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2 October 2015

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

Dear Ms. Walli:

Re: Union Gas Limited and Enbridge Gas Distribution Inc.
2015-2020 DSM Plan Applications
Board File Nos. EB-2015-0029 and EB-2015-0049

Please find attached APPrO's final argument in EB-2015-0029 and EB-2015-0049.

Yours very truly,

Lisa (Elisabeth) DeMarco

CC: Vanessa Innis (Union Gas Limited)
Crawford Smith (Torys LLP)
Andrew Mandyam (Enbridge Gas Distribution Inc.)
Dennis O'Leary (Aird & Berlis LLP)
David Butters (APPrO)
John Wolnik (Elenchus Research Associates Inc.)
All parties (by e-mail)

Encl.

ONTARIO ENERGY BOARD

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

IN THE MATTER OF an Application by Union Gas Ltd pursuant to Section 36(1) of the *Ontario Energy Board Act, 1998*, for an Order or Orders approving the 2015 to 2020 Demand Side Management Plan;

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.

EB-2015-0029/EB-2015-0049

The Association of Power Producers of Ontario (APPrO)

FINAL ARGUMENT

October 2, 2015

INTRODUCTION

1. We are counsel to the Association of Power Producers of Ontario ("**APPrO**") in this Union Gas Limited ("**Union**") EB-2015-0029 and Enbridge Gas Distribution ("**Enbridge**") EB-2015-0049 proceeding (the "**DSM Proceeding**") for an order approving Demand Side Management ("**DSM**") plans for 2015-2020 (each a "**DSM Plan**").

2. APPrO is a non-profit organization representing more than one hundred (100) companies involved in the generation of electricity in Ontario. APPrO members produce power from co-generation, hydro, gas, nuclear, wind and solar energy, waste wood and other sources. APPrO's members produce over 95% of the electricity made in Ontario and own and operate power generation capacity in the province. APPrO's membership includes generators, marketers, contractors, equipment suppliers, consultants, local distribution companies, fuel suppliers, service providers and financiers. APPrO's goal is to facilitate an economically and environmentally sustainable electricity sector in Ontario that supports the business interests of electricity generators, ratepayers and the provincial economy.

3. This DSM proceeding follows and builds upon the very considered development of DSM policy by each of the Minister of Energy, the government, the Ontario Energy Board (the "**Board**") and stakeholders. Specifically, in 2013, the Government of Ontario issued its updated Long-Term Energy Plan, *Achieving Balance*, which placed a strong focus on increasing energy conservation efforts throughout the province and incorporating the policy of Conservation First into planning processes.[1] On March 26, 2014, the Ontario Minister of Energy (the "**Minister**") issued a Directive (the "**Conservation Directive**") to the Ontario Energy Board that, among other things, required the Board to establish a new DSM policy framework.[2] On December 22, 2014, the Board issued its final 2015 to 2020 Report on the DSM Framework for Natural Gas Distributors (the "**Framework**")[3] and the Filing Guidelines to the DSM Framework ("the **Guidelines**").[4] The Framework provides that natural gas utilities are expected to develop their DSM plans in accordance with the Framework and Guidelines and submit those plans to the Board for approval.

4. On April 1, 2015, Union filed its DSM Plan, which included a request for approval of its Large Volume Rate T2/Rate 100 Program ("**LVC DSM Program**") and budget in accordance with section 36 of the *Ontario Energy Board Act*.[5] Enbridge similarly filed an application seeking approval of DSM Plan and the Board combined the two applications into a single proceeding.

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[1] Ontario, Ministry of Energy, *Achieving Balance: Ontario's Long-Term Energy Plan* (Ontario: Queen's Printer for Ontario, 2013).
[2] *Directive requiring the Board to amend the licences of electricity distributors regarding CDM activities for the period January 2015 to December 2020 and to develop a DSM policy framework for natural gas distributors for the same period*, OC 467/2014.
[3] Ontario Energy Board, *Report of the Board: Demand Side Management Framework for Natural Gas Distributors (2015-2020),* (Ontario: Ontario Energy Board, 2014) [DSM Framework].
[4] Ontario Energy Board, *Filing Guidelines to the Demand Side Management Framework for Natural Gas Distributors (2015-2020),* (Ontario: Ontario Energy Board, 2014).
[5] EB-2015-0029, Exhibit A, page 2 at paragraph 5(g).

5. APPrO members include Ontario gas-fired electricity generators ("**GFGs**"), most of which are Union and/or Enbridge large volume customers ("**LVCs**"). Within the Union franchise, GFGs primarily contract for distribution services under Rate 20, Rate 25 and Rate 100 in Union North, and T2 in Union South. Many of APPrO's members therefore stand to be directly and materially affected by the outcome of this proceeding, particularly as it relates to Union's proposed LVC DSM Program and budget.

OVERVIEW OF SUBMISSIONS

6. APPrO and its members are very supportive of the Minister's Conservation Directive, the Board's Framework and the objectives of DSM. APPrO submits that the evidence supports that GFGs are already undertaking energy efficiency and conservation measures pursuant to contractual or other obligations and do not require the costly assistance of a third party administrative intermediary to continue implementing these measures. APPrO further submits that pending Ontario cap and trade regulations that will apply to LVCs including GFGs also provide a direct incentive for conservation and efficiency and make the additional costs of an intermediary ineffective and inefficient. APPrO therefore submits that LVCs – and particularly GFGs – should be exempt from any mandatory ratepayer-funded DSM program for the reasons outlined in this submission.

