DECISION **NSUARB-E-ENSC-R-10**
2011 NSUARB 99

NOVA SCOTIA UTILITY AND REVIEW BOARD

IN THE MATTER OF THE EFFICIENCY NOVA SCOTIA CORPORATION ACT

- and -

IN THE MATTER OF AN APPLICATION by **EFFICIENCY NOVA SCOTIA CORPORATION** for Approval of its Electricity Demand Side Management Plan for 2012

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

COUNSEL: **EFFICIENCY NOVA SCOTIA CORPORATION**
Sean Foreman, LL.B.

CONSUMER ADVOCATE
William Mahody, LL.B.

ECOLOGY ACTION CENTRE
Brennan Vogel

NOVA SCOTIA POWER INC.
Nicole Godbout, LL.B.

AVON VALLEY *ET AL.*
Nancy G. Rubin, LL.B.

HALIFAX REGIONAL MUNICIPALITY
Stephan Jedynak, LL.B.
Julian Boyle

NOVA SCOTIA DEPARTMENT OF ENERGY, NOVA SCOTIA ENVIRONMENT AND CONSERVE NOVA SCOTIA
Mark V. Rieksts, LL.B.
Richard Penny
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NEWPAGE PORT HAWKESBURY CORP. and BOWATER MERSEY PAPER COMPANY LIMITED
David MacDougall, LL.B.
James MacDuff, LL.B.

QUETTA INC.
John H. Reynolds, P.Eng.

HEARING DATES:	April 18 and 19, 2011
FINAL SUBMISSIONS:	May 20, 2011
BOARD COUNSEL:	S. Bruce Outhouse, Q.C.
BOARD COUNSEL'S CONSULTANTS:	Mel Whalen, Multeese Consulting Inc. Tim Woolf, Synapse Energy Economics Inc.
DECISION DATE:	**June 30, 2011**
DECISION:	Application is approved. Directions given for future filing. See Summary at pages 48-50

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1.0 INTRODUCTION

[1] What initiatives should be taken to encourage electricity consumers in Nova Scotia to conserve and efficiently use electrical energy? How should such initiatives be paid for? Who should pay for them? How should the savings be measured? These issues are all elements of a demand side management ("DSM") plan.

[2] As stated in the decision of the Nova Scotia Utility and Review Board (the "Board") in the 2011 DSM Plan:

> [3] For the purposes of this decision, DSM can be defined as a plan to conserve and efficiently use electrical energy, thereby reducing electricity consumption, peak demand, air emissions and greenhouse gases. DSM includes initiatives to promote the purchase of energy efficient products, encourages customers to manage their electricity load and compare and consider fuel switching to reduce electricity energy consumption and costs.
>
> [4] As noted in the Board's decision on NSPI's [Nova Scotia Power Inc.] previous DSM application, in the absence of a DSM Plan, NSPI will need to build expensive infrastructure to meet the rising customer demand for energy, including generating stations, transmission lines, distribution lines, and substations. As a public utility, the costs incurred by NSPI for such expenditures are passed on to customers, subject to Board review and approval. DSM measures are intended to diminish (or delay) the need for these expenditures, thereby offsetting costs which would otherwise be incurred, and providing a benefit to customers while meeting established environmental objectives.
>
> [5] There is no question that DSM is an important and necessary responsibility. "Going green" is a path that the federal and provincial governments have committed to take with overall objectives of environmental protection, reduction in future energy demand and usage of alternative sources of energy. However, going green is not inexpensive. Well-intentioned efforts to promote DSM must be subject to critical analysis and planning to ensure that expenditures are justifiable and projected benefits will be realized as, ultimately, the public will pay the bill.
>
> [6] The overall issue of DSM is now under the authority of Efficiency Nova Scotia Corporation ("ENS"). The Board's intention in this decision is to provide guidance and helpful direction to ENS with respect to its role as it takes over the administration of DSM of electricity in the Province.
>
> [7] In the Board's view, it is important to identify that the concept of DSM goes well beyond the Board's jurisdiction in approving projects and promotions by NSPI. DSM relates to a far broader plan for the public to better use all forms of energy. For the purposes of this decision, the Board's findings are limited to NSPI's role in DSM and consequently, whether the DSM Plan it proposes is in the public interest, is cost effective, meets the established objectives, and warrants approval.
>
> [2010 NSUARB 155, pp. 5-6]

[3] The shift in responsibility for DSM from Nova Scotia Power Inc. ("NSPI") to Efficiency Nova Scotia Corporation ("ENSC") is discussed below.

