultant Synapse recommended that Enbridge develop its first IRP in a timely fashion and allow time for stakeholder feedback and input. Board Staff submitted that the gas utilities should complete their individual infrastructure studies by the middle of 2017, in time to inform the mid-term review of the DSM Framework and to determine the appropriateness of the Utilities budgets' for the remainder of the multi-year plan. Enbridge is of the opinion that to conduct a comprehensive IRP study, it will require the outcomes and learnings from the proposed case studies to inform, validate, and enhance the IRP study. Enbridge's decision to include a transition plan as part of the study scope that contemplates undertaking a case study to inform the IRP study requires a longer period than 6 to 12 months. Enbridge believes it is important to including both a practical and theoretical application as part of the study scope.

207. As Enbridge indicated and Board Staff acknowledged in their submission, Enbridge indicated that if a decision from the OEB is received by early Q4 it would commence the IRP study in late 2015. When this timeline was set, it was with the understanding that a decision from the Board would have been received and the procurement process begun by October 2015, at the latest. Recognizing that the procurement process takes approximately 2-3 months and can only begin after a decision from the Board, the commencement of the IRP study will most likely not happen until February / March 2016 (assuming a Board decision late this year).

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[117] M.GEC.Union.5

208. Should the Board agree with Board Staff's recommendation that the study should be ready June 1, 2017, Enbridge will attempt to meet this timeline. However, it should be noted that this may not provide adequate time to identify, implement, and report upon the case study. Enbridge submits that it has exhibited a leadership role by proposing a practical case study component to its scope of work. Enbridge believes that a hypothetical study which lacks a practical component may not pass muster and would be less reliable going forward.

209. While some stakeholders may be anxious to defer capital expenditures through the use of DSM, Enbridge submits that no stakeholder promotes the deferral or avoidance of future infrastructure projects that put future customer needs at risk or that might lead to costly service interruptions. It is in the interests of all ratepayers that there be a prudent and complete review of gas DSM on infrastructure planning. Enbridge believes that it would be irresponsible to accelerate a hypothetical analysis only to find after-the-fact that there are additional issues specific to natural gas IRP that were not identified or that are not applicable to targeted gas IRP.

210. This does not mean that geo-targeted offsets are not possible, or are not being taken seriously by Enbridge. The safe and reliable delivery of natural gas to customers is Enbridge's unwavering goal. It is also important to note that there has been much discussion by many of the parties that Gas IRP and Electric IRP are very similar and that the concepts used in Electric IRP can easily be adopted for Gas IRP. In theory while this may appear to be true, a practical application at another investor owned utility in British Columbia, Fortis Energy Utilities, has proven differently, as noted in Enbridge's argument in chief.

211. In conclusion, Enbridge believes that it is appropriate to follow the Framework with respect to IRP and for the Company to proceed based on its study scope as filed at Exhibit C, Tab 1, Schedule 3. It would be inappropriate for any entity other than the gas utilities to lead their respective studies. Additional input is appropriate and welcome, but ultimately, Enbridge is accountable for its planning activities.

**2015 Incremental Budget**

212. Enbridge notes that its 2015 Transition Year budget has received explicit endorsements from Board Staff[118], GEC[119], and VECC[120]. None of APPrO, BOMA, CME, ED, FRPO, IGUA, LIEN, or SEC offered explicit endorsement or disagreement with Enbridge's proposed 2015 budgets, though it appears that SEC's recommendations and support for elements of the Company's 2015 Incremental Budget imply that the remainder of the 2015 budget is not disagreeable to it. Enbridge, as required by the Framework at Section 15.1, rolled-forward all programs and parameters (i.e., budget, targets, incentive structure) into 2015.

213. SEC's specific proposals regarding the 2015 Incremental Budget are twofold. First, SEC has requested that Enbridge's Collaboration and Innovation Fund be modified such that rather than $1 million being made available within each year of the six-year plan, $6 million should be made available throughout the overall term of the six-year plan.

214. Second, SEC has noted that many of the items listed within the 2015 Incremental Budget may require spending to take place in 2016. SEC goes on to request that spending of the Incremental Budget be ring fenced to the items specifically identified within that budget, but be permitted to take place in either 2015 or 2016, with any unspent funds being returned to ratepayers via the DSMVA.[121]

215. Enbridge finds both of these recommendations to be reasonable and likely to increase the effectiveness of spending in pursuit of the Board's guiding principles and key priorities. The Company recommends the Board incorporate approval of these proposals into its Decision in this proceeding. To be clear, the 2015 Incremental Budget, excluding OPower, would be ring fenced, with monies not spent in 2015 being available in 2016 for use by Enbridge as between the incremental budget items identified in the Company's pre-filed evidence in Table 10 of Exhibit B, Tab 1, Schedule 3.

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[118] Board Staff, page 24
[119] GEC, page 66
[120] VECC, page 6
[121] SEC, pages 36-37

216. To the degree that parties take particular issue with Enbridge's proposed 2015 DSM budget, it appears that the concerns are mostly limited to the 2015 Incremental Budget which the Board made explicitly available to allow Enbridge to begin to pursue the Framework's guiding principles and key priorities.

217. CCC has expressed concerns with several of the items within Enbridge's 2015 Incremental Budget, namely funding for the Infrastructure Planning / IRP Study, the Green Button Initiative, and the My Home Health Record initiative.

218. In contrast, in another area of their submission, CCC expressed a view shared by many parties that this proceeding should not be, "…an opportunity to revisit the Guidelines that the Board has established."[122] Enbridge is in agreement with this sentiment however CCC appears to diverge from this view in regard to Infrastructure Planning generally and the IRP Study, suggesting that in their view, "…the Board should take the lead on any Infrastructure Planning / IRP studies and not the utilities."[123]

219. The Board provided clear guidance on this matter on page 36 of the Framework, stating that "…the gas utilities should each conduct a study, completed as soon as possible…" Enbridge submits that this matter has been definitively decided by the Board, inclusive of additional comments regarding punctuality. It of course makes logical sense that the entity responsible for the safe reliable delivery of natural gas be responsible for undertaking the study. Given the above, the Company requests that the Board approve use of the 2015 Incremental Budget on an IRP study as filed so as to avoid any delay of this important initiative.

220. Regarding the Green Button Initiative, CCC notes that limited budget details have been provided and that, "To the extent these requirements arise in future years Enbridge should have sufficient room in its proposed budgets to accommodate these activities."[124] Enbridge has two comments in response.

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[122] CCC, page 11
[123] Ibid, pages 8-9
[124] CCC, page 9

221. First, the Company has provided as much detail as it reasonably can at this point in time regarding the Green Button Initiative. While it has received the endorsement of the Ministry of Energy given its goal of facilitating energy literacy and a culture of conservation, the initiative is in its early stages. The overall budget for this initiative represents Enbridge's best estimate of the costs involved. To the degree that Incremental Budget funds are not required for this or the other items identified in evidence, the Company has already committed to returning unused funds to ratepayers.

222. Second, the Company disagrees with the assertion that it can simply accommodate Green Button costs within its existing proposed budgets. CCC has not pointed to any evidence to support this assertion. Enbridge submits that the sum of all its evidence demonstrates budgets which already require highly effective and efficient implementation in order to deliver on aggressive targets and respond to the goals, principles, and priorities identified by the Board for the future of DSM. Moving funds from another program offering to finance Green Button will negatively impact the de-funded offering.