7. In the alternative, APPrO submits that the Board should approve the Union and Enbridge proposed DSM Plans as filed.

BACKGROUND

8. Prior to this application, Union previously offered a Direct Access DSM program for its large volume (T2 and Rate 100) customers in 2013 and 2014. This 2013-2014 program included the following elements:

- customer incentives for studies, custom projects, and metering;
- Union technical staff to assist customers with Energy Efficiency Plans and projects;
- technical training courses;
- a Direct Access Budget specific to each customer to provide clarity on the amount of incentives available; and
- Union performance incentives based on achievement level relative to natural gas savings targets.[6]

9. In February and March 2015, Union carried out consultations with its Rate T2 and Rate 100 customers to discuss their experience with the 2013-2014 LVC DSM program and determine "what features and benefits the customers value in a utility energy efficiency program".[7] A number of the customers provided the express feedback that they were not in support of a mandatory LVC DSM program going forward. Indeed, a number of customers indicated that: they were primarily driven to self-implement energy efficiency by

[6] EB-2015-0029, Exhibit A, Tab 3, Appendix A, page 64.
[7] EB-2015-0029, Exhibit A, Tab 3, Appendix A, page 64.

the resulting "avoided costs of fuel" as opposed to incentives; they were "doubtful whether Union Gas staff could provide sufficiently specialized technical expertise for [their] plant processes"; and they "oppose[d] embedded DSM program costs in rates".[8]

10. Based on this input, its analysis, and the guidance set out in the Board's Framework, Union redesigned its LVC DSM Program to eliminate all previous DSM programs and financial incentives and offer more limited technical services that would continue to support LVCs by providing training and resources for those customers who wish to use them.[9] More specifically, the elements of Union's proposed LVC DSM Program include:

    - continuing specialized technical support and equipment audits by qualified Union Professional Engineers on an as-requested basis;
    - coordinating and delivering training on energy near plant locations or online to minimize customer staff time away from the plant;
    - eliminating customer incentive payments for studies, capital or operations and maintenance equipment investments;
    - eliminating Union's performance incentive and Rate T2/Rate 100 energy saving targets;
    - eliminating costs associated with energy saving targets and performance measurement; and
    - providing increased program cost certainty to customers by greatly reducing the magnitude of deferred costs to customers.[10]

11. Union's proposed LVC DSM program is estimated to cost ratepayers approximately $800,000 per year.[11] Over $400,000 of the total proposed budget would be allocated to program administration.[12] The Enbridge DSM Plan does not apply to LVCs, reflecting that they are already directly incented to be efficient and conserve energy.[13] APPrO submits that LVCs should be exempt from any mandatory ratepayer-funded DSM program for the reasons outlined below.

The Board's Own Framework Supports a Non-Mandated DSM Program for LVCs

12. The Minister's March 26, 2014 Conservation Directive directs the Board to establish a DSM policy framework and grants the Board broad discretion in crafting such framework.[14] On September 15, 2014, the Board issued its draft DSM Framework and explicitly invited all interested stakeholders to comment on the issue of whether DSM programs were

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[8] EB-2015-0029, Exhibit B.T5.Union.APPrO.2(a)(ii) and Attachment 1.
[9] EB-2015-0029, Exhibit A, Tab 3, Appendix A, page 66.
[10] EB-2015-0029, Exhibit A, Tab 3, Appendix A, section 1.3, page 66.
[11] EB-2015-0029, Exhibit A, Tab 3, Appendix A, section 1.3, page 66.
[12] EB-2015-0029, Exhibit A, Tab 3, page 6, Table 2.
[13] See Enbridge's Application and Evidence in EB-2015-0049.
[14] EB-2015-0029, Exhibit K11.2, March 26, 2014, Ministerial Directive: "In establishing the DSM Framework, the Board shall have regard to the following objectives of the government ***in addition to such other factors the Board considers appropriate***". [Emphasis added.]

appropriate for LVCs.[15] Intervenors such as the Green Energy Coalition ("**GEC**"), Environmental Defence ("**ED**") and the Ontario Sustainable Energy Association ("**OSEA**") submitted comments supporting the inclusion of LVCs in mandatory ratepayer-funded DSM programs.[16] The Board considered, and exercised its discretion to reject the parties' position. Instead, the Board's final Framework, issued on December 22, 2014, recommends that LVCs should be exempt from mandatory ratepayer DSM programs finding that:

> "The Board is of the view that rate funded DSM programs for large volume customers should not be mandated as these customers are sophisticated and typically competitively motivated to ensure their systems are efficient."[17]

13. In a February 4, 2015 letter to the Board, the Minister expressed support for the Framework inclusive of the Board's recommendations on the exemption of LVCs including GFGs.[18] The Minister expressly stated that he was "pleased that the [Board] had released its final DSM Framework (2015-2020)" and that he "look[ed] forward to the OEB's continued support in implementing the government's Conservation First policy".[19] The Minister did not indicate any concern with the Board's considered treatment of LVCs.

14. Union has also confirmed that it agrees with the Board's view.[20]

15. The Board's Framework was the result of an extensive process in which the Board considered a broad range of stakeholder comments and concerns. The Board exercised the discretion duly afforded to it as an expert body and determined that mandatory ratepayer-funded DSM programs were not appropriate for LVCs. It made this decision with the full consideration of GEC, OSEA and ED's opposition to this exemption and the broader policy context. Those parties are now attempting improperly to argue this matter that was already the subject of an extensive and inclusive process and decision in order to effectively redesign the Framework that the Minster has already approved. APPrO submits that the Board should continue to be guided by the principles it deliberately included in the Framework, which received support from the Minister, and exempt LVCs from Union and Enbridge DSM programs.

LVCs Have a Culture of Conservation and Energy Efficiency

16. APPrO and its GFG members support implementing energy efficiency programs and are achieving the associated objectives. GFGs are already undertaking energy efficiency and conservation measures, have long been doing so and have achieved unprecedented

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[15] Ontario Energy Board, *Draft Report of the Board: Demand Side Management Framework for Natural Gas Distributors*, (Ontario: Ontario Energy Board, 2014) [Draft Framework] section 7.1.
[16] EB-2014-0134, Environmental Defence Comments on Draft Report Guidelines, dated October 15, 2014, at page 8; OSEA Comments on Draft Report Guidelines, dated October 15, 2014, at page 13; and GEC Comments on Draft Report Guidelines, dated October 15, 2014, at page 15.
[17] DSM Framework, section 6.2, page 27.
[18] EB-2015-0029, Exhibit K11.2.
[19] EB-2015-0029, Exhibit K11.2.
[20] EB-2015-0029, Transcript Volume 4, page 52:5-18.

greenhouse gas reductions. Ontario's 2014 Climate Change Update recognized that emissions intensity in the sector improved by about 53% from 1990 to 2012.[21] Electricity now accounts for approximately only 6% of province-wide greenhouse gas emissions.[22]

17. GFGs have adopted a culture of conservation and are directly financially motivated to reduce fuel use. Union expressly agreed that GFGs will continue to be conscious of energy conservation in the absence of DSM program incentives.[23] While APPrO acknowledges Union's historical efforts to facilitate energy savings, APPrO submits that Union's LVC DSM program is not necessary to achieve energy efficiency and conservation objectives for GFGs and their operations.