[4] On April 18 and 19, 2011, the Board held a public hearing to consider the 2010 DSM Evaluation Report and 2010 Savings Verification Study ("SVS") provided to ENSC and the Board, and to consider ENSC's application for approval of its 2012 DSM Plan (the "Application") (Exhibit E-1)

[5] The Board's Final Issues List included the following:

1. Evaluation and verification reports of 2010 DSM programs

2. Proposed 2012 DSM Plan described in Appendix A and B, including
    - effective spending relative to purposes and priorities, e.g. Enabling Strategies
    - access and participation by renters and low income households
    - improved information exchange with municipal utilities
    - improved public understanding of potential benefits from plan participation
    - reporting of program costs by customer class

3. TRC test
    - effectiveness of DSM measures with Total Resource Cost ("TRC") ratios near 1.0
    - applying TRC screening to programs instead of measures
    - calculation and application of avoided costs

4. Free ridership and spillover approach within Nova Scotia

5. Implementation of 3 pilot programs
    - fuel substitution (including financing)
    - green schools
    - advanced houses

6. Reporting of energy and demand savings
    - incremental vs. cumulative
    - prior year over/under achievement
    - ELI projects
    - construction codes
    - new federal standards

7. Proposed integrated multi-fuel approach to program administration

8. Proposed consideration of a multi-year performance-based model

9. Future role of Program Development Working Group

[6] The following parties were Intervenors: the Consumer Advocate ("CA"); Avon Valley, *et al.* ("Avon"), Ecology Action Centre ("EAC"); Halifax Regional Municipality ("HRM"); NewPage Port Hawkesbury Corp. and Bowater Mersey Paper Company Limited ("NPB"); Nova Scotia Department of Energy ("NSDOE"); Nova Scotia Environment ("NSE"); Conserve Nova Scotia ("CNS"); Nova Scotia Power Inc. ("NSPI"); and Quetta Inc. ("Quetta").

[7] William Mahody appeared on behalf of the CA; Nancy Rubin represented Avon; Brennan Vogel represented EAC; HRM was represented by Stephan Jedynak; Nicole Godbout appeared for NSPI and Mark Rieksts appeared for NSDOE, NSE and CNS (collectively, the "Province"). John Reynolds appeared for Quetta.

[8] Direct evidence was given by the ENSC Panel consisting of: Allan Crandlemire, Interim Chief Executive Officer; Charles Faulkner, Director of Energy Efficiency Programs; and Philippe Dunsky, of Dunsky Energy Consulting ("Dunsky"), a consultant to ENSC. George Foote testified (by teleconference), on behalf of the CA and Glenn Reed, of Energy Futures Group, Inc., testified on behalf of EAC. Tim Woolf, of Synapse Energy Economics, Inc. (by teleconference), Dr. H. Gilbert Peach, of H. Gil Peach & Associates, and Mel Whalen, P.Eng., of Multeese Consulting Inc., gave evidence on behalf of Board Counsel.

[9] Closing Submissions were received after the hearing from EAC, NPB, ENSC, Avon, the Province, the CA and Quetta. Reply submissions were filed by EAC, NPB and ENSC.

2.0 BACKGROUND

[10] Prior to January 26, 2010, the electricity DSM conservation and energy plan for Nova Scotia was administered by NSPI. ENSC was established under the *Efficiency Nova Scotia Corporation Act*, S.N.S. 2009, c. 3, as amended (the "*ENSC Act*").

[11] The relevant provisions of the *ENSC Act* are:

> 2 The purpose of this Act is to
>
> (a) establish an administrator to manage electricity demand-side management programs in the Province;
>
> (b) establish a fund to be used to defray the costs of electricity demand-side management programs;
>
> (c) provide for regulatory oversight of the administrator, the Fund and electricity demand-side management programs; and
>
> (d) provide the administrator with the authority to engage in energy efficiency and conservation programs other than electricity demand-side management programs.
>
> 3 In this Act,
>
> . . .
>
> (c) "electricity demand-side management program" means an electricity demand-side management program designed to
>
> (i) promote efficiency of electricity use,
>
> (ii) promote electricity conservation, and
>
> (iii) manage electricity demand where it is not otherwise managed by a public utility;
>
> . . .
>
> (h) "public utility" means any person that may now or hereafter transmit, deliver or furnish electric power or energy for compensation to or for the public, and includes Nova Scotia Power;
>
> (i) "Review Board" means the Nova Scotia Utility and Review Board established under the Utility and Review Board Act.
>
> . . .
>
> 8 The objects of the Corporation are to

(a) design and administer electricity demand-side management programs with a view to restraining future electricity demand and use in the Province; and

(b) engage in energy efficiency and conservation programs other than electricity demand-side management programs.

. . .

16 (1) The Corporation shall operate on a not-for-profit basis.

. . .

20 The Corporation

(a) shall administer electricity demand-side management programs with a view to restraining electricity demand and use; and

(b) may engage in energy efficiency and conservation programs other than electricity demand-side management.

. . .

31 (1) Subject to the approval of the Review Board, the Corporation shall determine a public utility's annual assessment for electricity demand-side management.

(2) A public utility's annual assessment for electricity demand-side management programs must be paid to the Corporation in such amounts and at such times as the Review Board determines.