223. The Company has offered up a complete defense of My Home Health Record beginning on page 44 of this Reply Argument. In specific regard to use of the 2015 Incremental Budget on this item, Enbridge submits that this program offering is highly aligned to the Board's guiding principles and key priorities which are the explicit focus of the Incremental Budget. The Board's DSM Framework has required the utilities to create a culture of conservation[125], drive high participation levels[126], provide a greater level of customer-specific educational information[127], and benchmark customer energy usage, which includes allowing customers to compare their usage to other similar customers[128]. Enbridge submits that the My Home Health Record should be approved as filed for 2015.

224. Energy Probe states that the HEC program which Enbridge discontinued for lack of funding in 2015 should have continued using the 2015 Incremental Budget of

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125 DSM Framework page 5
126 Ibid, page 8
127 DSM Filing Guidelines, page 5
128 Ibid, page 6

$4.92 million. Enbridge submits that this would have been inconsistent with the requirement under the Framework that 2015 be a roll over from 2014. Using the 2015 Incremental Budget would not be consistent with the clear wording of Section 15.1 of the Framework, which requires such funding to address the guiding principles and key priorities outlined in the Framework.

225. VECC, at page 8, seems to suggest that the 15% Incremental Budget is not over and above the 2015 roll over budget but rather a replacement for the 15% available through the DSMVA. This interpretation is not consistent with the Framework and is not advocated by any other intervenor. Specifically, page 38 of the DSM Filing Guidelines notes that "This level of funding is **incremental** to any DSMVA amounts used in relation to (A) or (B) above after 100% of weighted scorecard targets are met." [emphasis added]. Where (A) and (B) in the above excerpt are the traditional 15% available through the DSMVA for pursuit above 100% weighted scorecard achievement, Enbridge notes that "incremental" can only mean incremental. This section of the Filing Guidelines clearly states that the 2015 Incremental Budget is above and beyond, rather than contained within, the traditional 15% available through the DSMVA.

## Evaluation and DSM Potential Study Variance Accounts

226. Further to recommending approval of Enbridge's proposed budget for evaluation of its programs, Board Staff proposes the establishment of a "specific DSM evaluation variance account to track evaluation costs separate from other generic DSM deferral and variance accounts."[129] Likewise, Board Staff proposes a similar variance account that would dedicate funds for the DSM Potential Study.

227. Enbridge is supportive of these two variance accounts and suggests they might in fact be combined for simplicity. While Enbridge made best efforts to adequately forecast an evaluation budget and budget towards a Potential Study, the newly determined coordination role of the Board Staff in the newly formed Evaluation Advisory Committee

[129] EB-2015-0049 (2015) *OEB Staff Submission: 2015-2020 DSM Plans*, p. 26.

make the priorities, quantity of work, and related costs increasingly opaque to the utilities. As such, the flexibility to spend more or less depending on the practical implementation of the new Evaluation Advisory Committee process will be necessary. Enbridge asserts in this new process that decisions on appropriate priorities, processes and costs for evaluation and the potential study should be a topic for the EAC and the Potential Study Working Group respectively.

**DSM Potential in Ontario**

228. GEC submitted on page 22 of in Exhibit L.GEC.1 that, "…Enbridge's recent potential study is fraught with so many methodological problems that it has almost no value for informing conclusions regarding achievable savings potential." Mr. Neme goes on to identify a number of the areas of the study where he believes such "problems" are evident. Subsequently, Enbridge noted on page 33 of its Argument in Chief that Mr. Welch, a recognized expert in the modelling of energy efficiency, "…*provided a thorough response during the oral hearing to one of the key concerns raised by Mr. Neme. Mr. Welch was prepared to address the additional concerns raised by Mr. Neme, but in the interest of time he did not."*

229. It is important to note that GEC did not question Mr. Welch on these other matters. To allege that the work of an extremely capable expert is of no value and then fail to put such assertions to the person produced at an oral hearing to respond to same should give rise to an adverse inference against GEC's assertions.

230. For purposes of insuring a complete response, Enbridge, working with Navigant, provides a comprehensive response to Mr. Neme's observations in the paragraphs that follow. The Company submits that these responses reinforce both the validity of its DSM Potential Study and the targets that it has proposed in its Multi-Year DSM Plan.

*Mr. Neme Comment:* *Navigant estimates that economic potential in the commercial and industrial sectors is 96% of technical potential. In other words, virtually all efficiency that is technically feasible is also cost-effective under current (relatively low) avoided costs. That conclusion strongly suggests that the analysis did not truly look at a full range of potential efficiency measures; rather, it just looked at the measures that the utilities were already pursuing and/or anticipating that they might pursue and which are already known to be cost* *effective. Put simply, it is not plausible that the supply curve of efficiency is a gradual upward slope to the current cost-effectiveness threshold and then becomes almost vertical.*

231. Response: The above argument is logically unsound. It can be compared to determining whether the height of a ceiling is appropriate by analyzing the height of the doors and what percentage of the overall ceiling height they represent. Clearly it would be more appropriate to simply measure the actual height of the ceiling. Navigant's estimate of technical potential is 35% of annual sales in the Industrial Sector and 28% of annual sales in the Commercial sector. These estimates are substantial relative to sales, comparable with those estimated in other jurisdictions and comparable with (or higher than) savings levels provided in sources cited by Mr. Neme[130].

*Mr. Neme Comment: Navigant does not appear to have analyzed potential from industry-specific and/or facility-specific custom industrial measures. Indeed, in reviewing the stratified random sample of industrial projects analyzed under Enbridge's 2014 Custom Project Savings Verification process I found that approximately half of the projects employed measures that do not appear to have been addressed in the Navigant study. I should note that is not uncommon for potential studies. They tend to assess only relatively common measures. However, that is an important limitation that makes such studies' conclusions regarding efficiency potential very conservative.*

232. Response: This statement is factually incorrect. A review by Enbridge staff determined, and was subsequently confirmed by Navigant, that all but one of the measures (greenhouse energy curtains) identified in the 2014 Industrial Custom Project Savings Verification were included in the list of industrial measures which are found in evidence at Table 2-22 of the DSM Potential Study[131]. Due to the low applicability of greenhouse energy curtains, this excluded measure is not likely to materially impact the overall results of the study.

It is also noteworthy that GEC did not examine Enbridge's expert witness, Mr. Welch, from Navigant on this particular issue. Under cross-examination by Environmental Defence, on September 1, 2015, Mr. Neme suggested that Enbridge's Potential Study

[130] For instance, on page 4 of the Enerlife study referenced by Mr. Neme (Footnote 49, page 24 in Exhibit L.GEC.1), two values for Commercial potential as a percentage of sales are provided in Figure 2. The "Median Target" value is 19% of sales, and the "Top Quartile" value is 31% of sales. These compare favorably with Navigant's estimate of 28% of sales. Likewise, the footnote in Figure 2 of the Enerlife study cites an estimate of Technical potential for the Industrial sector of 34.4%, which is actually lower than Navigant's estimate of 35%.