LVCs are Financially Motivated and Legally Required to be Energy Efficient

18. The Board's Framework provides that LVCs are "sophisticated and typically competitively motivated to ensure their systems are efficient".[24] APPrO strongly agrees. GFGs are subject to both financial and legal drivers that directly incent them to be energy efficient and conserve energy. Union's LVC DSM program is therefore not necessary to incent GFGs to undertake these measures and simply constitutes an additional cost.

i. Financial Incentives

19. In February and March 2015, Union carried out consultations with its Rate T2 and Rate 100 customers to discuss "what features and benefits the customers value in a utility energy efficiency program".[25] Many expressed that Union's services were not necessary, as LVCs are already economically driven to be energy efficient.[26] Six of the 20 customers who provided comments in Union's February and March 2015 LVC consultations indicated that natural gas savings were a primary driver, if not *the* primary driver, of their energy efficiency projects, and that further incentives were unnecessary.[27] They provided comments such as:

- incentives are appreciated but the underlying reality is reduced and avoided costs of fuel;
- although incentives are appreciated, reduced cost of fuel remains the primary driver; and
- avoided costs of fuel has been a stronger driver for energy efficiency projects than incentives.[28]

20. This direct customer feedback indicates that GFGs are self-motivated to seek out efficiencies in their operations because efficiencies reduce their direct costs. GFG facilities

[21] EB-2015-0029, Exhibit M.GEC.ED.12, Attachment 3, page 12.
[22] EB-2015-0029, Exhibit K2.3, page 15.
[23] EB-2015-0029, Transcript Volume 4, page 139:26-140:3.
[24] DSM Framework, section 6.2, page 27.
[25] EB-2015-0029, Exhibit A, Tab 3, Appendix A, page 64.
[26] EB-2015-0029, Exhibit B.T5.Union.APPrO.2(a)(ii) and Attachment 1.
[27] EB-2015-0029, Exhibit B.T5.Union.APPrO.2(a)(ii) and Attachment 1.
[28] EB-2015-0029, Exhibit B.T5.Union.APPrO.2(a)(ii) and Attachment 1.

are fuel intensive and cost reductions that may result from natural gas savings initiatives are therefore a top priority for GFG staff and their employees. The financial impacts of natural usage are also at the forefront of GFG planning processes. Indeed, it is in the direct financial interest of GFGs to seek out natural gas savings and energy efficiencies as they affect each facility's bottom line. GFG employee compensation programs also incent individuals to be as efficient as possible and seek out cost-effective energy efficiency programs.[29] APPrO submits that GFGs are already alert to energy efficiency benefits and opportunities and do not require Union's assistance or the burden of additional costs to motivate them to undertake efficiency measures.

ii. Contractual Incentives

21. In many cases, GFGs are parties to contracts that not only motivate, but require, them to undertake energy efficiency measures to optimize the efficiency of their equipment and operations. The experts before the Board confirmed that original equipment manufacturer ("**OEM**") contracts and long-term service agreements ("**LTSAs**") between GFGs and OEMs typically require maintenance schedules and the related efficiencies.[30] These contracts stipulate express confidential information maintenance requirements such as periodic overhauls to optimize the efficiency of GFGs.[31] Union, and many experts before the Board including Synapse, confirmed that GFGs are typically bound by related contractual arrangements.[32] These services are already paid for directly by generators, independent of any DSM program, which may in fact conflict with such contractual requirements.[33] Union is not a party to these agreements, nor is it subject to the requirements contained therein.[34] The involvement of a third party intermediary may therefore be problematic and cause conflicts in and around these contractual maintenance and efficiency requirements that are already in place for GFGs. It is noteworthy that the Board experts confirmed that GFGs are exempt from DSM requirements in the United States.[35]

22. Electricity generators are directly incented to improve and optimize their performance and efficiency through many and various provisions of their Ontario power contracts. The various forms of long term power contracts that GFGs have entered into with entities including the OEFC, OPA and the Independent Electricity System Operator (the "**IESO**") also provide direct contractual requirements that mandate efficient operation in order to maximize value, as discussed more fully below.

[29] EB-2012-0337, Transcript Volume 2, page 102:5-9.
[30] EB-2015-0029, Transcript Volume 4, page 140:11-15; Technical Conference Transcript Volume 4, pages 44:1-6 and 47:2 – 48:12.
[31] EB-2015-0029, Transcript Volume 4, page 140:4-27.
[32] EB-2015-0029, Transcript Volume 4, page 140:28 – 141:4.
[33] EB-2015-0029, Transcript Volume 4, page 141:8-22.
[34] EB-2015-0029, Transcript Volume 4, page 141:8-22.
[35] EB-2015-0029, Technical Conference Volume 4, pages 51:25 – 52:3.

iii. Carbon Pricing Requirements

23. Finally, the Government of Ontario recently announced its intention to introduce a cap and trade regime to regulate greenhouse gas emissions.[36] The regulation is expected to be finalized in summer 2016 and to cover LVCs, including GFGs.[37] GFGs and other emitting LVCs will soon be directly regulated under Ontario's forthcoming cap and trade regime and required to incur costs to ensure sufficient allowances to cover their greenhouse gas emissions resulting from fuel combustion.[38] This additional financial incentive for LVCs to directly reduce their emissions was announced after the Board issued the Framework. This further supports the Board's position that mandatory ratepayer-funded DSM programs for LVCs are not required as they will be directly mandated by the cap and trade system. Union agrees that its LVC customers "won't need any incentives or encouragement" to implement energy efficiency measures once the cap and trade regime is in place, as "they'll be legally obligated to reduce their…emissions".[39]

24. Union has not looked at the impact of carbon pricing on its DSM budget for T2 and R100 customers[40] or incorporated carbon pricing into its proposed DSM programs beyond the 15% non-energy benefit adder.[41] LVCs already face impending cost increases as a function of Ontario's announced carbon pricing measures, therefore if the Board were to require them to pay into a DSM program, it may effectively be asking LVCs to pay twice for at least a portion of their emissions.