(3) The Corporation shall provide notice of an assessment to a public utility in any manner it considers necessary or expedient.

(4) Any notice provided pursuant to subsection (3) must indicate the amount owing by the public utility and the time the assessment is payable.

. . .

35 The Corporation shall submit to the Review Board for approval an electricity demand-side management program for one or more calendar years, at the time and in the manner required by the Review Board, commencing with the program for the 2012 calendar year or such later year as the Review Board determines.

36 In approving the electricity demand-side management program, the Review Board must be satisfied that the allocation of costs of the Corporation between electricity demand-side management programs and energy efficiency and conservation programs, other than electricity demand side management programs, is just and reasonable.

37 The Review Board has the general supervision of the Corporation in relation to electricity demand-side management and may make all necessary examinations and inquiries and keep itself informed as to the compliance by the Corporation with the provisions of law and has the right to obtain from the Corporation all information necessary to enable the Board to fulfil its duties.

38 The Public Utilities Act applies mutatis mutandis to the supervision of the Corporation under Section 37, except that

> (a) the Corporation is not entitled to recover any rate of return through its assessments; and
>
> (b) notwithstanding Section 117 of the Public Utilities Act, where there is a conflict between this Act and the Public Utilities Act, this Act prevails.
>
> 39 Each public utility is entitled to recover through its rate base the electricity demand-side management charges assessed against it under this Act on the basis approved by the Review Board under the Public Utilities Act.

[12] In order to transfer responsibility for administration of DSM from NSPI to ENSC, a transition plan was developed, pursuant to ss. 40-41 of the *ENSC Act.* The transition plan was approved by the Board, subject to conditions, by letter dated September 22, 2010, which provided:

> The Board has carefully reviewed the DSM Transition Plan and grants approval to proceed with implementation, subject to the following directives:
>
> a) The DSM Transition Committee is to continue providing oversight in the transition process through to submission of the 2012 DSM Plan;
>
> b) As directed in the Board's letter dated June 1, 2010 ENSC is to file its quarterly financial reports, the first of which is to be submitted by October 22, 2010;
>
> c) ENSC and its new consultant are to meet with Board consultants and NSPI within two weeks of the consultant being engaged, with the purpose of ensuring that previously deferred DSM initiatives are appropriately addressed before new initiatives are pursued;
>
> d) Executed copies of Transition Agreements are to be filed with the Board by October 15, 2010;
>
> e) The ENSC workplan for development of the 2012 DSM Plan is to be filed with the Board by November 1, 2010. This workplan should outline the schedule of activities, milestones, and the specific role to be undertaken by NSPI and any consultants in this process.

[13] ENSC has complied with the Board's directives.

[14] The Board is required to receive and comment on the 2010 DSM Evaluation Report dated February 28, 2011, prepared by NMR Group Inc. ("NMR") (Exhibit E-2), and the 2010 SVS, dated March 2011, prepared by H. Gil Peach &

Associates (Exhibit E-3). The Board's findings on the Report and SVS are outlined below.

[15] ENSC also seeks approval of the 2012 DSM Plan, including the strategies and investments set out in Appendix A to the Application. The Board's findings on the Plan are set out later in this Decision.

[16] The Board notes that all Intervenors and expert witnesses spoke generally in encouraging and supportive terms about the DSM work to date and the 2012 Plan. The Board also observes that the transition from NSPI's administration has been without significant challenges.

3.0 EVALUATION AND VERIFICATION OF 2010 DSM PLAN

3.1 Evaluation Report and Savings Verification Study

[17] ENSC reported in its Application (Exhibit E-1, pp. 8-9) that in 2010 the DSM energy savings results had exceeded the target (84.79 GWh v. 81.13 GWh). The demand savings results were slightly lower than the target (16.38 MW v. 16.63 MW).

[18] The Board had approved the energy savings target for 2010 and an expenditure of up to $22.56 million in its Decision reported as 2009 NSUARB 116. ENSC noted the 2010 results were reached, and its start up activities covered by an expenditure of $22.71 million, although it stressed that final expenditure figures for 2010 were not yet audited.

[19] NMR prepared a Final Report entitled "Evaluation of 2010 DSM Programs", which was filed as Exhibit E-2. NMR is independent of, and conducted its

evaluation for, NSPI (DSM administrator to October 1, 2010) and for ENSC thereafter. The Report indicated that:

> ...the portfolio of programs evaluated in 2010 was generally run well and efficiently. The 2010 targets were met despite ramped up savings goals and operational challenges at a time when program staff were carrying out their work while also transitioning to Efficiency Nova Scotia Corporation.
>
> . . .
>
> The savings achieved by the DSM Administrator's portfolio of conservation programs exceeded 2010 program energy savings targets by 5% or a total of 3.84 GWh; they also virtually met demand savings targets, achieving 98% of the target. The achievement of the portfolio energy savings target came through exceeding some individual program goals, coming close to some, and falling short on others.
>
> The Efficient Products -Residential program exceeded its 2010 program target by 153%, or 7.6 GWh; within the Efficient Products Retail program, the Compact Fluorescent Lamp (CFL) markdown component accounted for 72% of the program's energy savings. The Efficient Products Direct Install program exceeded its 2010 program target by 26%, or 5.3 GWh. The EnerGuide for Existing Houses program exceeded its 2010 program target by 65%, or 3.2 GWh...
>
> . . .
>
> The other programs having specific energy savings targets were not able to achieve those targets. These programs include the Low Income Households program, which fell short of its program target by 83%, or 4.4 GWh; the Business Energy Rebates/Smart Lighting Choices programs, which fell short of their program target by 33%, or 3.3 GWh; the Small Business Lighting Solutions program, which fell short of its program target by 20%, or 2.8 GWh; and the New Houses program, which fell short of its program target by 66%, or 1.3 GWh. The C&I Custom program nearly achieved its program target, falling short by only 3%, or 0.6 GWh...
>
> [Exhibit E-2, pp. 1-3]

[20] The Evaluation Report noted that both the Efficient Products–Retail and Efficient Products–Direct Install programs were likely reaching their limits for securing energy savings. It also noted that it was uncertain whether the EnerGuide for Existing Houses Program would continue to be eligible for federal rebates.

[21] NMR also commented on the challenges of the Low Income Households program where recruitment continues to be difficult.

[22] NMR anticipates that the Business Energy Rebate program, which was new in 2010, will have greater impact in the future.

[23] Two challenges were noted by NMR in its evaluation process, both relating to data issues: quality of data, with inconsistent, inaccurate or missing data; and access to and delivery of data, noting an "inability to generate participation reports in a reasonable time frame."

[24] The Board retained H. Gil Peach & Associates to undertake an SVS of the NMR Report. The study, dated March, 2011, was filed as Exhibit E-3. The study was to "review, verify and if appropriate, recommend adjustments to the savings data and estimates" from NMR.

[25] The SVS contains two basic findings:

> Finding 1: All of the 2010 DSM programs were competently administered by the DSM Administrator. This finding is based on the NMR evaluations, our review of program documentation and tracking databases, interviews with the DSM Administrator's management, specialists, program managers, and staff as well as discussions with delivery agents and "due diligence" site visits. Some programs encountered problems and there are some areas in which we suggest improvements for the next cycle with a primary concern for internal program control and the reduction and/or explanation of free-ridership levels.
>
> Finding 2: In general, NMR Program Year 2010 evaluations were conducted within industry accepted evaluation frameworks and within the appropriate professional scope of a firm of seasoned Demand Side Management evaluators, given the time constraints of the regulatory schedule. There is only one decision to meld samples in a single evaluation where this savings verification study differs from the evaluator's technical decision. There are some areas in which we suggest improvements for the next evaluation cycle with a primary concern for more electrical measurement to serve as a replacement for and/or as a correction factor in modeling. We also support NMR's recommendation for a Nova Scotia socket study.
>
> [Exhibit E-3, p. 5]

[26] The SVS recommended acceptance of:

> ... the NMR evaluation results for ... 2010, except for a ten percent (10%) cut for Efficient Products-Direct Install...
>
> [Exhibit E-3, p. 6]

[27] Additional recommendations were made in the SVS for improvements in evaluation methods. These recommendations are set out at pp. 7-12 of the SVS. Evaluations of individual programs were discussed at pp. 21-46.

[28] Dr. Peach, chief author of the SVS, testified at the Hearing. He stressed that the SVS recommendation regarding free ridership arose from a concern about methodology rather than the NMR results, as he considers that methods "...are always open to further development and incremental improvement." (Transcript, p. 309)

[29] In response to Counsel for ENSC, Dr. Peach stated:

> MR. FOREMAN: And in your opening statement and your comments you've clearly indicated in your previous verification reports dealing with DSM, and I guess I'll paraphrase your comments, that the programs have been well and efficiently run with sound investment and good value delivered to ratepayers.
>
> DR. PEACH: Yes. I'm completely heartened by the work that's been done to date, including the work by the Nova Scotia Power and the work as it's been handed off by to the new administrator.
>
> I'm impressed by the spirit of the people, the intentionality, the focus. I think it has all the earmarks of a pretty wonderful organizational action.
>
> I see that there's, generally, support from the parties for a certain level of DSM effort and it looks very -- like a very successful program to me in all so far.
>
> Now, I'm not saying about next year or the year after that, I haven't see [sic] that.
>
> [Transcript, pp. 312-313]

[30] In response to Counsel for ENSC, Dr. Peach also commented on the data tracking problems identified by NMR, noting he had no concerns and that data tracking is "coming along nicely". He expected it would be used productively by ENSC (Transcript, p. 315-316)

[31] Dr. Peach's expectations were supported in the responses of ENSC to Board Counsel which confirmed that the work was in progress to address the data system problems.

