DECISION

2015 NSUARB 204
M06733

NOVA SCOTIA UTILITY AND REVIEW BOARD

IN THE MATTER OF THE PUBLIC UTILITIES ACT

- and -

IN THE MATTER OF AN APPLICATION for Approval of a Supply Agreement for electricity efficiency and conservation activities between EfficiencyOne and Nova Scotia Power Incorporated, the establishment of a final agreement between the parties, and approval of a 2016-2018 Demand Side Management Resource Plan

BEFORE: Peter W. Gurnham, Q.C., Chair
Kulvinder S. Dhillon, P.Eng., Member
Roberta J. Clarke, Q.C., Member

APPLICANTS: **EFFICIENCYONE**
James R. Gogan, CA, LL.B.

NOVA SCOTIA POWER INCORPORATED
Colin Clarke, Q.C.
David Landrigan, LL.B.
Brian Curry, LL.B.

COUNSEL: **CONSUMER ADVOCATE**
John P. Merrick, Q.C.
William Mahody, Q.C.

SMALL BUSINESS ADVOCATE
Nelson Blackburn, Q.C.
Ellen Burke, LL.B.

AFFORDABLE ENERGY COALITION
Donna Franey, LL.B.
Brian Gifford

CLEAN NOVA SCOTIA FOUNDATION
Chris Morrissey
Erin Burbidge

ECOLOGY ACTION CENTRE
Jamie Thompson
Elizabeth Chant

INDUSTRIAL GROUP
Nancy G. Rubin, Q.C.
Maggie A. Stewart, LL.B.

NOVA SCOTIA DEPARTMENT OF ENERGY
Stephen McGrath, LL.B.
Nancy Rondeaux

PORT HAWKESBURY PAPER LP
James MacDuff, LL.B.

BOARD COUNSEL: S. Bruce Outhouse, Q.C.

HEARING DATE(S): June 15, 16, 18 and 19, 2015

FINAL SUBMISSIONS: July 15, 2015

DECISION DATE: **August 12, 2015**

DECISION: **The Board approves a DSM Plan for 2016-2018 in the aggregate amount of $102,150,000. Approved spending is $33,210,000 during 2016; $34,020,000 during 2017; and $34,920,000 in 2018. Findings and directives are summarized at paragraphs 138-148.**

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1.0 INTRODUCTION

[1] It is generally acknowledged that using less energy, and using energy more efficiently, is a public good, as it can result in environmental benefits, such as less reliance on fossil fuels (and thus lowering emissions), and financial benefits to consumers of electric energy. Programs and activities designed to influence the amount and timing of electricity usage, and ultimately reduce the overall demand for electricity, are known as demand-side management ("DSM").

[2] The nature and cost of such programs and activities for the Province of Nova Scotia were the subjects of a hearing before the Nova Scotia Utility and Review Board ("Board") on June 15, 16, 18 and 19, 2015. EfficiencyOne ("E1"), a newly created entity, applied to the Board for approval of a Supply Agreement for these activities between it and Nova Scotia Power Incorporated ("NSPI") and approval of a 2016-2018 DSM Plan. The application was made pursuant to amendments made by s. 15 of the *Electricity Efficiency and Conservation Restructuring (2014) Act*, S.N.S. 2014, c. 5 ("*EECR Act*") to the *Public Utilities Act*, R.S.N.S. 1989, c. 380, as amended ("*PUA*").

[3] Attached as Appendix A to this Decision is the list of parties, intervenors and witnesses in this proceeding.

[4] Opening statements were filed by E1, NSPI, the Consumer Advocate ("CA"), the Small Business Advocate ("SBA"), the Industrial Group, the Ecology Action Centre ("EAC"), the Affordable Energy Coalition ("AEC"), and the Nova Scotia Department of Energy ("DOE").

[5] The Board received 37 letters of comment from members of the public. At an evening session held on June 15, 2015, 21 persons, who had previously registered to do so, spoke. A list of speakers is attached as Appendix B to this Decision.

2.0 BACKGROUND

[6] The Board considers it useful to set out some of the background of DSM in Nova Scotia to provide some context for this Decision.

[7] For a number of years prior to 2010, NSPI included requests for approval of spending for DSM programming in applications to the Board. The Board issued a number of directives concerning the development and administration of such programming. The costs of DSM were included in the rates paid by NSPI customers.

[8] By 2008, in a settlement agreement, stakeholders and NSPI agreed to begin a process to transition DSM activities to a new administrator, other than NSPI. In the interim period, NSPI continued as the temporary DSM administrator.

[9] Pursuant to the *Efficiency Nova Scotia Corporation Act*, S.N.S. 2009, c. 3, as amended ("*ENSC Act*"), the Efficiency Nova Scotia Corporation ("ENSC") was established to manage electricity DSM programs in the place of NSPI. Board approval of its programs and cost allocations was required, and the Board was given powers of general supervision over ENSC. A transition plan was mandated and required Board approval, which was granted in 2010.

[10] ENSC began to administer DSM programming and made applications to the Board for approval of its programs, spending and cost allocation, on a regular basis, either for multi-year plans, or for cost recovery riders.

[11] Over the period from the institution of DSM management programs, the range of programs and activities varied, as did the spending. Once ENSC had taken over the provision and administration of DSM programs, NSPI customers saw their respective charges for DSM as a separate line item on their bills.

[12] In 2014, the *EECR Act* provided for significant changes to DSM programming by amending the *PUA* and repealing the *ENSC Act*. Electricity efficiency and conservation activities were defined:

> **79A** In this Section and Sections 79B to 79V,
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> . . .
>
> (b) "electricity efficiency and conservation activities" means activities, programs or plans relating to
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> (i) the efficient use of electricity,
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> (ii) the conservation of electricity,
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> (iii) the alteration of the consumption pattern of an end-user of electricity that has the effect of reducing demand during Nova Scotia Power Incorporated's periods of highest demand,
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> (iv) the utilization or management by Nova Scotia Power Incorporated of its electrical system in a more cost-effective manner,
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> (v) the delivery of a reduction in the amount of electrical energy or capacity that Nova Scotia Power Incorporated would otherwise be required to supply to its customers, or
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> (vi) any other prescribed activities, plans or programs;

[13] The Board uses the terms DSM and electricity efficiency and conservation activities interchangeably in this Decision.

[14] DSM is to be provided by a franchise holder who has the exclusive right to supply NSPI with "...reasonably available, cost-effective efficiency and conservation activities..." for a nine year term for the first franchise (*PUA* s. 79C(2)). The franchise is

granted by the Minister of Energy, and the franchise holder is "...deemed to be a public utility..." (*PUA* s. 79G(2)).

[15] The Board is to determine the activities to be undertaken, and NSPI is to undertake the activities by virtue of an agreement for a three year term with the franchise holder, approved by the Board (*PUA* ss. 79(H), 79(I), and 79(J)). Customers of NSPI will not see the amount for DSM activities on their respective bills as a separate item; rather, it will be part of the NSPI charges.

[16] The first franchise holder is the entity now known as E1. NSPI and E1 are deemed to have entered into an agreement for 2015, spending for which was prescribed by s. 79R of the *PUA*:

> 79R (1) In making an order approving electricity efficiency and conservation activities pursuant to Section 79Q, the Board shall approve the amount that the franchise holder may spend to supply the activities, which must not exceed the sum of
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> (a) $35,000,000; and
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> (b) the amount of any over recovery of funds by Efficiency Nova Scotia Corporation during 2013.
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> (2) In making an order approving electricity efficiency and conservation activities pursuant to Section 79Q, the Board shall approve the amount that the franchise holder may charge to Nova Scotia Power Incorporated for the activities, which must not exceed the lesser of
>
> (a) $35,000,000; and
>
> (b) the amount approved by the Board pursuant to subsection (1) less the amount of any over recovery of funds by Efficiency Nova Scotia Corporation during 2013.

[17] NSPI is directed to defer the recovery of the 2015 spending over an eight year period, pursuant to s. 79R(3) of the *PUA*. Spending and programs for the three year term, 2016-2018, are the subject of this proceeding.

[18] The *EECR Act* contemplated that NSPI and E1 would reach and enter into an agreement for the provision of DSM activities. The evidence in this matter reveals that

the two parties, despite a period of negotiation, were unable to reach an agreement. As a result, pursuant to s. 79J(3), an application came before the Board. That section provides that "...the Board shall establish a final agreement between the parties on such reasonable terms as the Board considers appropriate".

[19] E1 filed a DSM Plan that called for spending of an aggregate $121.5 million over the 2016-2018 period, with a target of total cumulative energy savings of 405.9 GWh, and demand savings of 62.5 MW. While NSPI did not file a plan *per se*, it submitted that spending of $22 million annually, with a target of annual energy savings of 100 GWh, should be approved by the Board.

[20] During the course of the hearing, the Board was presented with two consensus documents. The first document (Exhibit E-61) ("Quantum Agreement") was signed by E1, the CA, the SBA, the AEC, and the EAC. It is attached as Appendix C to this Decision and provides for spending of an aggregate $113.5 million, with the same energy and demand savings targets as originally put forward by E1. The programs undertaken would be those filed by E1 in its application, and a number of matters which were in issue were referred to the DSM Advisory Group for study. E1 also agreed to undertake a Small Business Energy Study which had been proposed by the SBA. As was made clear in the closing submissions from AEC and EAC, the principles of equity and the provisions regarding the charitable contribution which NSPI had agreed to make to Clean Nova Scotia ("CNS") for a low income residential program (Sections 9 and 10 of the Quantum Agreement) were also important.

[21] The second document (Exhibit E-62) ("Consensus Agreement") was signed by E1, NSPI, the CA, the SBA, the Industrial Group, the EAC, and the AEC. The Quantum

Agreement provided that the Consensus Agreement, which is attached as Appendix D to this Decision, was incorporated by reference.

[22] The Consensus Agreement addressed a number of issues, which were identified in the Board's Final Issues List in this proceeding, and which the Board discusses below.

[23] In a number of previous decisions relating to electricity matters, and to other matters, the Board has indicated its view of consensus and settlement agreements. In *Re Nova Scotia Power Inc.*, 2008 NSUARB 140, the Board said:

> [12] The Board's Regulatory Rules facilitate settlement discussions. The Board welcomes and appreciates the efforts of parties to, in good faith, settle issues, even where, as sometimes happens, a settlement cannot be ultimately achieved.
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> [13] Where, as here, the Agreement is supported by representatives of all of the customer classes, the Board can have confidence that the Agreement is in the public interest.
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> [14] Customers of NSPI and members of the public are, perhaps understandably, wary of the settlement process. Many of those customers and members of the public may not appreciate that by the time the hearing commences 80% of the rate hearing process has already happened. NSPI filed extensive evidence, as required by the Board, to support its rate request. Interested parties and Board Staff asked NSPI many hundreds of written questions (Information Requests), to which responses were filed.
>
> [15] All of the parties who chose to do so filed evidence, including expert evidence. Written questions (Information Requests) have been asked of and answered by interested parties who filed evidence. NSPI filed reply evidence. As noted, all of this happened before the hearing was scheduled to begin so that the parties and the Board are well informed about the case in advance of any oral public hearing.
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> [16] The public can rest assured that the Board Members hearing the matter have also thoroughly reviewed all of the material in advance of coming to a decision as to whether to approve the Agreement as being in the public interest.
>
> [17] Settlement agreements, while relatively new in regulatory matters before the Board, are common in the litigation process. Within the Board's adjudicative mandate, for example, assessment appeals, planning appeals and other matters are often settled. In the civil courts of Nova Scotia, a much higher percentage of cases are settled than go to trial.