25. Moreover, Union has acknowledged that reinstating the LVC Direct Access Program for LVCs already implementing energy efficiency programs will allocate funds and resources away from other rate classes which will detract from the energy savings that they would otherwise achieve.

26. In light of the above, APPrO submits that GFGs are subject to sufficient financial, contractual and carbon incentives to implement energy efficiency measures. They do not require further costly incentives under a mandatory ratepayer-funded DSM program.

LVCs are Best-Placed to Identify and Implement Energy Efficiency Opportunities

27. APPrO submits that GFGs are best-placed to identify and implement energy efficiency opportunities in their own operations as they have the best expertise and can do so most effectively and efficiently.

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[36] EB-2015-0029, Exhibit 2.2, page 12 (MOECC presentation, *Greenhouse Gas Emissions Reductions Consultation on Cap and Trade*, dated May 7, 2015).
[37] EB-2015-0029, Exhibit 2.2, page 12 (MOECC presentation, *Greenhouse Gas Emissions Reductions Consultation on Cap and Trade*, dated May 7, 2015).
[38] EB-2015-0029, Exhibit 2.2, page 12 (MOECC presentation, *Greenhouse Gas Emissions Reductions Consultation on Cap and Trade*, dated May 7, 2015).
[39] EB-2015-0029, Transcript Volume 4, page 96:2-14.
[40] EB-2015-0029, Transcript Volume 2, page 147:2-6.
[41] EB-2015-0029, Transcript Volume 1, pages 72:22 – 73:12 and 96:8-11; Transcript Volume 2, page 51:8-19.

i. GFG Sophistication and Expertise

28. Given that natural gas usage, cost savings and energy efficiency are vital to GFG operations and economic performance, GFGs have trained staff with significant expertise in these areas. Many GFG staff have 20-25 years of operating experience and are mindful of all energy efficient and effective ways to reduce natural gas usage. They also have deep knowledge of their own operations and legal, technical and safety operating requirements that allow them to identify facility-specific opportunities.

29. In contrast, Union may offer LVCs expertise "of a general nature", which will be of limited assistance given the highly technical and regulated nature of GFG customers operations.[42] Indeed, Union received numerous comments during its February and March 2015 consultations indicating that customers were "doubtful whether Union Gas staff could provide sufficiently specialized technical expertise" for their plant processes.[43]

30. The Board has recognized in its Framework that LVCs are sophisticated parties with their own expertise relevant to the objectives of the Framework. The Board Staff experts, including Ms. Napoleon, similarly admit that LVCs have staff dedicated to energy efficiencies or internal energy managers onsite[44] and that such dedicated internal staff would generally have much better knowledge of the entity's operations than a third party utility operator.[45] Finally, Union has also expressly acknowledged GFGs' internal energy efficiency expertise in an earlier DSM proceeding, stating:

> "Union freely acknowledges that power generation customers possess expertise to undertake energy efficiency programs on their own that result in natural gas savings. In Union's submission, this fact should not be seen as a matter of controversy in this proceeding."[46]

31. Union continues to agree that its technical assistance may not be as effective as a customer's in-house expertise with respect to the identification and implementation of energy-efficiency opportunities.[47] [48] No party has offered credible evidence to the contrary.[49]

32. APPrO submits that the Board should aim to maximize the efficiency and effectiveness of each customer dollar and/or rate increase incurred by customers in order to ensure the most effective and efficient result. Union has neither conducted analyses nor collected data relating to the cost effectiveness or efficiency of direct GREENHOUSE GAS emission reductions and energy savings undertaken by the LVC itself versus that which is, or can

[42] EB-2015-0029, Transcript Volume 4, page 57:21-23.
[43] EB-2015-0029, Exhibit B.T5.Union.APPrO.2(a)(ii) and Attachment 1.
[44] EB-2015-0029, Technical Conference Transcript Volume 4, page 60:6-21.
[45] EB-2015-0029, Technical Conference Transcript Volume 4, page 60:22-26.
[46] EB-2012-0337, Transcript Volume 2, page 122:10-19.
[47] EB-2015-0029, Transcript Volume 4, page 135:21-23.
[48] EB-2015-0029, Transcript Volume 4, page 136:3-9.
[49] APPrO requests that the Board afford no weight to the related assertion of the OSEA witness, in light of his lack of expert qualifications and experience in the area.

be, achieved under a utility-administered DSM program.[50] Synapse similarly did not analyze whether the LVC, gas utility or end use customer is best placed financially to undertake energy efficiency measures in the Ontario context.[51] Moreover, Synapse noted that GFGs are generally exempt.

33. With experienced staff, energy efficiency expertise and facility-specific knowledge, GFGs do not require Union's general expertise to identify and implement energy efficiency projects. Rather, GFGs are best-placed to carry out efficiency measures from a cost-effectiveness perspective and no party has offered evidence to the contrary.

ii. Cost-Effectiveness

34. GFGs have their own profit-driven motives to encourage energy efficiency and their own expertise to carry these measures out, as detailed above. There are many different types of GFGs , operating many different generation technologies. Each has its own operating profile, remaining effective life and potential energy efficiency opportunities. GFGs themselves are best positioned to promote demand management at their own facilities in the most cost-effective, safe, and compliant way. APPrO submits that, by their very nature, third party-administered mandatory ratepayer-funded DSM programs do not provide ratepayers with greatest efficiency gains for each dollar spent. This is exacerbated by the high utility administrative costs and low-value service provision.

Administrative Portion of Union's LVC DSM Budget

35. Union's total proposed LVC DSM Program budget for 2016 is $809,000.[52] The administrative portion of the 2016 LVC budget, $409,000, accounts for over 50% of the total 2016 LVC DSM budget. [53] No other program identified in Union's evidence has an administration budget that is over 50% of the total budget.[54]

36. Union has indicated that these administration costs are not attributed to specific activities.[55] Rather, "they are the costs attributed to the salaries and expenses of Union's staff, which consist of professional engineers that will provide technical support to Rate T2 and Rate 100 customers."[56] Union stated that these costs also go towards funding ongoing professional development for those professional engineers, so they can be "cutting-edge in their field."[57] APPrO submits that these high administrative costs cannot be justified in light of the internal capacity, technical expertise and ability of GFGs to carry out energy efficiency and maintenance projects on their own.