[32] One of the SVS suggestions for evaluation which received specific attention in the Hearing is that there should be an "...organizational study [of ENSC] with some elements of a management audit." (Exhibit E-3, p. 47)

[33] The CA pursued this with both Mr. Crandlemire and Dr. Peach. Mr. Crandlemire foresaw no difficulty for ENSC in taking part in such an evaluation (Transcript, p. 43). Dr. Peach agreed that such a study should be mandated by the regulator to ensure independence, but suggested that a management audit process might take place after the operations of ENSC were in place for more than a year (Transcript, pp. 328-329).

[34] The direct evidence of Mr. Foote commented on ENSC's commitment to improving data quality and noted:

> ... It is essential that each successive evaluation of programs include recommendations for improvements in data quality and evaluation techniques. A requirement for such recommendations should be included in any Terms of Reference for program evaluation.
>
> [Exhibit E-10, p. 12]

[35] Mr. Whalen stated in his direct evidence that the evaluation and verification reports "appear to be working as they should" (Exhibit E-12, p. 12). He noted that the SVS agreed with NMR's calculations except for the Efficient Products-Direct Install program, referred to above.

[36] In its Closing Submission, ENSC urged the Board to accept the 2010 DSM results, the NMR Report and the SVS, noting in particular that the results had not been challenged.

[37] ENSC commented in its Reply Submission on the issue of an organizational or management audit as suggested in the SVS. This audit suggestion

was endorsed by Quetta and the Province in their Closing Submissions as well. ENSC stated that it is continuing to review all of the recommendations from both the NMR Report and the SVS, and suggested it would be premature to direct such a process at this time.

3.1.1 Findings

[38] As pointed out by the CA in examination of both the ENSC panel and Dr. Peach, the evaluation and verification of the DSM program and results are of critical importance to ratepayers. It is the means by which ratepayers may be satisfied that their investment in DSM is prudent and effective.

[39] The Board observes that there were no significant challenges to the results of the NMR Report and the SVS. The Board is satisfied that the 2010 DSM Plan evaluation and verification should be accepted with the qualification made in the SVS for a 10% reduction for the Efficient Products-Direct Install program.

[40] The Board notes that, in Closing Submissions, only the Province specifically endorsed the recommendations in the SVS. In an exchange with the Board Chair, Mr. Faulkner suggested that a formal response to the recommendations would be filed with the Board shortly after completion of the hearing process (Transcript, pp. 208-209).

[41] The Board is satisfied that ENSC is reviewing the recommendations and orders ENSC to file its response to them no later than July 31, 2011, for consideration by the Board.

[42] The Board accepts the submission of ENSC that it would be premature to order an organizational or management audit at this time. The Board will consider this suggestion when the 2013 DSM Plan application for approval is heard.

4.0 PROPOSED 2012 DSM PLAN

4.1 Proposed Plan

[43] In its direct evidence, ENSC described the programs proposed for the 2012 DSM Plan:

> Programs for the proposed 2012 DSM Plan are separated into three categories:
>
> - Residential Programs, which include four components: Efficient Products, Existing Houses, New Houses and Home Energy Report
> - Commercial and Industrial (C&I) Programs, which encompass three components: Prescriptive Rebate, Custom and Small Business Direct Install
> - Enabling Strategies, which cover eight areas: Education and Outreach, Development and Research, Fuel Substitution, Innovative Financing, Building Energy Labelling, Codes and Standards, Training and Quality Assurance, Renewable Heating Industry and Working with Local Governments
>
> [Exhibit E-1, Appendix A, p. 5]

[44] ENSC advised that it prepared the DSM Plan with the assistance of Navigant Consulting Inc. ("Navigant") and Dunsky. ENSC also sought and received input from stakeholders and other interested participants. ENSC testified that the proposed 2012 DSM Plan meets the energy saving targets within the level of investment identified in the 2007 Integrated Resource Plan ("IRP") and the 2009 IRP Update.

[45] ENSC identified what was new in the 2012 DSM Plan:

- program components for renters and multi-unit residential buildings

- a Home Energy Report program to encourage residential customers to make energy-saving behavioural changes, such as: lowering thermostat settings, using cold water for clothes washing and switching off lights in unoccupied rooms
- program components and strategies to increase access to DSM programs by low-income households, discussed in Section 8
- innovative financing options for residential programs
- enhanced outreach to commercial, industrial and institutional customers through key accounts management and subsector specialization
- additional fuel choice and fuel substitution components to be built into the residential and commercial DSM programs

[Exhibit E-1, p. 5]

[46] ENSC compared the cumulative saving targets from the 2009 IRP Update with the actual and expected savings results for 2008 to 2012.