> [18] That is not to say that the Board would hesitate to reject a settlement agreement it did not consider to be in the public interest, however, it should be understood that a properly supported settlement is a success of the regulatory process, not a failure.
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> [2008 NSUARB 140, pp. 10-11]

[24] As pointed out by counsel for the Industrial Group in its closing submission, the Consensus Agreement has broad stakeholder support. The Board will address the specific terms in more detail later in this Decision; however, the Board approves the Consensus Agreement. The Board considers that it serves the public interest by resolving, or providing a method of resolving, a number of the outstanding issues raised in this proceeding. Further, it contains a provision which will ensure that, where consensus cannot be reached after consultation with stakeholders, the parties will bring outstanding matters back to the Board no later than June 30, 2016. This will allow sufficient time to deal with any such matters prior to the submission of the next DSM Plan.

[25] For reasons that are explained later in this Decision, however, the Board does not approve the Quantum Agreement as it does not consider that the amount of DSM spending agreed upon is in the public interest, despite the support of the CA, the SBA, the EAC and the AEC. The Board wishes to be clear that it has no difficulty with certain aspects of the Quantum Agreement, i.e., the proposed discussion of a potential development of a DSM Expenditure Justification Criteria, the Small Business Energy Study, the referral of cost-effectiveness screening tests to the DSM Advisory Group, and the provision of the results of the CNS low income program to the Board and stakeholders. The Board observes that NSPI does not, according to its closing submission, object to a number of these matters. NSPI objects to the Small Business Energy Study due to cost and other issues; however Ms. Vincent said there is money for it in Enabling Strategies.

[26] The Board also notes that the DOE supported the principles of equity as well as other sections of both the Quantum Agreement and the Consensus Agreement, including mid-course adjustments.

[27] The Board understands that the non-financial provisions of the Quantum Agreement will be pursued by E1, NSPI and other stakeholders through the DSM Advisory Group.

3.0 ISSUES

3.1 Evaluation Report of 2014 DSM Programs (Econoler)

[28] As in the previous year, E1 engaged the services of Econoler Inc. ("Econoler") to conduct independent evaluations of the 2014 DSM programs. The Econoler team collaborated with two partner entities, Corporate Research Associates ("Corporate Research") and Equilibrium Engineering. Econoler coordinated all the evaluation activities, and prepared and reviewed all the deliverables. Corporate Research was responsible for the participant and builder surveys, interviews with partners and participants, and reporting on the data collected from those activities. Equilibrium Engineering conducted on-site visits, reviewed tracking sheets, assisted Econoler with certain parts of the impact evaluation, and analyzed and reported on those activities.

[29] In accordance with the Settlement Agreement from May 2012, a rolling schedule of evaluations was undertaken. This meant that mature programs which had both a process and impact evaluation in 2013 did not have a full-scale impact evaluation in 2014. Instead, the 2014 evaluation for those programs involved validating ENSC's tracked savings and ensuring that the evaluation parameters corresponded to those established in previous full-scale impact evaluations.

[30] The 2014 DSM portfolio included seven programs which consisted of 16 components and initiatives. Econoler evaluated all 16 in addition to Codes and Standards. The series of reports were filed on February 27, 2015.

[31] A revised version of the Home Energy Report ("HER") evaluation was filed on March 19, 2015 in response to a request from the Board's verification consultant for additional detail on the methodology used to evaluate this program. Based on Econoler's evaluations, the DSM portfolio achieved net energy savings of 151.9 GWh and net peak demand savings of 27.1 MW at the generator. In addition, savings from Codes and Standards, which are outside of the DSM programs, were determined to be 31.4 GWh of energy and 5.2 MW of peak demand.

[32] The evaluator's reports contained 71 recommendations. The previous report on the 2013 DSM portfolio contained 122 recommendations.

[33] In its application, E1 stated that energy savings of 151.9 GWh exceeded the 2014 target of 137.8 GWh by 14.1 GWh or 10.2%. This was primarily attributed to results reported for the HER program. However, in its recommendations for the HER (Exhibit E-2, Table 15, page 37), the evaluator identified some concerns with the reported results. Recommendation HER-R2 notes that due to confidentiality issues, the evaluator was not able to review the raw data that Opower, the program delivery agent, received and the treated data upon which it applied adjustments. Econoler recommended that both databases be reviewed to validate whether the adjustments were applied as defined in the methodology. Also, in recommendation HER-R3, Econoler noted that past electricity consumption for the participant group and non-participant group should be analyzed to:

> ...help determine whether the savings observed through the billing analysis are attributable to Home Energy Report and not to any other trend that could be observed with the treatment group, but not with the control group. An analysis of the electricity consumption trend for a five-year period should be conducted as part of the next evaluation.
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> [Exhibit E-2, p. 37]

[34] As noted in the following section, the verification report also identified some concerns with the HER savings results.

[35] A breakdown of the total reported savings shows that the residential programs achieved energy savings of 80.5 GWh compared to a target of 72.9 GWh. The demand savings were 15.5 MW. For the Business, Non-profit, and Institutional programs, the evaluated energy savings were 71.4 GWh compared to a target of 64.9 GWh. The demand savings were 11.6 MW.

[36] Without the HER results, E1's remaining portfolio achieved energy savings of 126.5 GWh compared to a target of 122.4 GWh, and demand savings of 24.2 MW compared to a target of 23.4 MW.

[37] The actual expenditure on the 2014 DSM portfolio was $38.7 million compared to an approved budget of $48.7 million.

3.2 Verification Report of 2014 DSM Programs (Peach)

[38] As in previous years, the Board engaged the services of H. Gil Peach & Associates to conduct an independent verification of the 2014 evaluated DSM savings results. Dr. Peach filed his report on March 26, 2015. The primary purpose of the report was to provide a review, verification, and if appropriate, recommended adjustments to the savings data and estimates created by the evaluation consultants engaged by E1.

[39] The verification process included a review of each evaluation's explicit or implicit design, evaluation methods and standards, and/or evaluation protocols used in each evaluation. It also included a review of the program data tracking system,

discussions with staff and delivery agents concerning program procedures and methods for program Quality Assurance/Quality Control, and selected due diligence site visits to check installation counts and quality of work.

[40] Regarding overall performance, the verification report noted that seven program components or initiatives exceeded targeted first year energy savings, while seven underperformed. Similarly, seven program components or initiatives achieved targeted demand savings, while seven did not. Three components or initiatives did not have targets: Residential Financing; LED Holiday Lighting Exchange; and Codes and Standards.

[41] There are 20 recommendations identified in the Peach verification report. In the previous report on the 2013 DSM portfolio, 30 recommendations were presented.

[42] The 2014 verification review determined that all but one of the evaluations conducted by Econoler were within accepted industry frameworks. The exception was the HER program. This program is a standalone behavioural program which is intended to motivate households to increase energy efficiency through a variety of means. This motivation is done through repetitive mailings to households with comparisons of energy usage to undisclosed similar households. The program clearly differs from the other programs, which are centred on technologies or a combination of technologies and codes and standards.

[43] It was determined that the HER program evaluation was not conducted to industry standards because the evaluator was not provided with the NSPI customer data to conduct random assignment to the treatment and control groups, carry out data cleaning and selection, and to conduct the primary evaluation analysis. This customer

data was provided by NSPI to the program delivery agent instead of the independent evaluator. Therefore, the evaluation was not independent since the program vendor controlled the database and assignment of houses to the participant treatment group and the non-participant control group.

[44] On page 39 of his report, Dr. Peach noted that "The standard in Demand Side Management evaluation is that evaluation must be conducted by an independent evaluator to guarantee the integrity of reported savings and to prevent conflict of interest." He also noted that this standard is specifically supported by the SEE Action (State and Local Energy Efficiency Action Network) Evaluation Protocol for behaviour-based programs, and is also strongly recommended in the Universal Methods Protocol for behaviour-based programs.

[45] Similar to the Econoler recommendations, in addressing this issue Dr. Peach recommended that the evaluator should run additional comparisons using an NSPI database rather than the program vendor's database, in order to determine if a systematic difference can be detected between the participant treatment group and the non-participant control group. He also noted that the claimed energy savings are approximately 1.3%, which is in the range of savings reported in similar HER studies elsewhere from approximately four vendors who offer this program. Therefore, he stated that, on this basis, the Board "could consider acceptance of the claimed results with qualifications even though the scientific protocol was broken and the results are fatally flawed". Alternatively, the vendor's self-evaluated results could be accepted subject to the evaluator's continued investigation of prior trending.

[46] Dr. Peach further noted that under normal conditions, behavioural-based programs have little value in resource planning but they do have a positive role as enabling strategies in support of technical DSM programs. Consequently, he recommended that behavioural programs be classified as Enabling Strategies along with marketing, promotional, and educational programs.

[47] The verification report contains several recommendations for improvement of evaluations and programs, and also endorses many of the evaluator's recommendations that would improve measurement and evaluation. Some of the specific recommendations that were noted include:

- Establishing a Nova Scotia Technical Resource Manual ("TRM") to facilitate program planning and evaluation (Rec #2);
- Developing a set of evaluation guidelines which cover methods, practices, and reporting (Rec #3);
- Implementing one of the accepted formal evaluation protocols (Rec #4);
- Partitioning energy savings to show the percentage claimed according to direct electrical measurement and the percentage developed without electrical measurement (Rec #16).

[48] It should be noted that the TRM was also recommended in the previous verification report and E1 identified this item in its Appendix C of Exhibit E-1 for completion in 2015, following the incorporation of the 2014 evaluation results.

3.3 Status of 2013 and 2014 Verification and Evaluation Recommendations

[49] In Appendix C, attached to its application, E1 included Table 1 - Update on Implementation of 2013 Verification Recommendations, and Table 2 - Update on Implementation of 2013 Evaluation Recommendations. Of the 30 verification recommendations, most were listed as completed, with several remaining to be completed in 2015 or to be considered during the 2016-2018 process evaluation.

Similarly, of the 122 evaluation recommendations, the majority were listed as completed, with several currently in progress for implementation during 2015, and a small number deferred for future consideration. No intervenors raised concerns with the status of those recommendations.

[50] In its Closing Submission, E1 stated:

> Neither the 2014 evaluation report nor the 2014 verification report was challenged by the formal Intervenors during the course of the hearing. EfficiencyOne therefore continues to rely on the evidence filed with the Board on February 27, 2015 with respect to the efforts undertaken by EfficiencyOne pursuant to the 2013 and 2014 verification and evaluation recommendations. Specifically, Appendix C to that evidence provides further detail on the measures undertaken by EfficiencyOne related to 2013 recommendations. EfficiencyOne will file an update on 2014 evaluation and verification recommendations in its Q2 report to the UARB.
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> [E1 Closing Submission, p. 10]

[51] Although there were no challenges during the hearing, as noted in the previous sections above, the evaluation report contained concerns regarding the savings reported for the Home Energy Report, and the verification report did not accept the energy savings results that were stated in the evaluation report. Evidence filed by Dr. Peach (Exhibit E-36) also addressed that issue.