[50] EB-2015-0029, Transcript Volume 2, page 147:7-18.
[51] EB-2015-0029, Technical Conference Transcript Volume 4, page 51:8-19.
[52] EB-2015-0029, Exhibit A, Tab 3, page 6, Table 2.
[53] EB-2015-0029, Exhibit A, Tab 3, page 6, Table 2.
[54] EB-2015-0029, Exhibit A, Tab 3, page 6, Table 2
[55] EB-2015-0029, Exhibit B.T5.Union.APPrO.4(a).
[56] EB-2015-0029, Exhibit B.T5.Union.APPrO.4(a).
[57] EB-2015-0029, Transcript Volume 4, pages 84:27-85:14.

Promotion Portion of Union's LVC DSM Budget

37. Union's proposed DSM "promotion" budget for LVCs is approximately $400,000 per year.[58] As per Union's evidence, this budget is to go toward training programs and technical support on an as-requested basis.[59]

38. Union has indicated that the courses it intends to offer LVCs will cost between $290,000 to $380,000 a year to deliver.[60] If LVC customers were to attend such a course directly, Union estimated that it would cost between $1,000-$1,500, with $1,500 being at the "high end" per individual.[61] Union estimated that approximately 29 customers,[62] or 180 individuals would attend such a course.[63] APPrO submits that if 180 LVC individuals paid for the cost directly, it would cost between $180,000 to $270,000. APPrO's math demonstrates that, even using the highest price estimate for an individual to register for the course: (a) a significant portion of Union's proposed promotion budget is unaccounted for; and (b) it would be much less expensive for customers to pay directly for these courses.

	Union's Reported Cost	LVCs' Direct Cost	Difference Paid by Customers
Union's Proposed Promotion Budget	$400,000	0	$400,000
Estimated Costs of Providing Course (using Union's projected participation rates)	$290,000 to $380,000	$180,000 to $270,000	$110,000
Union Low Estimate - $1,000/course	$400,000	$180,000	$220,000
Union High Estimate - $1,500/course	$400,000	$270,00	$130,000

39. When asked to explain this discrepancy in the actual cost of the course and the amount Union budgeted, Union stated that the additional costs were for the "convenience" of bringing the courses closer to the customer facility[64] and the "avoided cost[s]"[65] or costs

[58] EB-2015-0029, Exhibit A, Tab 3, page 6, Table 2.
[59] EB-2015-0029, Exhibit A, Tab 3, Appendix A, section 1.3, page 66.
[60] EB-2015-0029, Transcript Volume 4, page 82:2-8.
[61] EB-2015-0029, Transcript Volume 4, pages 82:15-18 and 142:20-27.
[62] EB-2015-0029, Exhibit A, tab 3, Appendix A, page 71, Table 26.
[63] EB-2015-0029, Transcript Volume 4, page 86:19-22. Note that Union further indicated that these participation numbers refer to both aspects of the LVC DSM program (i.e. participation and training).
[64] EB-2015-0029, Transcript Volume 4, page 144:2-4.

saved by a customer for not having to be away from a plant for training purposes. APPrO respectfully submits that the additional costs of convenience do not justify the results and impact on LVC customers. This is $110,000 less expensive than the proposed course budget set out by Union, and $130,000 to $220,000 less expensive than the proposed $400,000 Union DSM promotional budget for LVCs. Union also fails to acknowledge the opportunity costs associated with the time LVC customer staff will be required to spend interfacing with Union. Moreover, Union's evidence appears to suggest that any savings in customer training costs are likely offset by higher Union administrative costs. As Union explained, "there [are] fees involved for costs of getting our people to the location", "administrative costs to book hotel rooms" and "incremental costs that support the third-party training".[66]

40. APPrO therefore submits that training courses may not be the most effective DSM measure and if they are undertaken it is much more cost-effective for customers to take and pay for training courses directly. The employment hours required to interface with Union representatives on DSM-related matters may be much better spent reviewing plant-specific operational issues for efficiencies.

41. In summary on this point, the nature of the services Union intends to provide LVCs using the DSM budget do not justify the stated costs. Union agreed that it is essentially "proposing to provide training courses and supporting advice".[67] It sees its added value not as an active participant promoting DSM, but as a passive enabler:

> Mr. Mondrow: Thank you. Can you help me and explain – and I know you've got lots of evidence on this, but I wonder if, at a high level, you could help me with an explanation of precisely the value that you see your proposed DSM programs for large volume customers providing?
>
> Mr. Goulden: I see us as shifting from active participants in driving results from our customer's DSM programs to becoming effective enablers. And by enablers, what I'm getting at is helping our customers indirectly achieve DSM success.[68]

42. While individual GFG efforts may not lead to the implementation of *all* cost-effective DSM measures there are other constraints and contractual and safety requirements that may dictate what measures are implemented. Further, Union has indicated that, "even with [Union's] programs [LVCs] wouldn't achieve *all* cost-effective DSM"[69] (emphasis added). APPrO therefore submits that it is neither cost-effective nor efficient to require LVCs and GFGs to pay into a DSM program so that a third party utility administrator can help GFGs "indirectly achieve success".[70]

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[65] EB-2015-0029, Transcript Volume 4, page 144:20-23.
[66] EB-2015-0029, Transcript Volume 4, page 84:18-26.
[67] EB-2015-0029, Transcript Volume 4, page 79:22-23.
[68] EB-2015-0029, Transcript Volume 4, page 52:19-28.
[69] EB-2015-0029, Transcript Volume 4, page 50:13 – 51:18.
[70] EB-2015-0029, Transcript Volume 4, page 52:19-28.

iii. Power Contract Implications

43. The Minister of Energy directs the electricity supply mix in Ontario through directives instructing the IESO to procure electricity,[71] as well as the sources and technologies used to generate it.[72] Ontario's existing natural gas fleet has virtually no ability to mitigate its emissions, as the generation technology is set at the time of construction and the supply mix directives have stipulated how much capacity is to be allocated to what generation technologies. The IESO-administered wholesale market together with contracts, regulations and other considerations, determine what type of generation will supply demand for electricity at any given time. Emissions improvements in the sector must be designed around these systems, costs and contract implications. Unlike a third party utility administrator, GFGs are familiar with what the end-use customer can do under legal service agreements, including maintenance agreements, and can implement energy efficiency projects accordingly.[73]

44. In addition to contractually mandated supply requirements, the contracts that govern the operation, maintenance and payments to and from electricity generators in the province contain significant confidentiality requirements that could limit information sharing relevant to energy efficiency programs and obstruct a third party utility from effectively administering such projects.[74] In light of these contractual constraints, GFGs – as opposed to third parties who are not privy to such contracts – are best placed to implement energy efficiency measures in their own operations. This is entirely consistent with the practice of exempting GFGs from DSM requirements as evidenced by Synapse.