[131] Ex.C/T1/S1, pp. 43/44

did not capture a particular industrial moisture control measure.[132] This assertion was incorrect, as moisture control is captured within the measure "Process Improvement" (changing, cleaning, chemicals, set points, exhaust, moisture control, etc.)[133]

*<u>Mr. Neme Comment:</u> Navigant appears to have estimated the maximum technical potential for operational efficiency improvements in commercial buildings to be no more than about 3%.[48] That is implausibly low.[49] Where footnote 49 reads: "See EB-2012-0451, Exhibit L.EGD.ED.1"*

233. <u>Response:</u> Mr. Neme's cited value is simply incorrect; the actual figure is closer to 4-5%. Furthermore, the evidence Mr. Neme references in no way supports his statement that the figures are "implausibly low". The study he references does not differentiate "operational efficiency" improvements from total savings potential across all measures, since it simply looks at consumption levels of different building quartiles in aggregate (i.e., it is not measure specific). Thus, it is impossible to draw any conclusions from his referenced source about the specific estimate of savings attributed only to largely behavioral-type measures such as "operational efficiency." Navigant's estimate of savings on the other hand, is consistent with values it is accustomed to seeing in other jurisdictions and is estimated based on real data from Enbridge's "Run it Right" program.

*<u>Mr. Neme Comment:</u> Navigant's estimate of savings from do-it-yourself residential air sealing measures (e.g. caulking, weatherstripping, outlet gaskets, etc.) is implausibly high. The level of savings estimated is achievable, but only through more sophisticated blower-door guided air sealing by professionals. In other words, Navigant got the savings about right, but grossly under-estimated what it would cost to acquire.*

234. <u>Response:</u> Navigant acknowledged the likely low cost estimate for this measure in footnote 18 of the Navigant report, stating "the cost assumptions in this study would be optimistic."[134] The footnote states that the savings and cost of this measure were drawn from the list of OEB approved measures, consistent with Navigant's scope of work. Thus, Navigant agrees the cost of this measure in the study is low. However, given this is only one of many measures, overall cost impacts of this single measure are small and well within the uncertainty of the total portfolio costs and therefore not expected to materially influence the conclusions of this study.

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[132] TR.10, p.82
[133] Ibid, page 43
[134] Ex. C, Tab 1, Sch. 1, page 87

235. The above "concerns" constitute all of the specific concerns raised by GEC in its evidence[135]. Enbridge has now responded to each, either in evidence or argument, confirming that in most instances Mr. Neme's conclusions are either inaccurate or in the latter instance, simply unfair. While each of GEC's concerns have been addressed, it is important to note that even if each of the concerns identified had some merit, collectively they would not undermine the purpose and reliability of the Navigant Potential Study.

236. Given GEC's mandate, it is understandable that they may be reluctant to accept any potential limitations identified on the expansion of DSM. An example of this is the apparent criticism by Mr. Neme in his evidence that well done efficiency potential studies are inherently conservative.[136]

237. The fact remains that the costs to generate CCM do not increase on a linear basis. As the least costly CCM is captured, the gas utilities have to turn to more difficult to reach customers and program offerings that require incentives which do not generate the same savings per dollar as prior program offerings. The history of DSM in this province clearly demonstrates that with the maturity of program offerings, the cost to generate each cubic meter of savings increases.

238. Paradoxically, while GEC states in argument that the DSM potential Study and Enbridge's sensitivity analysis are *"not worth the paper they are written on".* GEC goes on to assert that there remains a sufficient evidentiary basis to justify a large increase in DSM budget and for the utilities to correspondingly update their targets. If the Potential Study and Sensitivity analysis are of no value as GEC asserts, on what basis can Enbridge proceed to increase program spending and its targets as GEC advocates?

239. The fact is that Enbridge engaged one of North America's leading experts on energy efficiency potential as contemplated by the Framework for the purpose of assisting Enbridge in the development of its Multi-Year DSM Plan. There is no suggestion by GEC that Mr. Welch and Navigant lack the expertise, qualifications and credibility to undertake the study. Navigant's report is entirely based on its study and experience. While GEC might dislike the results of the Potential Study because they are in its view

[135] Ex.L.GEC.1, pp. 21 - 24
[136] Ex.L.GEC.1, p. 22

conservative, this hardly forms the basis to completely disregard the work of such a recognized third party expert.

240. There are often debates about the methodological minutiae of potential studies but the fact remains that Navigant's Potential Study's directional findings cannot be challenged. There may be more or less DSM potential in certain markets than what Navigant determined but directionally the Potential Study achieved its goal of assisting Enbridge in understanding where potential remains and the directional impact of increased spending in certain sectors. The proof of these statements is the fact that GEC has not alleged that if Mr. Neme's concerns had been addressed it would have in any way altered the targets proposed by Enbridge's DSM Plan at the budget levels contemplated by the Framework.

**Board Staff Program Revision Recommendations**

241. This section focuses on particular references and recommendations that were made throughout intervenor arguments in relation to specific program design recommendations. Three offerings are discussed below: Home Energy Conservation, Savings by Design, and Home Rating.

***Home Energy Conservation***

242. Enbridge has been delivering a Home Energy Retrofit program in one capacity or another for over three years. Marketed initially as a "community" retrofit program in 2012, interest in the program has grown considerably in subsequent years. The general consensus among intervenors with respect to the program plan for HEC has been decidedly positive with some suggested modifications that Enbridge would like to address.

243. Board Staff suggested that Enbridge should review the customer incentive structure to ensure they provide flexibility to customers by allowing households of different sizes, housing shapes, and energy consumption levels to participate. However, the program

already considers these factors when determining the gas savings potential and realized gas savings as part of pre- and post-auditing functions. This is done implicitly through the HOT2000 model, which was discussed in response an interrogatory[137]

244. Board Staff also indicated their agreement with Synapse that providing an incentive on a per-square-foot basis, or on a percentage-of-total-project-cost basis for insulation measures, would be more equitable to households of different sizes, and would correspond better with the effort and cost expended by the customer. Enbridge wishes to be clear that this is already implicitly part of the program. That is, when evaluating the savings potential in a home, Enbridge uses the accredited national model used for EnerGuide and Energy Star called HOT2000. This model was the subject of an interrogatory response[138], and it explicitly accounts for homes of different size, age, housing type, orientation, and climactic zone. In this way, the savings potential is customized to each and every home.

245. Enbridge has been informed by its experience with the program and has determined that the current incentive structure does not exclude participants on the basis of housing size, square footage, or percentage-of-total cost. It believes that changes to the incentive structure as proposed by Board Staff will unnecessarily cause difficulties and increase the administrative burden. For example, it will be necessary to re-purpose the existing, accredited modeling tools. This will likely result in more time, expense, and confusion in delivering an already successful program. Said another way, Enbridge does not believe there is anything to ‘fix’ with the design of this program.

***Savings by Design***

246. In reviewing the Residential Savings by Design program, Board Staff has recommended that Enbridge reduce the maximum incentive available to participating builders from the proposed $300,000 down to $175,000 during the 2016-2020 program period. Board Staff recommend that builders be offered a declining incentive per home as has been proposed by Enbridge, but limit the number of homes for which an incentive is available to no more than 50 homes each time they participate.

[137] I.T6.EGDI.STAFF.25, plus attachment
[138] Ibid.

247. The purpose of the tiered incentive structure was designed to encourage repeat builders to design more builders above code with each development – which is the ultimate goal of the offer. This would minimize lost opportunities by engaging communities to be constructed above Building Code standards. It should also be noted that builders may not actually receive the full incentive unless they actually build to the program's minimum standards. That is, if a third time participant does not build a minimum of 200 homes at the program's design standard (15% above 2017 code, or roughly 30% above today's Code) then they will not receive the maximum incentive, as intimated by Board Staff's suggestion. Enbridge believes this incentive structure is important to continue to push builders to incorporate more of what they learn into more applications and situations.