3.3.1 Findings

[52] In his evidence, Dr. Peach commented on the status of the 2013 evaluation and verification recommendations:

> Q. **Are you satisfied with the status of the 2013 verification and evaluation recommendations?**
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> A. Yes. In general, from year to year Econoler has been responsive to all recommendations in the Savings Verification study, either making small modifications or stating why not. All key recommendations have been implemented or are in process. Also, ENSC, now E1, has been generally responsive to the evaluator's recommendations. In the minority of cases for which there has not been implementation, Econoler focuses on these in the next evaluation. My general sense is that the whole process moves forward well.
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> [Exhibit E-36, p. 15]

[53] Based on this observation and the lack of intervenor concerns regarding the evaluation and verification reports, the Board accepts E1's response to the 2013 recommendations to be satisfactory. In addition, the Board directs E1 to file an update on the status of the 2014 evaluation and verification recommendations in its next 2015 report.

[54] However, given the concerns and recommendations expressed by both the evaluator and the verifier regarding the results of the Home Energy Report, the Board directs that the energy and demand savings reported for those programs (25.437 GWh and 2.892 MW) are to be removed from the reported totals for 2014. Should E1 wish to have those savings reinstated at a later date, such reinstatement will be considered by the Board after the steps recommended by the evaluator and the verifier are satisfactorily concluded. The Board notes that the Home Energy Report initiative has not been included in the 2016-2018 DSM portfolio.

3.4 Status of KPMG Procurement Recommendations and Other Procurement Issues

[55] The Board accepts the status report supplied by E1 on the implementation of the KPMG audit recommendations. With respect to procurement issues, this appears to have been resolved as a result of work undertaken by the Deputy Minister of Energy, Murray Coolican, and contained in a report dated May, 2015 entitled A Review of Efficiency Nova Scotia's Business Energy Solutions Program.

3.5 Proposed 2016-18 DSM Resource Plan

3.5.1 Program Development

[56] E1's 2016-2018 DSM Resource Plan, as modified by the Quantum Agreement, recommends DSM investments for the three year period of:

(1) $36.9 million in 2016,

(2) $37.8 million in 2017,

(3) $38.8 million in 2018.

The revised aggregate amount over the contract period is $113.5 million.

[57] In justifying its DSM Plan, E1 indicated that its Plan expenditure is 38% less over the three year term than the Mid-DSM level plan, the Preferred Resource Plan from NSPI's recently completed Integrated Resource Plan ("IRP"). E1 argued its Plan is consistent with past expenditures and well within the $53 million that was in rates for DSM in 2014 and which amount was subsequently repurposed by Order of the Board for 2015 fuel expenses. It expanded on these points in its post-hearing submission:

- It is $69 million, or 38 percent, less (over the three-year term) than the Mid-DSM level of the IRP's Preferred Resource Plan. The Mid-DSM scenario resulted in the lowest revenue requirement over the 25-year planning period, rendering it the most cost-effective and therefore affordable for Nova Scotians over the long term.

- The Quantum Agreement investment level brings annual DSM investment less than a level that existed in 2011 and significantly below ratepayer-funded DSM Plans in 2012, 2013, and 2014.

- The proposed Plan balances short and long-term affordability by considering the $53 million for DSM in 2014 rates that was repurposed in 2015 for the FAM repayment and will be available in 2016. This ensures that EfficiencyOne's proposed investment, which is significantly lower than $53 million, is not the driving factor for an increase in rates while not causing negative impacts on EfficiencyOne's ability to achieve Mid-DSM levels, as per the IRP, in the future as required.

- In an effort to ensure that more customers are able to be participants, the Plan proposes an investment level and range of programs that allows for greater participation than NS Power's alternative DSM scenario while also reflecting an appropriate balance of participation opportunities between Residential and Business, Non-Profit, and Institutional (BNI) sectors and programs, unlike NS Power's alternative scenario that achieves 75 percent of energy savings from the BNI sector.

- It establishes a foundation level of investment that considers short-term affordability while ensuring that DSM can be gradually "ramped up" in future years, as needed.

- It addresses long-term affordability through avoidance of new capacity additions until 2032.

[E1 Closing Submission, p. 31]

[58] NSPI was the only other party to supply substantive evidence on an alternate plan. While not recommending a plan *per se*, NSPI recommended E1 design a plan that would provide annual energy savings of 100 GWh per year with associated demand savings over the contract period. The evidence presented by NSPI indicated this level of DSM savings could be accomplished for $22 million per year, which was NSPI's recommendation. In putting forward this plan NSPI noted, among other things, that no additional DSM is required by NSPI during the contract period for compliance with Nova Scotia's renewable electricity standards. NSPI indicated its recommendation would provide capacity and energy savings from the low DSM case at the half low price and enable NSPI to avoid additional generating capacity until 2032. NSPI cited the new affordability provisions in the *PUA* and indicated that affordability must be taken into account when making a determination on E1's Plan. Affordability is discussed later in this Decision.

[59] NSPI noted that based on its research, DSM spending in Nova Scotia is higher than in other Canadian jurisdictions. NSPI stated there are significant rate pressures. NSPI went on to say, in its post-hearing submission:

> Typically, in a more positive economic climate, being a leader in a particular initiative or industry is viewed in a positive light. Nova Scotia has demonstrated itself to be a leader in the following areas:
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> - environmental emissions caps;
> - renewable energy; and,
> - COMFIT.
>
> The province's leadership in these areas, however, has also resulted in Nova Scotia having some of the highest electricity rates in the country.

> Just a few years ago, when the province's industrial load was double what it is today, environmental initiatives were viewed by Nova Scotians as being as (if not more) important as affordability. As a result, aggressive government policies were implemented to control emissions from the electricity sector and to allow for the development of significant amounts of renewable energy.
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> ...
>
> Progress in adoption of renewable energy and the corresponding impact on rates is a major reason why Nova Scotians' clear number one priority is affordability. This priority is at such a level of importance that the government of Nova Scotia expressly legislated affordability as a factor to be taken into account by the Board in approving DSM expenditures.
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> Although there has been a strong shift in Nova Scotians' priorities towards affordability, the policies introduced a few short years ago are going to continue to put upward pressure on electricity costs in Nova Scotia for the next few years. In the immediate term, the COMFIT program is gaining momentum and is projected to add in excess of 150 MW of small low-impact renewable generation to Nova Scotia Power's network over the next two to three years. This is generation that comes at an average cost to rate payers that is nearly three times more expensive than the cost of the energy it is displacing.
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> [NSPI Closing Submission, pp. 5 & 7]

[60] The CA, SBA, AEC and EAC are all parties to the Quantum Agreement and, therefore, support the DSM level of spending proposed in the Agreement. The CA and SBA represent the majority of NSPI's customers.

[61] The CA noted that since 2011, through and including 2015, ratepayers have been paying approximately $40 million per year for DSM programs and that is an indication that such a level of expenditures is affordable. The CA also noted that the Legislature imposed a cap of $35 million for DSM in 2015 and that the Board is entitled to presume that the Province arrived at the cap after careful analysis and was satisfied the $35 million cap was affordable, although the DOE did not agree.

[62] The Industrial Group requested that the Board direct E1 to implement a plan, at a three year spending level, of approximately $80 million to achieve DSM energy savings of 100 GWh per year. The Industrial Group did not, however, supply a proposed plan and perhaps should not have been expected to do so. In the course of its

submission, the Industrial Group noted that E1's actual spend in 2014 was 80% of its budgeted amount and it still exceeded target energy savings by 10.2%.

[63] The Industrial Group made two very salient points with respect to the delivery of DSM programs, particularly as it relates to incentives. The Industrial Group expressed concern about the level of incentives as well as the role incentives play with respect to energy efficiency targets.

> 45. The Industrial Group is very concerned that E1 has not sharpened its pen in terms of the appropriate level of incentives.
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> 46. In addition, the Industrial Group is concerned that the established service delivery framework for E1 which requires it to deliver its targeted energy savings disincents E1 from eliminating incentives. E1's performance will be measured against achievement of those targets and failing to do so, puts it at risk of losing its franchise. E1's formal process for evaluation and verification does not allow it to "count" its "Enabling Strategies" (which include measures such as education and advertising) towards its performance targets. In other words, if a consumer may be persuaded solely by information to undertake an efficiency measure because it will pay for itself in a relatively short period of time, E1 cannot count this toward its performance target; however, if that education or information is coupled with an incentive then E1 can measure and count it.
>
> [Industrial Group Closing Submission, p. 12]

[64] Finally, the Industrial Group, as did NSPI and the DOE, recommended E1 be directed to model various funding scenarios in future hearings and not simply its preferred plan.

[65] On the proposed level of spending, the DOE appeared to align itself with NSPI and suggested that E1 be directed to develop a plan at a much lower cost than it requested or it has agreed to accept in the Quantum Agreement. The Board interprets the DOE's brief as supporting a number close to or at the $22 million per year suggested by NSPI.

3.5.2 Incentives

[66] The Board, in its questioning of E1's witnesses, and NSPI and the Industrial Group in their submissions, expressed significant concerns over the manner in which incentives are determined by E1. It would appear from the evidence that over 60% of the DSM budget is paid in incentives to program participants.

[67] The concern is that the incentives are not designed to achieve the minimum levels required to induce participant behavior. Mr. Pickles, NSPI's expert, testified there was very little information to indicate how incentives were designed and justified and, in his view, some incentives were outside the range of reasonableness. He cited a number of examples including LED lamps, adjustable speed drives and incentives for the custom program. The Board notes, parenthetically, that when comparing the testimony of Mr. Pickles with that of Mr. Dunsky, a consultant for E1, Mr. Dunsky appeared better informed with respect to what is happening both here in Nova Scotia and in other jurisdictions in North America. Generally speaking, the Board preferred the evidence of Mr. Dunsky. However, the Board acknowledges and accepts the concerns on incentives raised by Mr. Pickles, and more particularly Mr. Drazen, on behalf of the Industrial Group.

[68] Mr. Drazen also raised the concern about a lack of information, noting that several of the measures E1 proposed are so cost effective that customers should be expected to do them on their own, without any incentive. NSPI noted that the evidence from E1 seemed to suggest that the information E1 used in determining incentives is focused extensively on information from customers and trade allies who may have a vested interest in having a high incentive. It argued E1's Plan does not address the other side of the issue and that is, how much can be afforded. NSPI also argued the process contains no specific quantitative criteria analysis or guidelines with respect to incentives.