Certain Intervenor Evidence is Inaccurate and Inapplicable to Ontario's Unique Electricity Context

45. There are a number of inaccuracies in the evidence that warrant clarification and consideration to address the unique nature of Ontario's electricity sector generators in the context of DSM. In particular:

i) the free ridership rate put forward by Union to justify the Direct Access Program does not appear to be accurate;

ii) GEC's analysis of the amount of time GFGs are on the margin does not reflect IESO data;

iii) GEC's assumed carbon price and related GREENHOUSE GAS savings does not reflect actual carbon prices;

iv) Board Staff's evidence is consistent with the exclusion of GFGs from DSM;

v) potential infrastructure and DRIPE benefits may be overstated in light of underlying assumptions; and

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[71] S O 1998, c 15, Sched A [*Electricity Act*], s 25.32(4)(a)(ii).
[72] *Electricity Act*, s 25.30(2)(a).
[73] EB-2015-0029, Transcript Volume 12, page 166:2-19.
[74] EB-2015-0029, Technical Conference Transcript Volume 4, page 47:2 – 48:12.

vi) OSEA's evidence was not supported by qualified or expert witness evidence.

APPrO addresses each of these issues in turn below.

i. Union's Free Ridership Rate is Inaccurate

46. APPrO submits that the free ridership rate used by Union to justify continuing the Direct Access Program appears to be inaccurate and is prejudicial to LVCs. A more accurate freeridership assessment would support exclusion of LVCs from mandatory DSM programs.

47. Union currently uses an aggregate freeridership rate across all rate classes of 54%.[75] This figure is based on a report prepared in 2008,[76] and the results are not supported by evidence in this proceeding. APPrO submits that the actual freeridership rate for LVCs is much higher. The Direct Access Program reflects the energy efficiency projects that LVCs submit to Union for funding. Direct Access Program projects are the customers' own projects and it is likely that the customers would undertake them themselves in the absence of the program given that (i) the customers are already planning the projects themselves, and (ii) are prepared to fund the 89-93% of the cost of the measure themselves.[77] Furthermore, in order to get the necessary capital and operating budgets approved for these expenditures, these organizations must submit such costs for approval to senior management well in advance of knowing whether the associated measure will be eligible for DSM funding. The fact that a small contribution may subsequently be available from Union is simply not a major factor in deciding to implement energy efficiency measures. This suggests that the measures are not "additional" and are reflective of a very high free-ridership rate of almost 100%. The fact that 95% of the LVCs participated in the Direct Access Program[78] supports this view and is further testament to the fact that LVCs individually are committed to energy efficiency, as they are trying to recoup a portion of the amounts they have paid in rates.

48. Moreover, Union has been offering DSM programs since 1997.[79] If, in fact, past DSM programs have been effective, DSM by its very nature would have raised customers' energy efficiency awareness, and thereby increased freeridership rates over time. If freeridership rates have not continuously increased, then this brings into question the effectiveness of the DSM program for LVCs and the related assertions. APPrO submits that in deciding on the DSM treatment of LVCs, the Board should be governed by predominant fact of LVC-directed efficiency and not anecdotal stories of outliers.[80]

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[75] EB-2015-0029, Exhibit A, Tab 3, Appendix B, page 169.
[76] EB-2015-0029, Exhibit A, Tab 3, Appendix B, page 169.
[77] EB-2015-0029, Exhibit J4.3, page 56.
[78] EB-2015-0029, Exhibit A, Tab 3, Appendix A, page 64.
[79] EB-2015-0029, Exhibit A, Tab 1, page 5.
[80] See, for instance, EB-2015-0029, Transcript Volume 4 at page 80 where Mr. Dent discusses a training program: "I go back to a recent example, where we brought in a third party person to be do some steam training, and a specific customer brought in 25 of their employees and that became the basis for changes that the company made to their maintenance and steam trap program."

49. Finally, APPrO submits that LVC freerider rates are likely to increase under a cap and trade system. As indicated above, LVCs will be required to comply with Ontario cap and trade obligations that are scheduled to come into force in 2016/2017. The direct cap and trade requirements for LVC customers will, by definition, make any mandatory DSM fall within the ambit of free-ridership.

50. In summary, APPrO submits that the outdated 2008 freerider rate should not be used as a justification to continue the Direct Access Program through to 2020. It is very likely to be inaccurate and is prejudicial to LVCs. The majority of the DSM programs offered to LVCs are already being implemented by LVCs and/or will be subject to free-ridership under a cap and trade regime.

ii. GFGs as Marginal Electricity Source

51. GEC's analysis of the amount of time GFGs were on the margin does not reflect IESO data. As such, the Board should give it little to no weight.

52. Mr. Chernick's calculations were based on assumed and not actual data. The quantum of savings put forward by GEC was therefore inaccurate due to Mr. Chernick's assumption that gas-fired generation was on the margin 70% of the time.[81] The IESO data[82] confirmed by Synapse does not support Mr. Chernick's assumptions. Mr. Chernick stated that he would "be surprised" if actual data showed gas could be on the margin 30-40% of the time.[83] In fact, the IESO data support that, for the years 2013-2032, the IESO estimates that gas will be "on the margin" between approximately 25-36% of the time.[84] In addition, Mr. Chernick's assumption that 50% of the hours in 2016 would be surplus baseload generation was based on "eyeballing" graphs[85] and his gas supply and gas price assertions were based on outdated U.S. data that does not account for Ontario's unique context or the radical changes experienced by its natural gas industry in the past decade.[86] In fact, Mr. Chernick confirmed that much of his knowledge and experience with gas-fired generation and marginal production is in the U.S.,[87] where many electricity generators using natural gas as fuel are often exempt from DSM and CRM requirements and measures.[88]

53. All of Mr. Chernick's calculations of related costs using the assumed marginal rate of gas-fired electricity production are therefore inaccurate as they are based on assumed estimates that are not supported by actual IESO data. As such, APPrO respectfully submits that the Board should give such calculations little or no weight when making its decision.