***Home Rating***

248. In final argument both Energy Probe and CCC indicated that with the little progress made in legislating Home Rating in Ontario, and with sub-optimal results from the utility as they saw it, the program should be discontinued. Enbridge has been attempting to transform the market with this initiative for over three years and in that time it has learned some valuable lessons. As explained in the evidence at Exhibit B, Tab 2, Schedule 1, Enbridge believes a change in tactic from the realtor community to target homeowners directly will lead to more meaningful and positive change. As home energy labels become more prevalent in the market and homeowners become more aware of the value these labels bring, it is a good time to focus delivery of this offer directly to them.

## **Shareholder Incentives Embedded in Rates**

249. A number of parties have expressed concerns regarding the practice of embedding some portion of the DSM shareholder incentive into rates for the purpose of mitigating rate impacts upon clearance of the shareholder incentive ultimately claimed.

250. Enbridge wishes to clarify that it has not made such a proposal, and is indifferent to a treatment in this regard. The Company provided its forecast rate allocation in Exhibit B, Tab 2, Schedule 4 of its pre-filed evidence. Within that schedule the Company has

identified how the shareholder incentive would be allocated amongst rates in the event that Enbridge claimed the eligible incentive at precisely 100% of target.

251. The amounts for shareholder incentives shown have not been included in rates. Rather, they were provided as an illustration in response to the DSM Filing Guidelines' requirement that Enbridge provide evidence of rate impacts which include the impacts of the shareholder incentive.[139]

**<u>Budget Benchmarking and Productivity</u>**

252. SEC has submitted that "…without benchmarking, the Board has very little to go on in determining whether budget elements are at the right levels for the proposed results."[140] SEC goes on to suggest that, "…any budget approval granted by the Board in this proceeding should be made on a provisional basis. Union and Enbridge should be required, on joint basis, to undertake at their own expense a benchmarking study of their proposed budgets in the Plans."[141] CCC expressed a similar concern in this area offering their view that, "Productivity is not built into the budgets."[142] Enbridge disagrees with the two points and recommends the Board reject the recommendation for provisional budgets.

253. Though many areas of Enbridge's portfolio are new or significantly evolved, Mr. Neme agreed in his evidence that "…Enbridge's proposal for large C&I customers appears consistent with its historic experience in terms of savings per budget dollar (in real, inflation adjusted, terms). The same is true of the home retrofit program savings forecast."[143] He further notes in respect of Low Income that, "…a greater emphasis on private multi-family buildings will increase average costs. That is consistent with my understanding of the utility's recent experience."[144]

[139] DSM Filing Guidelines, page 43
[140] SEC, page 31
[141] Ibid, page 33
[142] CCC, page 3
[143] L.GEC.1, page 34
[144] Ibid., page 35

254. To draw comparisons outside of Ontario, Massachusetts was cited by both Synapse and GEC as a leading jurisdiction in North American DSM[145,146]. In 2014 the State of Massachusetts spent $171M USD, or approximately $221M CAD[147], to save 1,084,138,194 CCM[148]. In contrast, in 2017 Enbridge proposed a budget of approximately $74M CAD[149] to save 1,084,803,895 CCM[150]. The above noted figures largely speak for themselves; Enbridge is delivering the same level of savings as a jurisdiction others claim exudes best practices for approximately one third of the cost. This is precisely what Synapse found and confirmed in its report;[151] that Enbridge's DSM Plan is "highly cost effective".[152]

255. Lastly, Enbridge has in fact built productivity into its DSM Plan. First, the Company has proposed aggressive targets at the 100% achievement level. Achievement of these targets will require a high degree of optimization and efficiency, especially in an environment where, as CCC notes, "…Much of what has, in the past, been considered "low-hanging fruit" is no longer there."[153]

256. Achievement beyond the 100% target level requires an even greater level of optimization and efficiency, as the utility has only a 15% increase in budget available to reach targets that are 50% higher. It has been argued that such an increase in target is inappropriate with only a 15% increase in budget available, and that a reduced upper band target is warranted as a result[154]. To the degree the Board is persuaded that upper band targets of less than 150% are warranted on this basis, it is Enbridge's full expectation that it would be afforded the opportunity to revise its upper band targets to those lower levels.

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[145] L.OEBStaff.1, page 1
[146] L.GEC.1, page 10
[147] Based on USD to CAD conversion dated Oct. 16, 2015
[148] M.GEC.Union.1, page 3
[149] Exhibit B, Tab 1, Schedule 4, page 4
[150] I.T2.EGDI.Staff.7
[151] L.OEBStaff.1, page 3
[152] It should also be noted that GEC claimed that Massachusetts sees 1/3 of their results come from New Construction and while not examined in this case, Ontario's Building Code can be shown to be more stringent than that in Massachusetts and Enbridge does not even count CCM from the majority of its New Construction programs.
[153] CCC, page 7
[154] Tr. 6, page2 7-8

257. Second, from 2015 to 2020 the proportion of Enbridge's DSM budget represented by overhead and administrative costs drops significantly, from 17.5%[155] to 11.6%[156]. The Company submits that this is a clear demonstration that Enbridge is striving to do more with less, and has built productivity into its DSM Plan.

258. Enbridge also responds in this Reply to the suggestion of a lack of productivity being built into its DSM Plan in relation to its proposed DSMCEIDA. That response applies equally to Enbridge's response to SEC and CCC here.

## Implementation

259. To provide certainty and to assist Enbridge with the successful start of its 2016 year, it would be beneficial to have Enbridge's plan for 2016 in final approved form by the end of the year. As noted by Board Staff in its argument at Subsection 13.1, in the event that the Board's Decision in this proceeding requires any amendment to Enbridge's multi-year plan, it will be necessary for the Company to make the necessary amendments and re-file affected sections.

260. Enbridge believes that it should be able to respond to a Board Decision and file a revised multi-year plan within approximately 14 days of receiving the Board's Decision. Enbridge submits that no more than 7 days should be permitted for parties to file comments on the revised plan. Enbridge requests that the Board direct that any comments must be strictly limited to areas requiring amendment and only address concerns that the revised plan does not comply with the Board's Decision. While Enbridge believes it is unlikely that any intervenor comments will be filed, it will provide any response within 5 days. The Board would then be in a position to approve the "as amended" DSM plan.

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[155] Exhibit B, Tab 1, Schedule 3, page 5, table 1
[156] Exhibit B, Tab 1, Schedule 4, page 5, table 5

**Conclusion and Order Sought**

261. While Enbridge has spent a good number of pages in this Reply responding to the requests of intervenors, it hopes that the extent of its response has not created the perception that there is any material opposition to Enbridge's Multi-Year Plan and its program offerings. Enbridge felt a great deal of support and encouragement from the parties for the program mix, suite of program offerings, budgets and rate impacts. Enbridge appreciates the thoughtfulness of all intervenors who have made recommendations for improvements regardless of whether Enbridge has accepted the suggestion. Enbridge values and appreciates the input of its DSM consultative member and it views the recommendations made in this proceeding as a continuation of this cooperative stakeholdering.

262. Enbridge also appreciates the specific support and credit which many intervenors made in their argument about aspects of its plan. While too numerous to repeat, several examples include the following supportive submissions.