[69] Mr. Dunsky countered that argument as follows:

> Thank you. Just to explain a little bit more. So we do some of this work from time to time. We've done it for Efficiency Nova Scotia and others where we'll go out and, first of all, do primary research to understand what the actual cost differential is in a specific market.
>
> Once we've done that, speak with the full supply chain, as well as end users or -- and consumers, to get a sense of what their market barriers are. So just for example, I know it was raised in someone's opening arguments, I guess it was, the example of a commercial dishwasher where you had an extraordinarily low payback, and I think it was under one year. We just literally, I think it was last week, just completed market research for the Federal Government into why energy efficient equipment in the commercial kitchen space is not flying off the shelves given that it's so cost-effective.
>
> And so one of the things that we'll do is do a barrier analysis. And this is really critical to understanding how much incentive to provide. If the barriers are pervasive, then we know that we need to provide very significant incentives. If the barriers are minimal or if we can focus on those barriers and actually remove them, then we may need very few incentives.
>
> So in this example of commercial kitchen equipment, we found very pervasive barriers. You know, examples like in most cases when you're looking at restaurant chains or hotel chains, for example, the purchasing department, which is responsible for specifying the equipment, is very different from the operations and maintenance department, which is responsible for paying the bills.
>
> So purchasing actually doesn't really care about payback because they never see the payback. When you have that sort of a barrier, you know that unless you have reason to believe that you can actually have one-on-one discussions with, let's say, a large industry and change their entire internal practices, you need to provide extremely high incentives, because payback never actually makes it to the decision-maker.
>
> It's just one example of a whole series of barriers that we examine in each case to try to understand how far you need to go.
>
> [Transcript, June 16, 2015, pp. 483-485]

[70] E1 argued that incentive levels are determined by various factors including comparison to other jurisdictions, market knowledge gained through historical program operation, market research and consumer pricing information.

3.5.2.1 Findings

[71] The CA summarized his view of the purpose of a DSM program:

> The basic purpose is to reduce the level of energy required by Nova Scotia in the future, both short and long term. DSM programs are an integral component in meeting anticipated energy requirements. Having an effective DSM program giving a steady contribution to the control of energy costs is a prudent part of Nova Scotia's energy strategy.
>
> [CA Reply Submission, p. 3]

[72] The Board has several concerns with the NSPI Plan at $22 million. Firstly, it eliminates most of the programming in the residential class. The residential class is far and away the largest class on NSPI's system. Over the three years the E1 Plan spends approximately $50 million on the residential class while the preferred scenario in the NSPI Plan spends approximately $15 million. Secondly, the NSPI Plan cuts roughly in half the amount of spending on DSM from those amounts dedicated and spent on DSM in each of the last four to five years. This comes at a time when NSPI's own IRP supports DSM spending 35% to 40% higher than the amount suggested by E1. There is a radical disconnect between the IRP, which is designed to achieve the lowest long term cost for customers, and the NSPI Plan, which appears focused mainly on avoiding a 2016 rate case. In the Board's view, it is in the interests of ratepayers that they be provided a reasonable opportunity to achieve the overall long term cost savings identified in the IRP. While NSPI's Plan may meet the test of short term affordability, it does not do it in a manner that is in the best interests of Nova Scotia Power Incorporated's customers, who also must be given the opportunity to achieve long term cost savings.

[73] On the other hand, the E1 plan, subject to some adjustments which the Board will make in this Decision, better achieves, in the view of the Board, the objectives of the *PUA*. It is more consistent with the findings of the IRP; the level of funding is at par or below amounts in 2012, 2013 and 2014; and, it ensures more balanced participation by customer classes, particularly the residential class. Having said that, the Board has two concerns. As noted by the Industrial Group, there has been a history of some under-spending by E1 and fairly consistent overachieving of energy savings targets. Indeed, from 2008 to 2014, E1 and its predecessors, overachieved on energy savings and on

demand savings in most years as noted in the following chart which was prepared by Board Staff based on historical information:

Program Year	Expenditures ($ million)		Energy Savings (GWh)		Demand Savings (MW)	
	Plan	Actual	Plan	Actual	Plan	Actual
2008*	3.2	2.45	16.1	21.4	2.1	4.7
2009*	9.7	9.4	50.3	64.4	6.8	10.3
2010	22.9	23.0	82.7	82.5	16.9	15.9
2011	41.9	35.8	158.5	141.8	30.9	28.9
2012	43.7	43.6	124.2	158.1	23.2	33.7
2013	46.2	43.4	135.2	163.2	25.9	34.1
2014ᵻ	48.7	38.7	137.8	151.9	27.0	27.1
2015	39.0		121.2		21.2	

* Total actual for 2008 and 2009 was $11.85 million; 2008 amount was determined from financial information.

ᵻ Excluding HER results reduces actuals to 126.5 GWh and 24.2 MW

This suggests that the targets could have been met with less spending.

[74] The Board is also very concerned about the lack of rigor with respect to the determination of incentives. The Board is not satisfied that E1 presently has sufficiently rigorous programs to provide the minimum incentives necessary to achieve the savings targets. Indeed, a large part of E1's analysis seems to be to ask participants what they want. Having regard to the history of underspending, and the history of overachieving of savings and demand targets, and in an effort to bring greater rigor to the calculation of incentives, the Board is reducing each of the three years in the Quantum Agreement amounts by 10% so that, for example, the amount for 2016 would be reduced by $3,690,000 to $33,210,000. This amount is inclusive of the $8.4 million surplus remaining from 2014, as referenced in the following sections. A similar calculation is to be made for each of the two subsequent years. The Board is comforted in making this adjustment with the knowledge that HST payments ranging from $1.6 million to $4.2 million, during

the years 2011 to 2014, are no longer required to be paid and can be diverted to program spending. The Board is also mindful of the excess generation capacity in the NSPI system.

[75] It became apparent during the course of the hearing that E1 was requesting inflationary increases for 2017 and 2018. In past Decisions the Board has denied CPI increases to NSPI on the basis that there was no evidence of a direct connection between NSPI's costs and the general rate of inflation. Little, if any, evidence was presented by E1 to justify the inflationary increase and it is denied. The budgets for 2017 and 2018, reduced by 10% as noted in paragraph 74 of this Decision, are approved at $34,020,000 and $34,920,000 respectively.

3.5.3 Affordability

[76] Having determined the parameters of a preferred plan, the Board is specifically directed by the 2014 amendments to the *PUA* to address the issue of affordability. The most relevant sections are Section 79L(8) and (9):

> **79L (8)** The Board shall approve an agreement pursuant to this Section if, in addition to any other matters considered appropriate by the Board, it is satisfied that the agreement, including the proposed electricity efficiency and conservation activities that are the subject of the agreement, **is in the best interests of Nova Scotia Power Incorporated's customers** and satisfies the requirements of Section 79J.
>
> **(9)** The Board's assessment of the proposed electricity efficiency and conservation activities for the purpose of the approval **must take into account their affordability to Nova Scotia Power Incorporated's customers, along with any other matters considered appropriate by the Board or as may be prescribed**. [Emphasis added]

[77] Traditionally in determining a capital expenditure or a program such as DSM the Board has applied the test of lowest long term cost. This is a principle that is examined in the IRP and in every capital work order application the Board reviews. Issues of affordability, although not explicitly stated in the *PUA* until 2014, were always relevant to

discussions under such topics as rate shock and affordability generally. Indeed, for example, affordability has been on the Issues List in recent Annual Capital Expenditure Plans and in several hearings for Halifax Water which also is regulated under the *PUA*.

[78] Firstly, the Board must determine whether Section 79L(9) changes the manner in which the Board examines DSM expenditures and, secondly, whether the proposed plan, as amended by the Board, meets the test of affordability.

[79] The Industrial Group begins the discussion on affordability in its post-hearing submission with the following very salient statement:

> The Industrial Group wishes to make it clear that it does not favour short-term affordability at the expense of long-term risks.

[80] The DOE suggested the singular emphasis on affordability in the *PUA* amendments is significant. The DOE, however, noted the Board is not constrained to only take affordability into account and ultimately must be guided by the best interests of NSPI customers. The DOE argued the use of affordability in the legislation was intended to emphasize short term rate impacts. The DOE went on to state:

> 15. An understanding of these terms must also be informed by the context in which they appear in the PUA. These provisions only appear in the part of the PUA dealing with electricity efficiency and conservation activities which, by their nature, tend to involve an up-front cost and benefits over time. An assessment of the cost-effectiveness of these activities must necessarily have a long term purview, as the cost and benefits occur in different time frames. On the other hand, the affordability of these activities relates to their cost, which is paid up-front (unless it is deferred).
>
> [DOE Closing Submission, p. 5]

[81] The DOE suggested affordability means not spending any more than is absolutely necessary at this time. Both NSPI and the SBA indicated that customers view affordability over a short time period. According to Mr. Blunden, of NSPI, that means somewhere between tomorrow and five years.

[82] The Board finds that the inclusion of Section 79L(9) of the *PUA* directs the Board to take into account an increased focus on short term rate impacts. Having said that, the Board notes that there will be a review of the DSM program every three years. There will always be rate pressures to be taken into account in both determining rates and in determining the DSM program. A focus exclusively on short term affordability means that the Board would never get to consider long term costs. That would be to the detriment of ratepayers. The Board does not believe that ratepayers are well-served, or that it is in their best interests to focus only on short term costs and thereby deny customers the real long term cost savings that are possible from a balanced and properly implemented DSM program. Accordingly, while the Board finds that there has been a change in focus mandated by the Legislature, and an increased emphasis on short term rate impacts, the overarching consideration continues to be "the best interests of Nova Scotia Power Incorporated's customers" as stated in Section 79L(8) of the *PUA*.

[83] The Board then turns to the issue of whether the plan is affordable. NSPI inferred that its $22 million annual plan can be financed without the necessity of a rate increase. Either of the NSPI plan or the E1 plan will have the added cost of financing the amortization of the 2015 DSM program. It appears NSPI took this into account. NSPI candidly admitted it was unaware that $8.4 million in surplus existed in the hands of E1 which can be applied to next year's DSM Plan but, in any event, is for the benefit of ratepayers.

[84] NSPI appeared to take the position that <u>all</u> of its costs must be recovered (including repurposing the $53 million already in rates for DSM) and that the difference between NSPI's costs, and the room in rates that can absorb DSM without a rate increase,

is the amount available for DSM. However, the Board finds that it is all of NSPI's costs which will determine whether a rate increase is required, and not just DSM costs. There are other cost drivers:

(1) The base cost of fuel will be adjusted this fall and NSPI indicated that the reset could be as much as $50 million higher than currently included in rates attributed almost entirely to the Province's COMFIT program including more expensive COMFIT generation;

(2) There will continue to be an under-recovery under the FAM;

(3) Amortization of the DSM 2015 program will begin.

[85] In the Board's view there are, however, a number of factors which may offset the cost pressures:

(1) The amortization of NSPI's fixed costs recovery mechanism is ended eliminating $15 million or $16 million in rates;

(2) 2014 DSM surplus of $8.4 million;

(3) DSM fuel savings associated with the E1 plan of $8 million per year (although that may have already been taken into account by NSPI).

[86] The Board notes that NSPI's most recent General Rate Application included the following amounts in rates for 2014, which were no longer required at the end of 2014 based on NSPI's financial statements:

(1) Section 21 tax deferral at $18.5 million;

(2) 2008-2009 DSM amortization at $1.1 million.