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[81] EB-2015-0029, Transcript Volume 9, pages 189:7-12, 89:21 – 190:2 and 190:9-24.
[82] EB-2015-0029, Technical Conference Transcript Volume 3, pages 43:20 – 45:12, 46:7-11 and 48:7-15.
[83] EB-2015-0029, Technical Conference Transcript Volume 3, page 46:12-19.
[84] EB-2015-0029, Transcript Volume 12, page 159:14-20.
[85] EB-2015-0029, Technical Conference Transcript Volume 3, 51:20 – 54:26.
[86] EB-2015-0029, Technical Conference Transcript Volume 3, pages 57:25 – 60:5.
[87] EB-2015-0029, Technical Conference Transcript Volume 3, pages 46:28 – 47:5
[88] EB-2015-0029, Transcript Volume 12, page 163:21 – 164:8; Technical Conference Transcript Volume 4, pages 51:25 – 52:3.

iii. GEC's Carbon Price Assumption Does Not Reflect Actual Carbon Prices

54. The Board should disregard GEC's evidence regarding carbon pricing. GEC's proposed carbon price was too high because their assumed emission factor was not based on actual IESO or Ministry of the Environment and Climate Change data of actual emissions.[89] The carbon price assumption Mr. Chernick used in his evidence was too high and not consistent with past California/Quebec auction prices or current projections.[90] Mr. Chernick admits that the point of regulation under the forthcoming cap and trade regime would be carbon emissions, not gas usage.[91]

iv. Board Staff's Expert Evidence is Consistent with the Exclusion of GFGs from DSM

55. The Board should give limited weight to Synapse's recommendations because Synapse (i) did not properly consider the context in which LVCs operate in Ontario, (ii) has limited experience designing, implementing and assessing GFG energy efficiency and conservation programs, and (iii) GFGs are exempt from DSM in the United States for varied policy reasons.

56. Synapse clearly indicated that it was not instructed to consider the context in which GFGs operate in Ontario as part of its analysis. In particular, Synapse indicated that it did not:

- consider the province's long-term energy plan, *Achieving Balance: Ontario's Long-Term Energy Plan*;[92]
- consult the IESO for its analysis or recommendations;[93] and
- analyze which of gas utilities, GFGs themselves, or other LVC customers was in the best position financially, legally and contractually to undertake energy efficiency measures.[94]

57. Instead, Synapse's recommendations were based on maximizing all cost-effective energy efficiency opportunities for electricity and gas utilities and not GFG customers of gas utilities.[95] Synapse did not consider the cost-effectiveness of Union's DSM program without electricity generators included in the program,[96] nor did Synapse look at the financial efficiency or effectiveness of its proposed recommendations and the impact on the rates or costs of GFGs, as Synapse confirmed that they are not subject to DSM in the U.S.[97]

58. Synapse also confirmed that it has limited experience designing, implementing and assessing energy efficiency and conservation measures for LVCs.[98] However, Synapse

[89] EB-2015-0029, Technical Conference Transcript Volume 3, page 56:19-27.
[90] EB-2015-0029, Technical Conference Transcript Volume 3, pages 67:9-18 and 68:8 – 71:10.
[91] EB-2015-0029, Technical Conference Transcript Volume 3, page 66:13-15.
[92] EB-2015-0029, Transcript Volume 12, page 157:10-28.
[93] EB-2015-0029, Transcript Volume 12, page 156:8-16.
[94] EB-2015-0029, Technical Conference Transcript Volume 4, page 51:8-19.
[95] EB-2015-0029, Transcript Volume 12, pages 159:20 – 160:16.
[96] EB-2015-0029, Transcript Volume 12, pages 170: 23 – 171:6.
[97] EB-2015-0029, Technical Conference Transcript Volume 4, page 48:22 – 49:7.
[98] EB-2015-0029, Technical Conference Transcript Volume 4, pages 54:26 – 57:17.

confirmed that it did not understand the contracts that govern Ontario electricity generators, but understood generally that maintenance, efficiency and confidentiality requirements may commonly be addressed in such contracts.

59. Synapse was not familiar with the contracts that govern the operation, maintenance and payments to and from Ontario electricity generators, nor did it have knowledge of contracts between generators and the IESO.[99] Synapse agreed that these contracts can contain significant confidentiality requirements that could limit information sharing relevant to energy efficiency programs.[100] Synapse did not consider whether an electricity generator could pass through costs to electricity consumers in its analysis.[101] Furthermore, Synapse did not know if its energy efficiency recommendations would be legally permitted under these contracts and accepted that there may be contractual limits.[102]

60. Furthermore, as Synapse admitted in cross-examination, consideration of the cost-effectiveness of a DSM program would include consideration of what end-use customers can do under legal service agreements, including maintenance agreements and should include consideration of efficient capital stock turnover decisions.[103]

61. APPrO submits that when Synapse witnesses had the relevant Ontario electricity context and contracts put to them, its evidence was consistent with excluding GFGs from DSM as per the United States.

v. Potential Infrastructure and DRIPE Benefits May Be Overstated

62. APPrO submits that the potential infrastructure and demand-reduction-induced price effect (**DRIPE**) benefits resulting from DSM may be overstated and are not supported by the current effects of reduced demand on resulting TransCanada transportation tolls. Contract customers like GFGs enter into long term contracts, often for a term of 20 years, for their distribution and other upstream transportation capacity requirements when a plant is new. Once the plant is built, the embedded electricity generation technology is fixed and cannot be materially changed. Any potential decrease in engine efficiency that may occur over time is, to the extent possible, mitigated during the regular maintenance that is performed under mandatory service contract requirements. There is little opportunity to change the capacity under long-term contracts that are executed. Therefore there are little, if any, infrastructure benefits that would accrue for implementation of energy efficiency programs for GFGs. Furthermore, as stated in Union's evidence, DRIPE will have little impact on the market price of energy and its effects are not likely to be significant.[104] Further, the