263. SEC (p. 16) noted that the Enbridge Plan seeks to achieve high customer participation levels and that it has done a pretty good job of diversity in its offerings. SEC (p. 47) also believes that the Energy Leaders' program has the potential to be a very good program and could become a "valuable part of the Enbridge portfolio". It is also supportive of the CIF and the aspiration and work towards what Ms. Oliver-Glasford agreed made Enbridge "ahead of the curve"[157].

264. BOMA (p. 14) states that Enbridge's work on low income programs deserves special mention noting that it has developed an innovative approach to addressing low income households living in private sector rental buildings. LIEN (p.3/4) acknowledges that both applicants have proposed suites of low income program offerings to fulfil the key objectives of the Board and these offerings are cost-effective. FRPO (p. 3) praises Enbridge's low income market rate multi-family program and uses it as an example of the leadership which it and others are seeking.

[157] Tr. 5, p. 148

265. It is also clear from the submissions of intervenors that no party believes that Enbridge's Plan is not in material compliance with the Framework. Board Staff (p. 12) state that the natural gas savings anticipated by the Utilities are "largely appropriate given that the Utilities have responded to the guiding principles of the DSM Framework". Board Staff (pp. 25/26) believe that the rate impact on residential ratepayers is reasonable and that the cost effectiveness screening was undertaken consistent with the DSM Guidelines.

266. As a result, Enbridge submits that the Board has a clear and compelling record which supports the approval of its 2015 to 2020 Multi-Year Plan as filed subject to the specific refinements Enbridge has accepted in this Reply and its responses to the recommendations by Synapse and Mr. Neme found in Undertaking J8.1 and J6.5 respectively.

267. All of which is respectfully submitted.

Dated: October 23, 2015

**ENBRIDGE GAS DISTRIBUTION INC.**
By its Counsel

**AIRD & BERLIS LLP**

(Original Signed)

Dennis M. O'Leary

Other Responses to Stakeholder Submissions

1. The following table addresses a number of areas in which Enbridge believes a direct but concise reply to Board Staff and intervenor submissions is warranted.

| OEB Topic | Intervenor | Page | Intervenor / Board Staff Quote | Enbridge Response |
|---|---|---|---|---|
| 3 - DSM Budgets | IGUA | 18 | …EGD rates 100, 110, 115 and 170 be capped at 140% of their approved budgets, inclusive of DSMVA access. | Enbridge is not opposed to the idea of capping certain rate classes to maximize rate certainty. However the Company submits that its current rate caps for rates 110, 115 and 170 escalated annually for inflation have demonstrated themselves to be effective and appropriate (rate 100 currently does not have any customers within it). In the event that the Board believes IGUAs rate caps, which are overall lower than current caps, should instead be implemented, Enbridge requests that the cap be placed on the combined budgets of these three rate classes, to provide flexibility and ensure that no customer is denied access to DSM due to such rate caps. |
| 4 - Shareholder Incentive | Board Staff | 2 | Inflation should not have been applied to the 2015 shareholder incentive amounts | This recommendation contradicts the DSM Framework, which explicitly states in section 15.1 that the utilities should increase their "...shareholder incentive amounts in the same manner as they have done throughout the current DSM Framework." It is also worthy of note that the amount in question is the cap on shareholder incentives; not the actual incentive earned. Enbridge has complied with the DSM Framework and respectfully requests approval of the 2015 shareholder incentive cap as filed. |
| 4 - Shareholder Incentive | CME | 7 | Both EGD and Union have taken issue with the shareholder incentive structure established by the Board, and, in particular, have characterized the 150% upper band target as unreasonable. | Enbridge did not "take issue" in this area. The Company followed the Board's Framework diligently, however, notes only that it will be a challenge to meet 150% any single target, and virtually impossible to hit 150% in all targets simultaneously. |

| OEB Topic | Intervenor | Page | Intervenor / Board Staff Quote | Enbridge Response |
|---|---|---|---|---|
| 4 - Shareholder Incentive | ED | 29 | Union or Enbridge could have proposed a plan with twice the gas savings – or half the gas savings – and still been eligible for exactly the same maximum incentive. [..] One option is to peg the maximum incentive to the overall conservation budget or the proposed gas savings (while continuing to make the incentive payouts contingent on meeting or achieving the targets). | Enbridge's October 15th, 2014 submission regarding the Board's Draft DSM Framework was generally supportive of a shareholder incentive that scaled as effort, goals, and outcomes expanded. However, the Board ultimately decided that the total incentive should be capped. |
| 4 - Shareholder Incentive | SEC | 5 | With more money, and more shareholder profit, comes more responsibility. The Board will have seen that SEC's theme throughout this proceeding has been increasing the expectations placed on the utilities. | Enbridge does not agree that the current Plan stands to result in "more shareholder profit". Quite the contrary, the incentive amount is less than was experienced in the 2012 - 2014 timeframe despite a significant increase in budget and results. Operating under scorecards with 75% low-end thresholds and challenging 150% stretch targets only solidifies this reality. In addition, achieving higher results reduces the probability of over-achieving said higher results (meaning the probability of a given level of incentive diminishes). |
| 4 - Shareholder Incentive | VECC | 6 | VECC submits this $10.45 million incentive cap should also apply for 2015 consistent with the Board's DSM Framework issued in December, 2014, prior to the April 1, 2015 submission of Enbridge and Union's DSM applications. On this basis, VECC submits that Enbridge and Union's 2015 incentive should be capped at $10.45 million. | This recommendation contradicts the DSM Framework, which explicitly states in section 15.1 that the utilities should increase their "...shareholder incentive amounts in the same manner as they have done throughout the current DSM Framework." It is also worthy of note that the amount in question is the cap on shareholder incentives; not the actual incentive earned. Enbridge has complied with the DSM Framework and respectfully requests approval of the 2015 shareholder incentive cap as filed. |

| OEB Topic | Intervenor | Page | Intervenor / Board Staff Quote | Enbridge Response |
|---|---|---|---|---|
| 5 - Program Types | BOMA | 12 | Both companies should work with others including LDCs to accelerate the introduction of net zero buildings… | Enbridge is working towards introduction of net zero buildings and currently actively participate on a number of councils relevant to this matter, including CHBA Net Zero Council, BILD Board of Directors, a number of Municipal green standard councils, and every Home Builder Association within the Company's franchise area. Further, the SBD offers, which also promote electricity CDM offers, are an important step towards net zero, as participants seek to move beyond code compliance toward a challenging, high-efficiency future state. |
| 5 - Program Types | OSEA | 3 | Currently, Enbridge's Resource Acquisition Program focuses on the identification and replacement of lower efficiency products with higher efficiency products. OSEA submits that this characterizes energy efficiency too narrowly. The Applicants must assess the feasibility of new technologies beyond simple equipment upgrades. | Enbridge explained that it is always open to exploring the cost effectiveness of new technologies. Further, as noted in the Technical Conference, and in the Hearing by Mr. Lister (TR5, page 139) that the Savings by Design programs allow for these technologies to be implemented at the discretion of the customer. Enbridge is very interested in continuing to explore and assess sustainable technologies, such as those listed by OSEA, for their cost effectiveness and ability to help customers conserve energy and lower their energy bills. EGD has also asked for funds to continue to look at new and innovative technologies through the Collaboration and Innovation Fund. These elements of EGD's plan will drive the appropriate level of focus on moving the technologies of tomorrow forward, while also allowing EGD to get on with the business of implementing the technologies of today and increasing energy literacy among customers. |
| 8 - Cost-Effectiveness Screening | SEC | 12 | All custom projects should qualify for inclusion in utility plans only if they meet the relevant cost-effectivess test… | Enbridge does not find this restriction to be appropriate given it is a Framework issue, and the Framework's direction on page 33 to the Utilities was to screen "programs", not projects, for cost effectiveness using the TRC and PAC tests. It is also not seen as necessary given the highly cost-effective nature of its overall DSM portfolio. |
| 9 - Avoided Costs | Board Staff | 2 | Avoided cost calculations should be updated using an agreed on natural gas commodity price forecast…[with Union Gas] | Enbridge agrees it will seek to understand why the commodity price used is different than Union Gas, and determine if consistency is appropriate. |