Figure 4.2 Cumulative Savings Targets and Results 2008-2012

Year	IRP Target (GWh)	Result (GWh)	IRP Target (MW)	Result (MW)
2008	16	21[a]	2	5[a]
2009	66	86[a]	9	15[a]
2010	149	171[b]	26	31[b]
2011	295	329[c]	57	62[c]
2012	500	543[d]	101	100[d]

[a] verified results
[b] estimate based on evaluated but not verified results
[c] estimate based on approved Plan
[d] estimate based on proposed Plan and includes savings outside DSM programs

[Exhibit E-1, p. 12]

[47] For 2012, ENSC forecasts annual energy and demand savings of 233.6 GWh and 44 MW respectively. On a cumulative basis, forecast energy savings are 543 GWh compared to an IRP target of 500 GWh and the cumulative forecast demand savings are 100 MW compared to the IRP target of 101 MW. The proposed investment for 2012 is $43.7 Million.

[48] ENSC, in its Final Submission, stated that the DSM Plan struck the right balance between energy savings and expenditures. NPB, Avon and the CA all supported the 2012 DSM Program and the level of expenditures as filed.

[49] EAC suggested opportunities exist for improvement to the 2012 DSM Plan in terms of lighting and improvements to residential programs. Mr. Reed, testifying for EAC, raised some concerns as well about fuel substitution:

> Fuel substitution measures, however, are very capital intensive, requiring a large upfront investment to replace an electric appliance or heating or hot water system that is typically functioning and not in need of immediate replacement. The space heat fuel conversion measures are estimated to cost between $3,417 for a wood stove to $18,312 for a high efficiency gas boiler (Response to NPB IR-3). Even with the promise of large annual savings accruing to the customer, particularly for space heating and hot water conversions, it is often difficult to convince customers to make this financial investment without some type of assistance. Such assistance is typically in the form of an upfront rebate as has been proposed for the fuel substitution pilot, consumer friendly (typically reduced cost) financing, or some combination of the two.
>
> . . .
>
> Also note that ESNC is using an 80 percent net to gross ratio (Response to EAC IR -43) for the Existing Houses Program. This value does not match those proposed by Dunsky Consulting in their Residential Fuel Substitution Pilot Program description (Appendix D of ENSC's 2012 DSM Plan). Potentially, depending on the final 2012 installed measure mix, ENSC's planned savings from this set of measures may be overstated.
>
> [Exhibit E-11, pp. 3 & 4]

[50] With respect to residential lighting, ENSC appears to agree with Mr. Reed:

> MR. FAULKNER: We feel Mr. Reid makes a good observation. The LED lighting product market is evolving very rapidly. For instance, the list of – I think he quoted more than 100 lamps and over 1,100 fixtures. If we went back to last August there were none on that list so it is evolving quickly and we would certainly assess those opportunities before we put our 2012 program together. So I think it's a good recommendation and we would consider it as we move to 2012.
>
> [Transcript, pp. 211-212]

4.2 Level of Spending

[51] In section 6.2 of its evidence, ENSC identified the guiding principles observed in preparing the 2012 DSM Plan. The first two state:

Meet IRP Targets: ENSC's primary goal is to meet IRP targets as a whole, both in the short term (measured by incremental annual energy and demand savings) and long term (measured by cumulative savings).

Low-cost Programs: Program costs will be minimized, where doing so does not hinder meeting overall IRP targets in both the short and long term.

[Exhibit E-1, pp. 20-21]

[52] Figure 4.1 of the evidence shows DSM targets for the years 2008 to 2015 as presented in the 2009 IRP Update Report, while Figure 4.2 compares the cumulative savings targets with results for the years 2008 to 2012. Both figures are reproduced below:

Figure 4.1 DSM Targets 2008-2015 (from 2009 IRP Update)[12]

Year	Incremental Demand Savings (MW)	Cumulative Demand Savings (MW)	Incremental Energy Savings (GWh)	Cumulative Energy Savings (GWh)	Incremental Program Cost ($ millions)	Cumulative Program Cost ($ millions)
2008[a]	2	2	16	16	3	3
2009[a]	7	9	50	66	10	13
2010[b]	17	26	83	149	23	36
2011[b]	31	57	146	295	41	77
2012[b]	44	**101**	205	**500**	61	137
2013[b]	63	164	305	805	82	219
2014[b]	57	222	276	1081	74	293
2015[b]	57	279	276	1357	74	367

Numbers are rounded.
[a] (expressed in 2008 dollars)
[b] (expressed in 2010 dollars)

12 *Supra* note 6, 2009 IRP Update Report, Appendix D, Attachment 4, page 1.

Figure 4.2 Cumulative Savings Targets and Results 2008-2012

Year	IRP Target (GWh)	Result (GWh)	IRP Target (MW)	Result (MW)
2008	16	21[a]	2	5[a]
2009	66	86[a]	9	15[a]
2010	149	171[b]	26	31[b]
2011	295	329[c]	57	62[c]
2012	500	543[d]	101	100[d]

[a] verified results
[b] estimate based on evaluated but not verified results
[c] estimate based on approved Plan
[d] estimate based on proposed Plan and includes savings outside DSM programs

[53] As can be seen in Figure 4.1, the projected incremental program cost for 2012, in the IRP Update is $61 million, with targeted cumulative savings of 500 GWh and 101 MW, and incremental savings targets of 205 GWh and 44 MW.