Both of these amounts are further offsets currently available within existing rates since the revenue related to these fully amortized deferrals continues to be collected during 2015.

[87] As noted earlier, in 2014 approximately $53 million was in rates in the DSM rider. By Order of the Board, at the request of the various customer classes, those funds

which were not needed for DSM in 2015 because of the legislated deferral, were diverted to pay excess fuel costs. However, those amounts continue in rates and, as E1 argued, and the Board agrees, were put there for the purposes of paying for DSM.

3.5.3.1 Findings

[88] The Board notes that the DSM amount of $33,210,000, as set by the Board for 2016, is below DSM spending in each of the last four years. It is also an amount significantly below that recommended in the IRP, and the Board believes, generally speaking, meets the test of affordability as set out in Section 79L of the *PUA*, while at the same time recognizing the overarching principle of what is in the best interests of ratepayers. The Board offers the following analysis concerning a possible rate increase:

• NSPI's DSM Program	$22.0 million
• Plus 2014 ENSC surplus $8.4 million	$8.4 million
• Plus 2008-09 DSM amortization still in rates	$1.1 million
• **Total** (which, based on the evidence of NSPI, can be absorbed without a rate increase in 2016)	**$31.5 million**
• Year one DSM Program ordered by the Board	$33.2 million
• **Difference**	**$1.7 million**

[89] Given a total NSPI revenue requirement of $1.3 billion, the Board does not believe a revenue shortfall of approximately $2 million will drive a rate increase as it believes NSPI should be able to find offsetting savings to achieve that. If that were not possible, and the $2 million difference would cause a rate increase, the Board would hear evidence with respect to deferral. In the circumstances, therefore, the Board believes the program is affordable.

[90] The Board anticipates E1's proposed program and savings targets can be achieved within the budget approved by the Board in this Decision. However, if E1 feels revisions are necessary they can be requested in the Compliance Filing.

[91] The DOE raised the issue of deferral and amortization of certain of the DSM costs, noting it is permitted by the *PUA*. The DOE indicated that a decision on deferral should generally be made at the time the DSM budget is set. As noted in questioning of the E1 panel by the Board, the Board does not see any logical reason why a deferred amount should be put in NSPI's rate base at a cost of 7.78% when bank financing is available to qualified borrowers at approximately 3%. E1 is directed to enter into discussions with the DOE and with commercial lenders to see if there is a less expensive way to finance any deferrals and whether that is authorized by the *PUA*. The Board would be much more inclined to order a deferral if it did not attract a financing cost of 7.78%.

[92] E1 is directed to undertake research and make recommendations on a more rigorous program for determining incentives which should be filed with the Board by March 31, 2016. The Board recognizes that optimizing incentives is difficult; however, a guiding principle should be that incentives are designed at the minimum levels required to induce adequate participation and employ some quantitative analysis.

[93] Finally, in future applications, E1 is to provide one or more alternate scenarios of DSM budgets for the Board to consider, and NSPI is to provide rate impact analysis caused by these scenarios.

3.5.4 Relationship of the Proposed 2016-18 DSM Plan to the 2014 Integrated Resource Plan

[94] During a 10-month period in 2014, NSPI developed a new IRP in collaboration with Board Staff and consultants, and in consultation with interested parties and their consultants.

[95] The general purpose of the IRP process is to identify a plan which utilizes both supply-side and demand-side resources to reliably serve the electrical requirements within Nova Scotia at the lowest long term cost to ratepayers. The Preferred Resource Plan determined through this comprehensive modelling process included what was referred to as the "mid-DSM" scenario presented in a Navigant report on DSM potential in the province. That scenario represented a 3-year DSM energy savings of 519 GWh at a 3-year cost of $183 million. This is about 30% higher than the DSM Plans over the 3-year period of 2012 to 2014, which included approximate energy savings of 397 GWh and expenditures of $139 million.

[96] It has been the understanding in Nova Scotia that DSM plans were developed to satisfy the levels of energy and demand savings identified in the IRP's Preferred Resource Plan, which can result in hundreds of millions of dollars in savings to ratepayers over the planning period. This issue was extensively explored during the hearing on the 2011 DSM Plan, and it is instructive to revisit the explanation provided by NSPI's former Vice-President, Alan Richardson:

> MR. RICHARDSON: <u>So I would suggest that the primary purpose of why we're doing DSM in Nova Scotia is all related to the results of the 2007 Integrated Resource Plan and subsequent update in 2009</u>.
>
> So I believe we filed a quote from the Terms of Reference for the 2009 IRP and it lists basically what we're trying to evaluate in doing the IRP. Bullet number three says:
>
>> Develop and evaluate alternative plans in order to determine the best option. The objective function is the cumulative present worth of the annual

> revenue requirements over the planning period including DSM total resource cost and adjusted for end effects.

So our primary objectives are completely defined within the IRP work. So the IRP says if we can accomplish these savings for this money we will have saved our customers hundreds of millions of dollars over the planning period. And so then the challenge becomes for us to do it. And so far the results are good. The '08-'09 programs did achieve the results that were set out, the goals that were set out. And those were clear right from the start.

MR. MERRICK: Am I correct that you would identify the primary purpose of the DSM spend in Nova Scotia today being to save rate payers money?

MR. RICHARDSON: <u>DSM is part of a long-term Integrated Resource Plan and so the primary purpose of DSM is to hold up its part of that plan. That plan has tremendous benefits of all types, including on the economic side precisely what I've just read, which is very well spelled out, but it also has other benefits such as help meeting our goals for reducing emissions, for reducing carbon dioxide. So it takes us to a cleaner future and it does so in a way that saves our customers hundreds of millions of dollars. That's the primary reason we're doing DSM</u>. [Emphasis added]

[M02783 Transcript, April 19, 2010, pp. 30-32]

[97] In developing the 2016-2018 DSM Plan, E1 stated that it was guided by the results of the current IRP, but in the interest of ratepayer short term affordability, its proposal contained significantly reduced savings targets and related expenditures. In fact, its proposed plan of 405.9 GWh and $121.5 million is a reduction of 22% in energy savings and a reduction of 34% in expenditures below the Preferred Resource Plan. The amount of expenditures submitted in the Quantum Agreement of $113.5 million is 38% less than the Preferred Resource Plan and is also below the 3-year amount for the 2012 to 2014 period.

[98] Regarding NSPI's proposed annual levels of 100 GWh and $22 million, as noted elsewhere in this Decision, that proposal would result in a radical disconnect from the IRP, with reductions of 42% in energy savings and 64% in expenditures below the Preferred Resource Plan.

3.5.5 Cost Effectiveness Screening

[99] Although the Board has not approved the Quantum Agreement, Section 7 contains a provision which states as follows:

> Through collaboration within the DSM Advisory Group the parties agree to work to achieve a consensus as to the methodology and assumptions of the cost effectiveness screening test to be applied to future DSM research plan.

[100] The Board has no objection to that process taking place. In the meantime, the existing Total Resource Cost ("TRC") methodology will remain in place. The Board cautions, however, that a compelling case would have to be made to abandon the TRC test altogether.

3.5.6 Avoided Cost Analysis

[101] Synapse, in its evidence, indicated that rate impact analysis should account for all factors that impact rates either positively or negatively, which would include avoided costs that might exert downward pressure on rates (e.g., generation, transmission and distribution) as well as the avoided cost of complying with environmental regulations.

[102] In response to NSUARB-Pronko IR-4, E1 recognized that intensifying DSM efforts on a locational basis could provide cost effective savings to ratepayers by avoiding or deferring transmission and distribution related capital investment.

[103] In NSPI's response to NSUARB IR-7, NSPI indicated that locational avoided cost is the type of consideration the company would look to explore with E1 in future.

[104] The Board encourages the collaboration noted in the two IR responses on this issue.

3.5.7 Rate and Bill Impact Analysis

[105] In approving the Consensus Agreement the Board approves the Section 6 provisions related to rate and bill impact analysis.

3.5.8 Program Cost Allocation

[106] In approving the Consensus Agreement the Board has approved Section 4 on the cost allocation.

3.5.9 Evaluation and Reporting

[107] In approving the Consensus Agreement the Board approves Section 5 dealing with evaluation and reporting.

3.6 Performance Targets, Indicators, and Thresholds

[108] E1 proposed that the performance targets be cumulative annual energy and peak demand savings at the end of the three year period at the portfolio level and the performance indicator be an annual reporting of annual incremental energy and peak demand savings. The annual reporting will also include lifetime energy savings as a performance indicator. E1 noted that it also plans to include information in its annual reports on total ratepayers' benefits, total spending by E1 and customer satisfaction, but not as performance indicators.

[109] The performance threshold proposed by E1 is 90% of the performance targets for the three year cumulative energy and peak demand savings.

[110] Based on the proposed plan, the cumulative performance targets are 405.9 GWh of energy savings and 62.5 MW of demand savings at the generator. These performance targets were confirmed in the Quantum Agreement. As noted earlier in the Decision, the Board has reduced the expenditures on DSM activities from the amounts in the Quantum Agreement and those proposed in the application, which may impact the performance targets.

3.6.1 Findings

[111] The Consensus Agreement signed by the parties, and approved by the Board, provides further details on the performance targets, indicators and thresholds. These targets are cumulative at the end of the three year period and the threshold for compliance is 90% of the proposed targets. As discussed earlier in the Decision, E1 is ordered to incorporate these targets in its Compliance Filing.

3.7 Mid-Course Adjustments and Flexibility

[112] In the Consensus Agreement, the parties agreed to the setting of targets over a three year period, instead of annual targets. E1 had sought the ability to make changes of up to 25% in targeted savings and investments at the sector level so that it could make any appropriate adjustments as the programming evolves. Section 5 of the Consensus Agreement allows E1 to make such changes at a program level, and requires it to provide explanations of changes exceeding 25% at the program level. E1 also agreed "...to use reasonable efforts to avoid program changes that will result in substantial changes to any customer class on an annual basis", and to give written notice of intent to implement any mid-course adjustments.

[113] In its closing submission, the Industrial Group asked the Board to deny the request by E1 to permit moving up to 25% at a sector level "...if on an annual basis, it will impact customer classes greater than 25%."

3.7.1 Findings

[114] The Board is satisfied that the provisions of the Consensus Agreement adequately address the ability of E1 to make mid-course adjustments and allow sufficient flexibility at the program level. Limiting the 25% adjustments to programs rather than sectors will reduce potential impacts at the customer class level. The Board does not

consider it necessary to address this at the sector level, given E1's approach to the impact on customer classes. The Board also notes that the Industrial Group is a signatory to the Consensus Agreement.

3.8 Establishment of a Reserve Fund

[115] As a part of the Consensus Agreement, E1 withdrew its request for a reserve fund.

3.9 HST Status

[116] E1 noted that its predecessor, ENSC, sought a ruling from the Canada Revenue Agency ("CRA") as to whether or not the company is making a taxable supply to NSPI and if it is entitled to claim full input tax credits for the HST it paid in delivering its programs.

[117] The CRA ruling and a subsequent appeal denied the request for input tax credits by the ENSC. E1 now has an appeal pending before the Tax Court of Canada.