| OEB Topic | Intervenor | Page | Intervenor / Board Staff Quote | Enbridge Response |
|---|---|---|---|---|
| 11 - Integration and Coordination of Natural Gas DSM and Electricity CDM Programs | CCC | 7 | Although the Utilities are attempting to coordinate with the electric utilities, there is very little activity proposed during the term plan. The Council believes there is significant potential with respect to coordination and integration with the electric LDCs. This should be more rigorously explored by the Utilities over the next several years in order to avoid duplication and overlap between the delivery of natural gas DSM and electric CDM. | Enbridge has taken a very pro-active approach to DSM / CDM collaboration. The process is slow moving, complex (given the number of stakeholders and opinions) and must pass through the pilot phase before meaningful large scale collaboration can take root. As SEC notes on page 64 of their Final Argument, the gas utilities "...can't do it alone, and this Board cannot force the issue within its specific jurisdiction. SEC believes that the patience and tenacity that Union and Enbridge have expressed...are the best that can be done." Enbridge agrees with this characterization and furthermore is committed to its current productive path. |
| 11 - Integration and Coordination of Natural Gas DSM and Electricity CDM Programs | OSEA | 8 | The Applicants have yet to engage in substantive pilot projects with LDCs. | Enbridge has taken a very pro-active approach to DSM / CDM collaboration. The process is slow moving, complex (given the number of stakeholders and opinions) and must pass through the pilot phase before meaningful large scale collaboration can take root. As SEC notes on page 64 of their Final Argument, the gas utilities "...can't do it alone, and this Board cannot force the issue within its specific jurisdiction. SEC believes that the patience and tenacity that Union and Enbridge have expressed...are the best that can be done." |
| 11 - Integration and Coordination of Natural Gas DSM and Electricity CDM Programs | SEC | 64 | …the Board should direct both Union and Enbridge to review all of their proposed program incentives and other benefits, and determine which, if any, are higher than they would need to be, absent competition from the electricity distributors. Where that is the case, they should be reduced to a more reasonable level, and the gas utilities should discuss with the LDCs and the IESO the need to co-ordinate their offerings so that the electricity distributors are not also spending more than necessary. | This would create the exact situation which Mr. Shepherd outlined in TR.8, 99-100, where the gas utilities would have no negotiating position and would essentially have to do whatever the IESO and LDCs wanted. In Enbridge's experience, it is highly unlikely that mere "discussions" with LDCs and the IESO will result in their reducing incentives, which they will likely see as limiting their ability to meet difficult targets. As in DSM, elements of CDM are inextricably linked and changing one element will likely change all other elements of their plan. |

| OEB Topic | Intervenor | Page | Intervenor / Board Staff Quote | Enbridge Response |
|---|---|---|---|---|
| 11 - Integration and Coordination of Natural Gas DSM and Electricity CDM Programs | VECC | 48 | "...Enbridge and Union should take a more proacitve approach and lead the way for more electricity and gas DSM coordination that would include…" | Enbridge has taken a very pro-active approach to DSM / CDM collaboration. The process is slow moving, complex (given the number of stakeholders and opinions) and must pass through the pilot phase before meaningful large scale collaboration can take root. As SEC notes on page 64 of their Final Argument, the gas utilities "...can't do it alone, and this Board cannot force the issue within its specific jurisdiction. SEC believes that the patience and tenacity that Union and Enbridge have expressed...are the best that can be done." |
| 13 - Other | IGUA | 27 | When [carbon] regulations come into effect, anticipated no later than 2017, utility incentives to implement reductions in gas consumption and rate funded training and analysis would be completely redundant for the large users directly subject to carbon regulations. | As highlighted by Mr. Ott in TR9, page 97 when questioned by IGUA on this matter "… DSM can make a difference here [for Industrial users], it can push that customer to do the option in which they reduce their emissions..." Enbridge submits that DSM would not, under this circumstance be redundant. |

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**ONTARIO ENERGY BOARD ("OEB")**

**Request for RFP**

**For**

**Planning and Execution of a Natural Gas Conservation Potential Study**

Request for Proposal No.: RFPOEBNGCPS09222015

Issued: September 22, 2015

Proposal Submission Deadline**: October 14, 2015 @ 3:00:00pm**

# SECTION 2 - THE DELIVERABLES

## 2.1 Background

The OEB is a self-funded Crown Corporation with a relatively small number of employees, charged with regulating Ontario's natural gas and electricity sectors.

The March 2014 directive to the OEB from the Minister of Energy (Conservation Directive), among other things, requires an achievable potential study for natural gas efficiency in Ontario to be conducted every three years, with the first study to be completed by June 1, 2016 to inform natural gas efficiency planning and programs. The Conservation Directive further stated that the achievable potential study should, as far as is appropriate and reasonable, be coordinated with the Independent Electricity System Operator (IESO). A similar directive was provided to the IESO to conduct an electricity efficiency achievable potential study every three years.

On February 4, 2015 the OEB received a letter from the Minister of Energy requesting that the OEB consider as part of this study how potential Demand-Side Management (DSM) benefits such as carbon reduction and natural gas price suppression may be used to screen prospective DSM programs and inform future budgets.

## 2.2 Objectives for Planning and Execution of a Natural Gas Conservation Potential Study

The objective of this natural gas conservation potential study is to estimate the achievable potential for natural gas efficiency in Ontario from 2015 to 2030 to inform DSM program design and delivery at the mid-term review of the 2015-2020 DSM Framework, and also provide guidance to utilities for DSM program design and delivery beyond 2020. In addition, the results of the study could be a useful input in assessing the role DSM may serve in future distribution infrastructure planning processes at the regional and local levels.

OEB staff will oversee the achievable potential study which will be carried out by a qualified consulting firm with support from a DSM Technical Working Group (DSM TWG). The DSM TWG is comprised of experts proposed by stakeholders and representatives from natural gas utilities, the IESO, the Ontario Ministry of Energy and the Environmental Commissioner of Ontario. More details on the DSM TWG are available on the OEB's natural gas conservation potential study webpage.

## 2.3 Purpose and Scope

The scope of work for the study includes the planning and execution of an achievable potential study in the Union Gas and Enbridge Gas Distribution franchise areas in accordance with the Conservation Directive. Input and advice for the study will be provided by DSM TWG at key junctures.

The consultant shall recommend an appropriate methodology to address each task of the project; shall state assumptions and inputs in order to achieve maximum transparency while respecting customer confidentiality; and shall take into consideration existing and upcoming codes & standards that concern equipment and buildings in Ontario. The analysis shall take into consideration new commercially available technologies, as well as emerging energy efficient technologies anticipated to achieve significant natural gas savings in Ontario beyond 2020.