[54] By comparison, in its Application, ENSC proposes 2012 program costs of $43.7 million, with Figure 4.2 showing cumulative savings of 543 GWh and 100 MW, which translates into incremental savings of 233.6 GWh and 44 MW. These results include over-achievements from 2008 and 2009, as well as preliminary savings from one of the Extra-Large Industrial ("ELI") customers during 2009 and 2010, and preliminary savings from the adoption of energy-efficiency codes and standards.

[55] Excluding the savings from the 2008/09 over-achievement, the ELI customers, and codes and standards, the cumulative savings would only be 433.5 GWh and 79.2 MW, while the incremental savings would be 124.1 GWh and 23.2 MW. This is notably less than the IRP targets shown in Figure 4.1 for 2012.

[56] In the direct evidence of Board Counsel Consultant, Multeese, Mr. Whalen expressed his concern that the proposed spending for 2012 will deliver lower energy

and demand savings than those approved by the Board for 2011, which he considered to be a regressive step. Mr. Whalen also noted that the 2012 programs will yield fewer kWh savings per dollar invested, when compared to 2011 and previous years. In order to meet all IRP targets, Mr. Whalen stated that:

> ...the 2012 plan should have savings of 173.2 GWh and 39.3 MW, with expenditures of $60.6 million.
>
> [Ex. E-12, p. 6]

[57] Further, Mr. Whalen recommends:

> ...that ENSC adjust its plan to provide energy savings from its programs that are at least equal to the 2011 plan. Such an approach sustains the momentum of the 2011 plan and makes the achievement of the 2013 savings targets more achievable.
>
> [Exhibit E-12, p. 9]

[58] As presented in the ENSC response to Multeese IR-4(f), this recommendation would increase the ENSC proposed 2012 spending from $43.7 million to $53.4 million. Excluding the savings from the 2008/09 over-achievement, ELI customers, and codes and standards, the resulting incremental savings would be 158.6 GWh and 29.4 MW, while the resulting cumulative savings would be 487.6 GWh and 86.4 MW.

[59] Mr. Whalen was questioned about his recommendation to increase the 2012 energy savings target to match the 2011 target of 158.6 GWh and the possibility that it may result in significant over-achievement. In response, he stated:

> ...the discussion's been primarily around 2011 to 2013, and whether or not that's achievable. I think if 2012 were to stay at 2011, as I've said in my evidence, getting to 2013 is also, you know, within range with an effort that would be comparable to 2012 at 158.5 from programs.
>
> So when I look at 2012 and 2013, going beyond that in the IRP, it just seemed to me to be a mistake to -- I don't know if back-off is the right word -- but even to -- I guess I'll use Mr. Crandlemire's expression, to let your foot off the floor a little bit. And I'm not sure that, you know, that's exactly what the corporation's doing, but that's what it seemed to me; that you had the opportunity to be able to get the same level as 2012 and any of

> the plans seem to have the same economics; TRC of about two, PAC of about three. The corporation has not said that 158.5 is not achievable, so I don't see a good reason for not going to the 158.5.
>
> MR. FOREMAN: In fairness the evidence that Mr. Crandlemire gave yesterday also clearly indicated, with respect to that foot on the pedal analogy, that they do have -- or from his perspective, from Efficiency's perspective, they have the pedal, like, pushed fully down.
>
> MR. WHALEN: I certainly would agree with Efficiency Nova Scotia that 2011 is a big challenge. I did not hear the corporation say that they had doubts about meeting that. They've talked about flexibility, being able to adjust, you know, as things need to be adjusted to be able to meet that.
>
> There's the whole question of, you know, if you can do that in 2011 why would you not keep that momentum if you can; the momentum with your contractors, with your suppliers, with all the partners who are working with you on DSM. It just seemed to me that if you can do that for 2011, which is the approved plan for 2011, maintaining that into 2012 would -- made sense, particularly in the discussion of the IRP and trying to meet the longer term of the IRP.
>
> [Transcript, pp. 349-350]

[60] In his direct evidence, Board Counsel Consultant Tim Woolf supported Mr. Whalen's recommendation to increase the 2012 DSM savings level to match or exceed the 2011 level:

> With regard to the 2012 DSM Plan savings, I concur with my colleague Mel Whalen that ENSC should at least maintain, if not exceed, the savings goals from the 2011 DSM Plan.
>
> [Exhibit E-13, p. 10]

[61] He confirmed his opinion during the hearing:

> ...as Mr. Whalen points out, these actual budgets are less than what they were in 2011, suggesting that maybe even scaling back and that an alternative approach would be to maintain or increase the budget and that would be consistent with the more long-term ramp ups in making it a bit easier to get to 2013 goals.
>
> [Transcript, p. 224]
>
> ...
>
> BOARD: But you're also supporting Mel Whalen, they should be -- change the proposal to increase those target to -- in 2012 to meet the 2011 target which means there'll be more than the cumulative target to 2012?
>
> MR. WOOLF: Yes. The point being, that it appears as though by maintaining or slightly increasing the budgets in 2011 they'll be able to achieve just that much more cost effective energy efficiency and be that much closer to achieving their goals in 2013 and 2014.