[118] E1 noted that it is currently negotiating with NSPI regarding the funding of this appeal and during this period, the HST receivable is an asset of the E1 Transition Corporation. Based on legal advice, E1 is now claiming and receiving input tax credits for 2015 and corresponding HST cost is not included in the DSM cost estimates.

3.9.1 Findings

[119] The Board understands that E1 is pursuing the input tax credits for past HST which it paid while delivering DSM services. The matter is currently before the Courts and the Board will await the decision before issuing directions on this matter. E1 is directed to provide the Board with full information when the matter is resolved by the Courts for further directions from the Board.

3.10 Agreed form of Supply Agreement

[120] E1 included an Agreed Form of Supply Agreement as Appendix J of its application, effective January 2016. The Supply Agreement generally outlines the terms and conditions which each party is expected to adhere to, in order to fulfill their respective responsibilities under the *PUA*. Attached to the Supply Agreement were various schedules, some of which were left blank pending the Board's Decision in the current proceedings and the Compliance Filing.

3.10.1 Findings

[121] The Board has reviewed the Supply Agreement and has no comments at this time. E1 is ordered to complete the Supply Agreement incorporating the Board's Decision as a part of its Compliance Filing.

3.11 Compliance with Electricity Efficiency and Conservation Restructuring (2014) Act

[122] Section 79J of the *PUA* contemplates that E1 and NSPI will enter into an agreement for electricity efficiency and conservation. That implies to the Board a good faith negotiation and a reasonable attempt to resolve as many issues as possible. Under the *PUA*, where the parties are unable to come to agreement that may be referred to the Board.

[123] This proceeding was far more litigious as between E1 and NSPI than it needed to be. The Board understands that on the critical question of the DSM budget the parties were sufficiently far apart that there was likely no reasonable prospect of agreement. In those circumstances it is the role of the Board to adjudicate and come to a conclusion which it has done in this Decision. However, there were many other issues that could, and should, have been agreed upon well before the hearing. As it turned out,

E1 and NSPI did come to an agreement in the form of the Consensus Agreement tabled during the course of the hearing on many of those issues, but only after thousands of dollars in consulting fees and many pages of evidence were produced in circumstances where, in the view of the Board, it need not have happened. Perhaps the degree of separation on the overall budget poisoned other aspects of the negotiations but it should be constantly kept in mind that both parties are being funded by ratepayers.

3.12 Establishment of a Standardized Filing for Future Applications to approve a DSM Supply Agreement

[124] The Consensus Agreement proposed to establish a standardized filing for future applications by E1. The parties to the Consensus Agreement have agreed to refer this matter to the DSM Advisory Group for discussion and report back to the Board as noted in the Consensus Agreement. In general, it is expected that the standardized filing will include:

i) Lifetime energy and demand savings;
ii) Annual participation and participation rates by program;
iii) Cost-effectiveness testing analysis results by program;
iv) Levelized cost of saved energy for each program;
v) Detailed description of the rate and bill impact analysis; and
vi) Such other items as agreed to in the DSM Advisory Group.

[Exhibit E-62, p. 4]

[125] E1 also agreed to provide technical data in its future plans by measure or other similar information, as far as possible.

3.12.1 Findings

[126] The parties in the Consensus Agreement have agreed to work on a standardized filing template and other information and to submit a report to the Board for approval.

[127] The Board approves this process and awaits the filing of the report.

3.13 Costs

[128] The EAC seeks costs in this proceeding in the amount of $27,500. The EAC is a non-profit organization and would qualify for costs under the Board's *Costs Rules*. The Board did find the evidence provided by the EAC's witness, Ms. Chant of the Vermont Energy Investment Corporation, helpful. The Board directs that E1 and the EAC discuss the issue and see whether it can be resolved. If not, the Board reserves the right to make any cost determination. It would be unlikely that the Board would award costs to reimburse salaries of employees of the EAC.

4.0 LETTERS OF COMMENT AND PUBLIC SPEAKERS

[129] The Board received 37 letters of comment from various persons, who wrote individually or on behalf of organizations. With only two exceptions, all were supportive of E1 and maintaining the amount of its proposed DSM plan, and in a number of instances, some writers urged the Board to allow an increase in spending on efficiency programs. One of the exceptions did not address the DSM Plan, but presented a critique of the evidence of Dr. Peach.

[130] Among the reasons cited for this support were environmental benefits and fighting climate change, economic benefits including jobs in the energy efficiency field, and benefits to low income customers, with particular emphasis on programming for low income renters. A number of writers suggested they would not mind paying more to support increased DSM programming. The Board notes that several writers described their personal experiences with E1 or its predecessor, ENSC, resulting in decreased electricity consumption and significant savings.

[131] At the evening session held on June 15, 2015, the Board heard from 21 speakers. A number of the speakers were engaged in businesses that were providers of services to E1, or were delivery agents for services under DSM programs. They spoke of the environmental, economic, and financial benefits of DSM programming and supported E1's Plan as filed. Concerns about losing industry capacity if spending and programs are decreased, and problems of "ramping up" after a "ramping down", were expressed.

[132] Other speakers included students who had either recently graduated from, or are currently in, programs which they hope will lead to positions in energy efficiency or sustainability businesses. They want to ensure that the "culture" of energy efficiency is maintained. They, too, supported E1.

[133] Rev. Charles Bull, representing the Anglican Diocese of Nova Scotia and Prince Edward Island, spoke about the environmental impacts of energy efficiency, and also about the need to assist low income earners to be energy efficient. In his view, cuts to E1's Plan would affect the most vulnerable in society.

[134] Julian Boyle spoke on behalf of the Town of Lunenburg and its electric utility, as well as the Municipal Electric Utilities of Nova Scotia Co-operative. He said he was not in a position to support or criticize the E1 Plan; however, he noted that access to DSM programming in Lunenburg was not the same as other areas of the province. Mr. Boyle said only participants benefit from DSM programming and, therefore, there is a need for equal access. He also suggested that E1 needs to target programming which reduces peak energy demand.

[135] The Board appreciates that all of these persons and organizations took the time to write or to speak to present their views. The Board understands the importance of ensuring that low income customers are able to participate in or benefit from energy efficiency programs. The Board notes that NSPI has committed already to annual contributions to Clean Nova Scotia for programming for low income homeowners. E1 is encouraged to pursue programming for low income renters within the Plan approved by the Board.

[136] The Board notes, however, its limited role, as pointed out by Counsel for the Industrial Group in its closing submission:

> 32. It is not the role of the Board to prop up or sustain an industry, regardless of the impassioned evidence of speakers in the public session who have enjoyed an expansion of their business under E1. The arguments with respect to the number of jobs created is not a matter of concern for this Board unless they directly connect to costs associated with the delivery of the programs. Job creation is a policy matter for the Province, not the Board under the **Public Utilities Act**. Furthermore, it should be evident from the early submissions and the basis for intervention by Nichent, that there are businesses in Nova Scotia which are prepared to deliver efficiency to consumers outside of the circle of preferred providers or suppliers to E1.
>
> [Industrial Group Closing Submission, p. 8]

[137] The Board understands the concerns expressed in the letters and comments of the speakers. However, the Board's jurisdiction with respect to DSM plans is restricted by ss. 79L(8) and (9) of the *PUA*, which address the best interests of NSPI's customers and affordability, as discussed earlier in this Decision.

5.0 SUMMARY OF BOARD FINDINGS

[138] E1 applied to the Board for approval of its 2016-2018 DSM Plan, pursuant to s. 79J(3) of the *PUA*, as it was unable to reach agreement with NSPI on the terms of the Supply Agreement. E1 sought approval for spending of an aggregate $121.5 million

over the three years, with a target of total cumulative energy savings of 405.9 GWh and demand savings of 62.5 MW. NSPI submitted that the Board should approve a plan which included $66 million over three years, with a target of annual energy savings of 100 GWh.

[139] During the course of the hearing, two settlement documents were presented to the Board, the first being the Quantum Agreement, whereby E1, the CA, the SBA, the EAC and the AEC agreed to an aggregate spending of $113.5 million, with the same energy and demand savings target as originally put forward by E1. NSPI, the Industrial Group, and the DOE were not parties to the Quantum Agreement.

[140] A Consensus Agreement, which was signed by NSPI and the Industrial Group, in addition to the signatories to the Quantum Agreement, addressed a number of issues which the Board had identified in its Final Issues List for this proceeding.

[141] The Board does not approve the Quantum Agreement, and instead, approves an aggregate spending of $102,150,000, which is a 10% reduction in the amount agreed to in the Quantum Agreement, with no inflation increases over the three years. As noted in paragraphs [74] and [75], the approved spending is $33,210,000 during 2016; $34,020,000 during 2017; and $34,920,000 during 2018. The Board has reduced DSM spending by 10%, having considered the history of underspending on DSM programming, the history of overachieving savings and demand targets, and as an inducement to bring greater rigor to the calculation of incentives.

[142] The Board considers that the target energy and demand savings included in the E1 DSM Plan can be achieved within the approved spending; however, if E1 feels that revisions are necessary, they can be requested in the Compliance Filing.

[143] The Board finds that this plan meets the tests set out in the *PUA* in that it is in the best interests of NSPI's customers. Further, the Board acknowledges that affordability is given an increased focus under the provisions of s. 79L of the *PUA*. The Board concludes, however, that a focus exclusively on short-term affordability would be detrimental to ratepayers since long-term costs would never be considered, which would not be in the best interests of ratepayers.

[144] While not approving the Quantum Agreement, the Board has no difficulty with certain aspects of the Quantum Agreement, i.e., the proposed discussion of a potential development of a DSM Expenditure Justification Criteria, the Small Business Energy Study, the referral of cost effectiveness screening tests to the DSM Advisory Group, and the provision of the results of the Clean Nova Scotia Low Income Program to the Board and stakeholders.

[145] The Board approves the Consensus Agreement, which refers a number of matters to the DSM Advisory Group, and has given directions regarding the evaluation and verification reports and recommendations, as set out in paragraphs [53] and [54] of this Decision. The Board finds that the TRC for cost effectiveness screening is to remain in place for the time being.

[146] In approving the Consensus Agreement, the Board notes that it contains a provision which will ensure that, where consensus cannot be reached after consultation with stakeholders, the parties will bring outstanding matters back to the Board no later than June 30, 2016, which allows sufficient time to deal with such matters prior to the submission of the DSM Plan for the next three year term of the franchise.

[147] The Board directs E1 to undertake research and make recommendations on a more rigorous program for determining incentives, which should be filed with the Board by March 31, 2016.

[148] In future applications, E1 is to provide one or more alternate scenarios of DSM budgets for the Board to consider, and NSPI is to provide rate impact analysis on those scenarios.

6.0 ORDER

[149] An Order will issue following a Compliance Filing. The Compliance Filing is to be filed by September 15, 2015. If that is problematic, E1 and NSPI should approach Board Counsel to discuss an alternate date.

DATED at Halifax, Nova Scotia, this 12th day of August, 2015.