The project tasks shall include review of technology input assumptions and avoided costs; development of a 2014 base case; development of a reference case forecast; an estimation of technical, economic, and achievable potential; a sensitivity analysis on key inputs; hourly peak demand analysis; and recommendations for the development of future DSM programs, including the identification of coordination opportunities for electricity and natural gas energy efficiency programs.

As the Ministry of Energy indicated in its March 4, 2015 letter, the potential study shall also include an assessment of how such potential DSM benefits as carbon reduction and natural gas price suppression may be used to screen prospective DSM technologies and programs and inform future budgets.

An electricity achievable potential for Ontario is also currently underway, which is being led by the IESO. The OEB and the IESO are working to share information and coordinate between the two studies wherever feasible. More information on the IESO potential study is available here: http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/Working-Groups/2016-Achievable-Potential-Study-LDC-Working-Group.aspx

**Please see attached Section 3 for a full list of project requirements.**

[**End of Section 2]**

SECTION 3 - REQUIREMENTS OF THIS RFP

### 3.1 Mandatory Requirements

The project tasks are listed below. The consultant shall provide a methodology and budget for all tasks. All tasks should be included in the consultant's proposed budget as separate line items.

**Task 1 - Project Plan**

The consultant shall develop a detailed project plan including the proposed scope, methodology, and work plan to complete the study. The project plan shall be guided by the study objectives, scope of work, and timeline outlined in this RFP.

## Task 1 Deliverables:

- Draft project plan
- Presentation of project plan to the DSM TWG
- Final project plan

**Task 2 - Review and Development of Measure Input Assumptions**

The consultant shall review the measures included in the Technical Reference Manual (TRM)[1] filing as prepared by the Technical Evaluation Committee (TEC)[2] and develop a database of natural gas energy efficiency measures to be included in the study.

The consultant shall:

2.1 Assess technologies and operations/maintenance/controls measures that save natural gas including, but not limited to, those included in the TRM.

2.2 Include new commercially available and emerging natural gas technologies, with an emphasis on measures that are anticipated to deliver significant savings in Ontario. Use Ontario-based energy performance data wherever possible to inform the measure input assumptions.

2.3 Include measures that are applicable to one or more sub-sectors in the industrial and commercial sectors where applicable.[3]

2.4 Review and align input assumptions with IESO's Measures and Assumptions Lists for measures that save both natural gas and electricity, where feasible.

2.5 Exclude any measures that are part of a current or pending efficiency standard or building code as of the effective date of the product standard or building code. Include applicable measures whose performance levels exceed the standard or building code.

2.6 Describe how to address the impacts of future technologies which could emerge beyond 2020 but which cannot be specifically identified today.

2.7 Assess how the results from benchmarking analyses conducted for various commercial building types can be used in the estimation of savings for commercial measures where data is available.

[1] The Technical Reference Manual will provide the most updated measure input assumptions and is not currently publically available, but will be made available to the selected consultant for the purpose of completing the study. The current input assumptions are publically available on the OEB website (EB-2014-0354).

[2] The TEC was established to develop DSM technical and evaluation standards for natural gas utilities in Ontario. The TEC consists of three stakeholder representatives, two independent technical experts and a representative from each of the utilities.

[3] The consultant is recommended to review recent Custom Project Savings Verification (CPSV) reports filed with the OEB as a starting point to develop subsector-specific measures for the industrial and commercial sectors. The study shall also account for all custom measures that might be installed, particularly in larger commercial and industrial facilities, which cannot realistically be fully anticipated or captured in any measure list.

For each measure identified, the consultant shall:

2.8 Provide a description of each measure, and classify it as applicable to new construction, natural end-of-life replacement, early retirement, retrofit, operational / maintenance / controls, or whole-building / whole-facility.
2.9 Map measures to sector (i.e. residential, commercial, industrial), sub-sector and end-use.
2.10 Estimate measure life and customer equipment and operating costs and savings of gas, electricity, water and other resources associated with each measure. Consider interactive effects between measures where applicable.
2.11 Consider whether the measure costs will decline as market share or volume increases, and make such adjustments for measures when it would be reasonable to expect such changes.
2.12 Provide the simple payback period / return on investment associated with each measure, and also assess other factors such as capital project hurdle rates that would affect a customer's decision to adopt the technology; including qualitative impacts such as comfort improvements, product quality improvements, etc.
2.13 Quantify carbon impacts associated with the savings of each technology.
2.14 Provide current market penetration or saturation estimates associated with each measure, where data is available.
2.15 Assess whether the measure achieves base load or peak gas savings or increases, and other pertinent load characteristics, where available.

## Task 2 Deliverables:

- Summary of natural gas energy efficiency measures by sector, sub-sector and end-use including input assumptions for new commercially available and emerging technologies.
- Measure summary can be provided in one chapter of final report, with all measure details in an appendix.

### Task 3 - Review of Avoided Costs

3.1 The consultant shall review the current avoided costs, as shown in each utility's 2015-2020 DSM Plans, including review the methodology and components of the avoided cost as filed (i.e. commodity costs, other variable costs, and capital facility expenditures) for reasonableness.
3.2 The consultant shall review any avoided cost studies submitted by intervenors in the OEB's review of their 2015-2020 DSM Plans (EB-2015-0029/EB-2015-0049), including review the methodology and components of the avoided cost such as commodity costs, capital facility expenditures and other variable costs for reasonableness.

## Task 3 Deliverables:

- Avoided costs to be used in the study.
- Carbon pricing levels to be used in the screening of DSM technologies and programs.
- Findings shall be summarized in one chapter of the final report.

### Task 4 - Carbon Reduction Benefits

Based on a review of existing research, actual carbon markets, and Ontario's greenhouse gas emission reduction commitments, the consultant shall propose potential carbon pricing levels for use in the screening of the DSM technologies.

## Task 4 Deliverables:

- Carbon pricing levels to be used in the screening of DSM technologies and programs.
- Findings to be included in the Avoided Costs chapter of the final report.

### Task 5 - Natural Gas Price Suppression Effect

The consultant shall estimate the natural gas price suppression effect associated with Ontario DSM programs to be included in the cost-effectiveness screening of the economic potential, using existing research and a methodology proposed by the consultant. These effects shall be included in the study's final avoided costs for use in the cost-effectiveness screening.

## Task 5 Deliverables:

- Methodology and calculation of natural gas price suppression effects.
- Final avoided costs to be used in the study, including natural gas price suppression effects.
- Findings to be included in the Avoided Costs chapter of the final report.

### Task 6 - Base Case

Using 2014 as the base year, the consultant shall disaggregate natural gas consumption by utility service area, utility region, sector, and sub-sector and end-use, using a methodology recommended by the consultant. The consultant shall use the 2014 gas consumption data and residential end-use survey results provided by the gas utilities, as well as use other data sources as appropriate to disaggregate into subsectors and end-uses.

## Task 6 Deliverables:

- Disaggregated base case, by natural gas utility, utility region, sector, and sub-sector, and end-use.
- Findings shall be summarized in one chapter of the final report.

### Task 7 - Reference Case Forecast:

The consultant shall develop a reference case forecast for 2015-2030. The reference case forecast shall include the following milestone years: 2015, 2016, 2017, 2018, 2019, 2020, 2025 and 2030.

The consultant shall:

7.1 Base the reference case on analysis that explicitly assumes that there are no gas DSM efforts going forward.

7.2 Consider the gas utilities' forecasts, information on IESO's forecast used in the electricity potential study, as well as other sources as recommended by the consultant.