[99] EB-2015-0029, Technical Conference Transcript Volume 4, page 44:1-6; Transcript Volume 12, pages 156:17 – 157:9.
[100] EB-2015-0029, Technical Conference Transcript Volume 4, pages 47:2 – 48:12.
[101] EB-2015-0029, Transcript Volume 12, pages 166:20 – 167:10.
[102] EB-2015-0029, Technical Conference Transcript Volume 4, pages 44:7 – 45:25.
[103] EB-2015-0029, Transcript Volume 12, page 166:2-19.
[104] EB-2015-0029, Ex A, Tab 2, App C at 7 of 34.

proposed DRIPE effect is not supported by the very significant increase in transportation costs that have resulted from decreased demand on the TransCanada Mainline.[105]

63. Moreover, Union confirms that DRIPE will have little impact on the market price of energy and its effects are not likely to be significant.[106] APPrO therefore submits that the Board should be guided by the actual customer and gas transportation cost increases associated with decreased demand rather than a presumed theory of DRIPE.

vi. OSEA Evidence Was Not Supported

64. APPrO respectfully submits that the Board should give very little or no weight to the evidence put forth by OSEA as it was not provided by an expert or otherwise appreciably qualified witness.

65. In the August 17, 2015, Technical Conference, Mr. Young confirmed that he has no expertise in:

- natural gas DSM;[107]
- energy opportunities for natural gas utilities;[108]
- barriers to achieving GREENHOUSE GAS reductions;[109] and
- developing or operating CHP plants in Ontario.[110]

66. Mr. Young confirmed that he was testifying as a layperson and was generally supporting coordination among gas and electricity utilities. APPrO supports the general objective of coordination of utilities, but submits that the evidence goes well beyond this objective.

67. Mr. Young strictly relied upon U.S. and U.K. data to make unsupported conclusions about the efficiency of Ontario-based combined heat and power plants.[111] He claimed that the "type and robustness" of data required to make these determinations is not available in Ontario.[112] His claim that the efficiency of electricity generation from natural gas is below 40% is inaccurate,[113] and, again, any data that could have factored into this determination was from the U.S. or the U.K.[114] Mr. Young did not have data regarding the barriers to DSM and the completely unfounded assertion that GREENHOUSE GAS emissions reductions were not being achieved by the electricity sector.[115]

68. Further, Mr. Young did not provide support for the $12 billion in costs associated with his recommended replacement of all GFGs with combined heat and power[116] and the

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[105] NEB Decision in RH-001-2014.
[106] EB-2015-0029, Exhibit A, Tab 2, Appendix C, page 7.
[107] EB-2015-0029, Technical Conference Transcript Volume 3, page 121:5-9.
[108] EB-2015-0029, Technical Conference Transcript Volume 3, pages 119:16-25 and 120:28 – 121:4.
[109] EB-2015-0029, Technical Conference Transcript Volume 3, page 122:16-21.
[110] EB-2015-0029, Technical Conference Transcript Volume 3, page 127:19-23
[111] EB-2015-0029, Technical Conference Transcript Volume 3, page 138:17-23.
[112] EB-2015-0029, Technical Conference Transcript Volume 3, pages 138:24 – 139:12.
[113] EB-2015-0029, Technical Conference Transcript Volume 3, pages 136:15 – 137:5 and 140:21-23.
[114] EB-2015-0029, Technical Conference Transcript Volume 3, page 137:12-21.
[115] EB-2015-0029, Transcript Volume 9, pages 144:25 – 145:8.
[116] EB-2015-0029, Exhibit JT3.11, page 132.

adjustment, amendment or cancellation of power contracts, despite admitting that it was safe to assume that all gas-fired power plants operate in accordance with long-term contracts.[117] He was not aware of any direct power purchase agreements with building consumers[118] and did not support the feasibility, particularly in terms of cost, of replacing 8,000 MW of capacity in Ontario.[119] Finally, his undertaking to APPrO was left unanswered.

69. APPrO therefore respectfully submits that the OSEA evidence should be afforded very little or no weight. To do otherwise may have a precedent impact on the quality and nature of evidence that is brought before the Board to inform its credible, expert decision making.

REQUESTED RELIEF

70. In summary, APPrO respectfully requests that the Board find in accordance with the Framework that LVCs and particularly GFGs should be exempt from DSM requirements and the Union and Enbridge DSM Plans.

71. In the alternative, APPrO submits that the Board should approve the LVC portions of each of the Enbridge and Union DSM Plans, as filed. Union's current proposal reflects experiences, customer needs, stakeholder feedback, the Board's Framework, free-ridership and cost-impact for ratepayers.[120] The proposal was influenced by Board's recommendation that "[t]he primary focus of any program proposed for [LVCs] should be offering technical expertise, including conducting facility audits, advice for operational improvements or engineering studies, as opposed to capital incentives".[121] [122] Indeed, the proposed Union LVC program provides any LVC who can derive value from Union's DSM program with access to resources. In the event that the Board decides that LVCs should not be excluded from Union's mandatory ratepayer-funded DSM Plan, APPrO submits that Union's LVC DSM program and budget may constitute the next-best alternative.

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117 EB-2015-0029, Technical Conference Transcript Volume 3, pages 134:22 – 135:1.
118 EB-2015-0029, Transcript Volume 9, pages 147:5 – 148:8.
119 EB-2015-0029, Technical Conference Transcript Volume 3, pages 144:19 – 145:4.
120 EB-2015-0029, Union Application cover letter, dated April 1, 2015: "Union indicated that this DSM Plan was designed by balancing "meeting the needs of customers; fulfilling the Board's request to enable and incorporate the key priorities and guiding principles outlined in the Framework; responding to input received from stakeholders; and adhering to a reasonable total cost impact for customers as guided by the Board."
121 EB-2014-0134, DSM Framework dated December 22, 2014, section 6.2, page 27
122 EB-2015-0029, Transcript Volume 3, pages 131:28 – 132:18.

ALL OF WHICH IS RESPECTFULLY SUBMITTED THIS

2nd day of October, 2015

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