Peter W. Gurnham

Kulvinder S. Dhillon

Roberta J. Clarke

APPENDIX A
PARTIES, INTERVENORS, AND WITNESSES

Parties	Counsel	Witnesses
EfficiencyOne	James R. Gogan, CA., LL.B.	**Panel No. 1** John Aguinaga, Chief Energy Technical Officer Charles Faulkner, Director, Efficiency Programs Julie-Ann Vincent, Manager, Regulatory Affairs **Consultants:** Phillippe Dunsky, President, Dunsky Energy Consulting Stuart Slote, Associate Director, Navigant Consulting, Inc. **Panel No. 2** Allan Crandlemire, Chief Executive Officer Stephen MacDonald, Chief Operating Officer Gina Thompson, Director of Finance
NSPI	Colin J. Clarke, Q.C. David Landrigan, LL.B. Brian Curry, LL.B.	Greg Blunden, CA, Executive Vice President, Customer, Business & Financial Services Eric Ferguson, CA, Director, Regulatory Affairs Michael Sampson, P.Eng., Director, Generation Asset Management Anne-Marie Curtis, P.Eng., Director, Marketing & Sales **Consultants:** Robert Boutilier, P.Eng. David Pickles, Senior Vice-President ICF International
Board Counsel	S. Bruce Outhouse, Q.C.	**Consultants:** Dr. H. Gil Peach, H. Gil Peach & Associates LLC Mel Whalen, Multeese Consulting Inc. Tim Woolf, Synapse Energy Economics, Inc.
Intervenors		
CA	John Merrick, Q.C. William Mahody, Q.C	Paul Chernick, President, Resource Insight, Inc. George Foote
SBA	E. A. Nelson Blackburn, Q.C. Ellen Burke, LL.B.	John Athas, LaCapra Associates, Inc.
Industrial Group	Nancy G. Rubin, Q.C. Maggie Stewart, LL.B.	Mark Drazen, Drazen Consulting Group.
EAC	Jamie Thompson	Elizabeth Chant, Vermont Energy Investment Corporation
AEC	Donna Franey, LL.B. Brian Gifford	
CNS	Chris Morrissey Erin Burbidge	

NSDOE	Stephen McGrath, LL. B. Nancy Rondeaux	
Port Hawkesbury Paper LP	James MacDuff, LL.B.	
Rhyno LED Lighting Solutions		Granted Intervenor status but did not appear at the hearing

APPENDIX B
LIST OF SPEAKERS

1.	Nicole Briand	
2.	Joe Berta	ARCA Canada Inc.
3.	Nic Fieldsend	Journeyman Film Company
4.	Emma Norton	
5.	Rev. Charles Bull	Anglican Diocese of NS and PEI Environment Network
6.	Kawlin Rolfe	Energy Sustainability Engineering Technologist
7.	Dwaine MacDonald	Trinity Maintenance Solution & Trinity Inspection Services
8.	Len Preeper	Thinkwell Research
9.	Dale Robertson	
10.	Tim Houston	MLA for Pictou East and Energy Critic for the PC Caucus
11.	Kim Thompson	The Deanery Project
12.	Jamie Muirhead	MJM Energy Limited
13.	Wayne Groszko	
14.	Trevor Parsons	Innovative Real Estate Ltd.
15.	Gordon Wilkie	Solar Nova Scotia
16.	Megan McCarthy	powerWHYS Technologies
17.	Katrina Isabel Phillips	
18.	Chester Goluch	Chester & Company
19.	Kirk Mock	President, Bro-Moc Print
20.	Steve Zubalik	
21.	Julian Boyle	Municipal Electric Utilities of Nova Scotia Cooperative (MEUNSC)

APPENDIX C
Quantum Agreement

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M06733

IN THE MATTER OF:	***THE PUBLIC UTILITIES ACT***
And	
IN THE MATTER OF:	*An application by EfficiencyOne for Approval of a Supply Agreement for Electricity Efficiency and Conservation Activities between EfficiencyOne ("E1") and Nova Scotia Power Inc. ("NSPI"), the establishment of a final agreement between the parties, and approval of a 2016-2018 Demand Side Management ("DSM") Resource Plan*

WHEREAS EfficiencyOne is the Franchise Holder in accordance with the *Public Utilities Act*;

AND WHEREAS EfficiencyOne has filed an application with the Nova Scotia Utility and Review Board, in accordance with the provisions of the *Public Utilities Act*, for the approval of a Supply Agreement with Nova Scotia Power Inc. ("NSPI") for the supply of electricity efficiency and resource conservation activities for the years 2016 through 2018 ("Supply Agreement");

AND WHEREAS NSPI is, in accordance with the *Public Utilities Act*, deemed to be a co-applicant with EfficiencyOne in the application for approval of the 2016 -2018 DSM Resource Plan ("2016-18 DSM Plan") and Supply Agreement;

AND WHEREAS EfficiencyOne and NSPI (together referred to as the "Co-Applicants") have each filed its evidence before the Board;

AND WHEREAS each of the Co-Applicants has served and responded to Information Requests of the other, and each of the Co-Applicants have responded to Information Requests filed by certain of the formal Intervenors in this proceeding;

AND WHEREAS, based on the record before the Board, the Parties hereby approve the Terms of Consensus attached hereto as Appendix "A". The Parties reserve the right to amend their position based on any further evidence raised in the proceeding before the Board [or any other Intervenors who are not a party to this Consensus Agreement].

2870094

1) This Consensus Agreement may be executed by the Parties in counterparts, each of which when so executed and delivered shall be deemed to be an original and when taken together shall be deemed to be one and the same instrument. The electronic delivery, including, without limitation, by email or facsimile transmission, of any signed original of this Settlement Agreement shall be the same as the delivery of an original.

Signed and dated this 16th day of June 2015.

	EfficiencyOne
Witness	Per:
	Consumer Advocate
Witness	Per:
	Small Business Advocate
Witness	Per:
	Affordable Energy Coalition
Witness	Per:
	Ecology Action Centre
Witness	Per:

2870094

Document: 238357

APPENDIX "A"

1) IMPORTATION OF AGREEMENT

a) The parties agree to incorporate by reference all of the terms of agreement reached in the partial settlement agreement among EfficiencyOne, Nova Scotia Power, the Consumer Advocate, the Small Business Advocate, the Industrial Group, the Ecology Action Centre, and the Affordable Energy Coalition in the proceeding before the Nova Scotia Utility and Review Board (Matter M06733).

2) DSM INVESTMENT LEVEL

a) The parties support a reduction in investment level for DSM activities over the 2016-2018 contract period from the proposed $121.5 million to $113.5 million as follows:

   i) $36.9 million in 2016

   ii) $37.8 million in 2017

   iii) $38.8 million in 2018

3) EFFICIENCYONE PERFORMANCE TARGETS

a) EfficiencyOne's cumulative energy and demand savings targets shall be 405.9 GWh and 62.5 MW respectively, as set out in EfficiencyOne's 2016-2018 DSM Resource Plan filing.

4) 2016-2018 PROGRAMS

a) The DSM programs in 2016-2018 will be as proposed in EfficiencyOne's 2016-2018 DSM Resource Plan filing.

5) DSM Expenditure Justification Criteria

a) The parties agree to discuss the potential development of DSM Expenditure Justification Criteria (DSMEJC) within the DSM Advisory Group.

6) Small Business Energy Study

a) EfficiencyOne agrees to undertake a Small Business Energy Study in 2016, with the scope to be developed in consultation with the Small Business Advocate.

7) Cost-Effectiveness Testing

a) Through collaboration within the DSM Advisory Group, the parties agree to work to achieve consensus as to the methodology and assumptions of the cost-effectiveness screening test to be applied to future DSM Resource Plans.

8) DSM Advisory Group Discussions

a) If consensus is not achieved on any of the above items to be addressed within the DSM Advisory Group, such items will be presented to the UARB for determination.

9) Principles of Equity

a) All ratepayers are entitled to an equitable opportunity to participate in DSM programs. Low-income tenants and homeowners as well as marginally viable commercial and industrial customers are some of the most difficult and most expensive customers to serve. Services that recognize the barriers these customers face must be offered so they can participate. Cost-effectiveness screening must take into account the extra costs involved.

10) NS POWER'S CHARITABLE CONTRIBUTION

a) The parties encourage Nova Scotia Power to provide the evaluated results of its low income program to the Board and to stakeholders on an annual basis and to coordinate administration and evaluation of the program with EfficiencyOne.

b) At present, the Parties agree that DSM activities resulting from NS Power's charitable contribution will not be used to reduce or constrain EfficiencyOne's Performance Targets.

APPENDIX D
Consensus Agreement

M06733

IN THE MATTER OF:	***THE PUBLIC UTILITIES ACT***
And	
IN THE MATTER OF:	*An application by EfficiencyOne for Approval of a Supply Agreement for Electricity Efficiency and Conservation Activities between EfficiencyOne and Nova Scotia Power Inc., the establishment of a final agreement between the parties, and approval of a 2016-2018 Demand Side Management ("DSM") Resource Plan*

WHEREAS EfficiencyOne is the Franchise Holder in accordance with the *Public Utilities Act*;

AND WHEREAS EfficiencyOne has filed an application with the Nova Scotia Utility and Review Board, in accordance with the provisions of the *Public Utilities Act*, for the approval of a Supply Agreement with Nova Scotia Power Inc. ("NSPI") for the supply of electricity efficiency and resource conservation activities for the years 2016 through 2018 ("Supply Agreement");

AND WHEREAS NSPI is, in accordance with the *Public Utilities Act*, deemed to be a co-applicant with EfficiencyOne in the application for approval of the 2016 -2018 DSM Resource Plan ("2016-18 DSM Plan") and Supply Agreement;

AND WHEREAS EfficiencyOne and NSPI (together referred to as the "Co-Applicants") have each filed its evidence before the Board;

AND WHEREAS each of the Co-Applicants has served and responded to Information Requests of the other, and each of the Co-Applicants have responded to Information Requests filed by certain of the formal Intervenors in this proceeding;

AND WHEREAS the parties to this Agreement (collectively the "Parties" and individually a "Party") have reached an agreement on certain matters in relation to the approval of the 2016-2018 DSM Plan;

AND WHEREAS, based on the record before the Board, the Parties hereby approve the Terms of Consensus attached hereto as Appendix "A". The Parties reserve the right to amend their position based on any further evidence raised in the proceeding before the Board.

NOW THEREFORE the Parties agree as follows:

1) This Consensus Agreement may be executed by the Parties in counterparts, each of which when so executed and delivered shall be deemed to be an original and when taken together shall be deemed to be one and the same instrument. The electronic delivery, including, without limitation, by email or facsimile transmission, of any signed original of this Settlement Agreement shall be the same as the delivery of an original.

Signed and dated this 16th day of June 2015.