7.3 Ensure that projected growth rates and intensities in the residential, commercial, and industrial sectors are taken into consideration in the forecast.

7.4 Consider proposed government regulation, such as cap and trade for GHG emissions, in the forecast, as appropriate.

7.5 Include the impacts of natural conservation, existing and anticipated updates to codes and standards, existing and upcoming regulations, persistence of historical conservation program savings, as appropriate.

## Task 7 Deliverables:

- Reference case forecast by natural gas utility, utility region, sector, sub-sector and end-use.

- Findings shall be summarized in one chapter of the final report.

**Task 8 - Technical Potential:**
The technical potential is the total natural gas savings resulting from the implementation of all technically feasible energy efficiency measures identified in Task 2 above, regardless of cost effectiveness or market acceptance.

## Task 8 Deliverables:

- Technical potential by utility, utility region, sector, sub-sector, and end-use, for each milestone year specified in the reference forecast.
- Discussion of results and comparison to previous studies conducted in Ontario and other similar jurisdictions.
- Results shall be summarized in one chapter of the final report.

**Task 9 - Economic Potential:**
The economic potential is the total natural gas savings resulting from the implementation of all measures included in the technical potential that also pass the TRC-plus cost effectiveness[4] screening, regardless of market acceptance.

## Task 9 Deliverables:

- Economic potential by utility, utility region, sector, sub-sector, and end-use, for each milestone year specified in the reference forecast.
- Discussion of results and comparison to previous studies conducted in Ontario and other similar jurisdictions.
- Results shall be summarized in one chapter of the final report.

**Task 10 - Achievable Potential:**
The achievable potential analysis takes into account realistic market penetration rates of cost-effective measures over the study period based on the following factors:

- Market barriers
- Customer preferences and acceptance based on payback periods, return on investment (ROI), investment hurdle rates and other factors
- Incentive levels
- Aggressiveness of marketing efforts
- Historic program experience
- Competing DSM measures
- Increased future collaboration between electricity and natural gas utilities[5]
- Experience in leading jurisdictions, and
- Other factors affecting market acceptance as identified by the consultant

Empirical research results, and how they are applied to the analysis, should be explicitly stated.

10.1 The consultant shall estimate the achievable potential savings by utility, utility region, sector, sub-sector and end-use under three scenarios:

*10.1.1 Unconstrained Achievable Potential*

[4] See page 26 of the 2015-2020 DSM Guidelines.

[5] The gas utilities have proposed CDM/DSM collaboration on certain programs in their 2015-2020 DSM Plans. The consultant is asked to assess how future collaboration between electricity and gas utilities on program delivery may impact adoption rates.

The consultant shall estimate natural gas savings potential assuming no budget constraints or policy restrictions over the study period.

*10.1.2 Constrained (Existing Program) Potential*

The consultant shall estimate natural gas savings potential assuming the DSM budgets, established by the OEB for each utility in the 2015-2020 DSM Framework, remain unchanged throughout the study period.

*10.1.3 Semi-Constrained Program Potential*

The consultant shall take into account additional DSM funding that may become available through the cap and trade greenhouse gas emissions reductions program announced by the Ontario government. The consultant shall estimate natural gas savings potential assuming the DSM budgets, established by the OEB for each utility in the 2015-2020 DSM Framework, remain in place from 2015-2017, increase to double these levels by 2020, and then continue at similar levels from 2020-2030.

## Task 10 Deliverables:

- Achievable potential results by utility, utility region, sector, sub-sector, end-use for each scenario.
- Discussion of results and comparison to previous studies conducted in Ontario and other similar jurisdictions.
- Results shall be summarized in one chapter of the final report.
- Present preliminary results to the DSM TWG for feedback.

### Task 11 - Sensitivity Analysis:

The consultant shall conduct a sensitivity analysis on the economic and achievable potential, based on changes to the following variables:

- Natural gas price forecast.
- Carbon price forecast, as related to carbon cap and trade proposed by the provincial government.
- Avoided costs, including the effect of natural gas price suppression effects.
- Sensitivity analysis on one or two other variables as proposed by the consultant.

## Task 11 Deliverables:

- Sensitivity analysis results for economic and achievable potential scenarios by utility, service area, and sector.
- Sensitivity analysis shall be summarized in one chapter of the final report.

### Task 12 - Hourly Peak Demand Analysis:

The consultant shall analyze the net impact on peak demand of the measures included in the achievable potential scenarios, based on the peak demand profiles of the measures and anticipated market penetration rates as determined in the achievable potential scenarios.

## Task 12 Deliverables:

- Analysis of net peak demand impacts associated with each of the three achievable potential scenarios.
- Results shall be summarized in one chapter of the final report.

### Task 13 - Summary of Results and Recommendations:

13.1 The consultant shall summarize the study results and make recommendations for program enhancements that would drive further participation and savings, including opportunities for collaboration between electricity and gas utilities.

13.2 The consultants shall identify new program opportunities that warrant further investigation for the mid-term review of the DSM framework and beyond.

## Task 13 Deliverables:

- Results summary and recommendations shall be summarized in one chapter of the final report.

**Final Deliverables**

The consultant shall present the study results in a standard report format, as well as in an electronic format that allows for data manipulation (e.g. pivot table), with all years included (not only milestone years). It should be possible to view the achievable potential scenarios by utility, utility region, sector, sub-sector and end-use, in a form that is transparent and explainable to a variety of stakeholders.

**Meetings**

The consultant's bid shall budget the following meetings in their proposed work plan and budget:

- Four in-person meetings and four conference calls with the DSM TWG (November 2015 - May 2016).
- One presentation of preliminary study results for stakeholders (April 2016).
- Biweekly progress meetings with OEB.
- One final presentation to OEB (May 2016).

**Reference Material**

The consultant should consider the following information in the development of the study, in addition to data sources recommended by the consultant:

- 2015-2020 DSM Framework and Guidelines (link)
- Union and Enbridge filed DSM Plans, including new and evolved programs, and avoided costs (Union's DSM Plan; Enbridge's DSM Plan)
- Previous potential studies completed for Ontario's natural gas utilities (Enbridge's past potential study; Union's past potential study)
- Technical Reference Manual, most recent Measure Input Assumptions filing (link) and IESO's measure assumptions (link)
- Navigant's Input Assumption Filing from 2009 (link)
- Filed annual DSM audit reports which includes Custom Project Savings Verification (CPSV) reports (Union's 2013 audit report; Enbridge's 2013 audit report)
- New England Avoided Costs Study (link)
- Ontario Long-Term Energy Plan (link)
- Gas consumption and number of customers by utility, utility region, and sector for 2014 (to be provided by natural gas distributors)
- Residential customer end-use surveys (to be provided by natural gas distributors)
- Natural gas sales forecasts (to be provided by natural gas distributors)
- Reported actual energy use by broader public sector (BPS) organizations under the Green Energy Act
- Studies of actual energy use in the residential and industrial sectorsResults of benchmarking/target-setting work by the Canada Green Building Council[6], Toronto & Region Conservation[7], REALpac[8] and CivicAction[9]

[6] Canada Green Building Council https://www.cagbc.org/

[7] Toronto & Region Conservation http://www.trca.on.ca/

[8] Real Property Association of Canada http://www.realpac.ca/

Expert witness evidence, as well as intervenor and OEB staff submissions in the current DSM Proceeding (Filings for Union and Enbridge)

[**End of Section 3]**

[9] CivicAction http://civicaction.ca/