Witness	**EfficiencyOne** Per:
Witness	**Nova Scotia Power Incorporated** Per: DAVID LANDRIGAN
Witness	**Consumer Advocate** Per:
Witness	**Small Business Advocate** Per:
Witness	**Industrial Group** Per: NANCY RUBIN
Witness	**Affordable Energy Coalition** Per:
Witness	**Ecology Action Centre** Per:

2870094

APPENDIX "A"

1) ESTABLISHMENT OF A STANDARDIZED FILING FOR FUTURE APPLICATIONS TO APPROVE A DSM SUPPLY AGREEMENT

a) The Parties agree to the establishment of a standardized filing for future applications, the substance of which will be vetted through the DSM Advisory Group for the Board's approval. The standardized filing will include a program description template based on Efficiency Maine (included as Attachment C to EfficiencyOne's Reply Evidence), with the addition of:

i) Lifetime energy and demand savings;

ii) Annual participation and participation rates by program;

iii) Cost-effectiveness testing analysis results by program;

iv) Levelized cost of saved energy for each program;

v) Detailed description of the rate and bill impact analysis; and

vi) Such other items as agreed to in the DSM Advisory Group.

b) EfficiencyOne is not precluded from providing additional information or sections as it may determine to be relevant.

c) EfficiencyOne will provide technical data in its Plan filing, by measure, or such similar information to the extent available.

2) ESTABLISHMENT OF A RESERVE FUND

a) In lieu of development of a DSM reserve fund, the Parties agree they will not challenge EfficiencyOne's ability to apply on an expedited basis to the Board for recovery of funds to address extraordinary or unforeseen circumstances outside of normal operations, if required, provided that Efficiency One has made a good faith effort to mitigate the costs of the extraordinary or unforeseen circumstances.

b) This clause is without prejudice to any Party's rights of participation in any such application and does not preclude any Party from challenging the merits of the claimed recovery, claimed recourse or any other matter.

c) EfficiencyOne agrees that, if a budget surplus exists at the end of the three-year contract period, the surplus will be returned to NS Power for the benefit of ratepayers as determined by the Board.

3) PERFORMANCE TARGETS, INDICATORS AND THRESHOLDS

a) The parties agree to the following Performance Targets and Performance Indicators:

i) Performance Targets are set over the three-year contract period, rather than annually.

ii) EfficiencyOne is deemed to be in substantial compliance with the approved Plan Performance Targets if 90 percent or greater achievement is reached on the two Performance Targets as listed below. If less than 90 percent of any Performance Target is achieved, a regulatory process will be triggered.

b) Performance Targets consist of:

i) Cumulative annual energy savings

ii) Cumulative annual peak demand savings

c) Performance Indicators (for indicating or monitoring progress toward Performance Targets) consist of:

i) Annual incremental energy savings (reported by program)

ii) Cumulative annual energy savings (reported by program)

iii) Lifetime savings (once methodology is developed) (reported by program)

iv) Annual incremental peak demand savings (reported by program)

v) Cumulative annual peak demand savings (reported by program)

vi) Total ratepayer benefits (once methodology is developed)

vii) Total spending (reported by program and rate class)

viii) Customer satisfaction

ix) An analysis of the impact on rates through the implementation of the 2016-2018 programs, to be included as part of EfficiencyOne's historical-looking rate and bill impact analysis as outlined in clause 6(b).

x) Reporting on low income program participation, expenditures, and savings through a variety of methods, including estimation based on geographic census information.

d) For the Performance Indicators reported by program, EfficiencyOne agrees to report on them additionally by rate class as soon as available and not later than within its Q3 report.

4) COST ALLOCATION

a) The Parties agree to collaboratively work to develop new DSM cost allocation and DSM cost recovery models to be submitted by October 31, 2015 for approval or Decision by the Board, or within a reasonable period of time in accordance with the Board's regulatory schedule. This engagement will include the following items:

i) 2015 DSM cost allocation

ii) 2016-2018 DSM cost allocation

iii) 2014 rate-smoothing adjustment ("RSA"); and

iv) Mid-course adjustments.

b) For clarity, this clause in no way restricts Nova Scotia Power's discretion in making application to the UARB regarding the accounting treatment and recovery mechanism of DSM costs.

5) EVALUATION AND REPORTING

a) The Parties support EfficiencyOne's proposal for annual program impact evaluations and process evaluations at the organizational level with program process evaluations if required. EfficiencyOne will provide an overview of potential condensed impact reporting to the DSM Advisory in 2016 for discussion.

b) EfficiencyOne will explore methodologies of demand savings evaluations with its evaluator.

c) EfficiencyOne agrees to provide a full report on its 2016-2018 Performance Requirements and Performance Indicators within its Annual Progress Report filed in 2019.

d) EfficiencyOne will provide explanations of substantial changes, defined as variance in energy savings or investment of 25 percent or more at a program level.

e) Dependent on an approved cost allocation methodology, EfficiencyOne will undertake reasonable efforts to avoid program changes that will result in substantial changes to any customer rate class on an annual basis.

f) The Parties agree to the timing of EfficiencyOne's reporting and the contents of those reports as set out in the attached Schedule 1, subject to revisions to the contents of the reports which may be agreed to or determined by the Board as a result of discussions within the DSM Advisory Group.

g) EfficiencyOne will provide written advance notice of its intent to implement mid-course adjustments by program and their customer rate class impacts. The Parties acknowledge EfficiencyOne's position that it is not able to provide advance notice of mid-course adjustments resulting from third-party evaluation reports, as these adjustments are made immediately after receipt of these reports.

6) RATE AND BILL IMPACT ANALYSIS

a) As with prior filings of its rate and bill impact analysis, EfficiencyOne agrees to develop, in consultation with the DSM Advisory Group, assumptions to its rate and bill impact analysis. This will include, but is not limited to, the inclusion of contribution to fixed costs. Once complete, the inclusions will be included in future filings of the analysis.

b) EfficiencyOne agrees to file historical-looking rate and bill impact analyses by October 31st of each year.

7) RESOLUTION PROCESS

a) If consensus is not achieved on any of the above items to be addressed within the DSM Advisory Group, such items will be presented to the UARB for determination not later than June 30th, 2016.

8) Reservation of Rights

a. This agreement is without prejudice to the rights of any Party or the position any Party may take on these issues in future proceedings.

"Schedule 1"

Report Timing and Contents

Legend:

Filing has not historically triggered an automatic regulatory process (would be on request or by Decision of the UARB).	Filing has historically triggered a regulatory process.

Year	Report/ Process	Filing Timeframe	Inclusions
2015	2015 Q2 Report	July/Aug	• Quarterly and YTD Highlights: o Comparison of targets, mid-course adjustments, and results (by program) • YTD investment by rate class (compared to approved forecast) • Sector highlights (results, participation, and items of interest by program, plus low-income results) • Other activities (organized by Enabling Strategies categories) • Advance notice of Significant Changes if relevant.
	2015 Q3 Report	Oct/Nov	• See 2015 Q2 report for details
	Meetings with DSMAG	At least three times per year (generally following filing of quarterly reports)	• Discussion of quarterly report • Other topics as required/requested

Year	Report/ Process	Filing Timeframe	Inclusions
2016	2015 Annual Progress Report	End of March	• Summary of 2015 context, activities and milestones achieved • 2015 investment by rate class (compared to approved forecast) • Status of Performance Targets and Indicators • Energy savings and investment for each program component • Management discussion and analysis of any major discrepancies relative to the original plan's intent and forecasts • Summary of investment and savings for each program or target market area • Update to 2016 planned activities (mid-course adjustments by program plus updated program descriptions/highlights) o Corrective Action Plan (if required) o If mid-course adjustments result in substantial changes by program, explanation and justification will be provided) o Notice of significant changes (if required) • Update on items arising from the 2016-2018 DSM Plan process • Updated preliminary cost allocation (if relevant)
	2015 Evaluation Reports	End of March	• Impact evaluation (all programs) • Process evaluation
	2016 Q1 Report	April/May	See 2015 Q2 report for details
	2015 Audited Financial Statements	May	
	2016 Q2 Report	July/Aug	See 2015 Q2 report for details plus advance notice of Significant Changes if relevant.
	Historical-looking rate and bill impact analysis	End of October	• Results by rate class in graphical form • Overview and description of analysis • Commentary around results • Assumptions, including explicit identification of any changes from prior filings
	2016 Q3 Report	Oct/Nov	• Status of Performance Indicators by rate class

Year	Report/ Process	Filing Timeframe	Inclusions
			• See 2015 Q2 report for remaining details
	Meetings with DSMAG	At least three times per year (generally following filing of quarterly reports)	• Discussion of quarterly report • Other topics as required/requested
2017	2016 Annual Progress Report	End of March	• See 2015 Annual Progress Report
	2016 Evaluation Reports	End of March	• Impact evaluation (all programs) • Process evaluation (as proposed in EfficiencyOne's Evidence)
	2017 Q1 Report	April/May	See 2015 Q2 report for details
	2016 Audited Financial Statements	May	
	2017 Q2 Report	July/Aug	See 2015 Q2 report for details
	Historical-looking rate and bill impact analysis	End of October	• Results by rate class in graphical form • Overview and description of analysis • Commentary around results • Assumptions, including explicit identification of any changes from prior filings
	2017 Q3 Report	Oct/Nov	See 2015 Q2 and 2016 Q3 report for details
	Meetings with DSMAG	At least three times per year (generally following filing of quarterly reports)	• Discussion of quarterly report • Other topics as required/requested

Year	Report/ Process	Filing Timeframe	Inclusions
2018	2019-2021 DSM Plan Filing	End of February	• Based on standardized filing agreed to/ordered by the UARB • Rate and bill impact analysis • Preliminary cost allocation (if relevant) • Other items as required to support the Plan
	2017 Evaluation Reports	End of February	• Impact evaluation (all programs, shortened version referencing 2016 evaluation for methodology unless it changed) • Process evaluation (as proposed in EfficiencyOne's Evidence)
	2018 Q1 Report	April/May	See 2015 Q2 report for details
	2017 Audited Financial Statements	May	
	2018 Q2 Report	July/Aug	See 2015 Q2 report for details
	Historical-looking rate and bill impact analysis	End of October	• Results by rate class in graphical form • Overview and description of analysis • Commentary around results • Assumptions, including explicit identification of any changes from prior filings
	2018 Q3 Report	Oct/Nov	See 2015 Q2 and 2016 Q3 report for details
	Meetings with DSMAG	At least three times per year (generally following filing of quarterly reports)	• Discussion of quarterly report • Other topics as required/requested
2019	2018 Annual Progress Report	End of March	• Status of annual performance indicators • See 2015 Annual Progress Report for remaining items
	2018 Evaluation Reports	End of March	• Impact evaluation (all programs; shortened version referencing 2016 evaluation for methodology unless it changed) • Process evaluation (as proposed in EfficiencyOne's Evidence)

Year	Report/ Process	Filing Timeframe	Inclusions
	2019 Q1 Report	April/May	See 2015 Q2 report for details
	2018 Audited Financial Statements	May	
	2019 Q2 Report	July/Aug	See 2015 Q2 report for details plus advance notice of Significant Changes if relevant.
	Historical-looking rate and bill impact analysis	End of October	• Results by rate class in graphical form • Overview and description of analysis • Commentary around results • Assumptions, including explicit identification of any changes from prior filings.
	2019 Q3 Report	Oct/Nov	See 2015 Q2 report for details plus advance notice of Significant Changes if relevant.
	Meetings with DSMAG	At least three times per year (generally following filing of quarterly reports)	• Discussion of quarterly report • Other topics as required/requested