BOARD: So you're in support as long as it's cost effective to go beyond the cumulative targets?

MR. WOOLF: Yes, my statement is under the presumption that the efficiency programs they're operating are cost -- as they appear to be very cost effective. And so to maintain the budgets in 2011 or increase them by 10 percent you would also be -- they would also be implementing very cost effective programs.

[Transcript, pp. 230-231]

[62] On behalf of EAC, Mr. Reed also supported Mr. Whalen's recommendation:

...My principal comment in terms of the DSM plan that's been proposed for 2012 is that I concur with the Board consultants that the spending levels should be increased to attain the program savings levels that were in place for 2011, and that should be at a minimum for 2012.

[Transcript, p. 261]

[63] Dr. Peach also supported Mr. Whalen's recommendation:

...The one area that I do have some concern...as Mel Whalen has put in his testimony, that the efforts might be dropped back. On -- my experience with working with DSM over a number of years is that if there's any drop back with contractors, this causes a problem...

...

...I support Mel Whalen's point that a cutback in level of effort is not a good idea...

[Transcript, pp. 316-318]

[64] Mr. Whalen was also asked about the increased spending level that would be needed to match the 2011 energy savings target and whether he had considered the impact this might have on the ELI customers. He responded that he had done a "back of the envelope" calculation which indicated there would be a small benefit to the ELI customers if the spending level was increased to $53.4 million. Subsequently, in responding to Undertaking U-3, Mr. Whalen provided slightly more refined calculations for most customer classes. The only customer class showing a small net benefit was the ELI class, while the Residential and General Demand classes showed an increased net cost due to the higher spending level.

[65] In its Closing Submission of May 13, 2011, ENSC stated:

> With respect to the proposed budget for the 2012 DSM Plan of $43.7M – a modest increase over the 2011 DSM Plan budget of $41.9M – ENSC submits that there is insufficient evidence and rationale at this critical time in the aggressive ramp-up of DSM programming to order a further increase in DSM program expenditures, particularly when the 2012 DSM Plan as filed will already deliver incremental and cumulative energy savings that significantly exceed the already aggressive energy savings targets found in the 2009 IRP Update.
>
> . . .
>
> As ENSC understands the evidence that has been introduced, there are three primary concerns raised to support the proposed alternate 2012 DSM Plan investment levels that would result in an increased 2012 DSM Plan budget to $53.4M or $58M:
>
>> (a) There is sufficient uncertainty in achieving the aggressive energy savings targets projected for 2013 and beyond and a corresponding desire to "front load" savings beyond the existing IRP energy saving targets to provide greater flexibility in future years;
>>
>> (b) IRP energy savings targets should be viewed as a "floor" and not a "ceiling", and therefore the primary focus of DSM programming should be to implement "all cost effective" energy efficiency measures that can reasonably be achieved each year;
>>
>> (c) Allowing a smaller level of program-based energy savings from 2011 may be regressive and "scaling back" DSM programming could interfere with established contractors and employment and threaten the ability to further ramp-up aggressive energy savings from actual DSM programs in future years.
>
> [ENSC Closing Submission, pp. 3-5]

[66] ENSC acknowledged some of the concerns raised, and submitted that the proper question for the Board is:

> ...what evidence is on the record to suggest that acknowledged "uncertainties" are of such magnitude to justify ordering such significant increases in spending, when the only result is to further increase the already significant over-achievement in cumulative IRP targets – particularly so, when most stakeholders are opposed to such increased spending at this time and have legitimate concerns with respect to short-term rate impacts.
>
> [ENSC Closing Submission, p. 6]

[67] In their Closing Submissions, several Intervenors supported the 2012 program and spending levels proposed by ENSC. In supporting that budget and savings targets, the CA raised the following concerns:

> . . .
>
> 2. The proposed budget for 2012 represents a 100% increase on the 2010 DSM spending. In fact, proposed program spending in 2012 will come close to equaling the cumulative 2008-2010 spending.
>
> 3. Efficiency Nova Scotia is a new entity. Management positions were created and filled during mid-year 2010 and operational responsibilities for DSM administration were completely transferred to Efficiency Nova Scotia by December, 2010. 2011 will mark the first full year of Efficiency Nova Scotia operation of DSM programming.
>
> ...
>
> Obviously, any upward pressure on rates is a concern. To the degree, however, that DSM spending has the impact of actually lowering customer bills, rate impacts caused by DSM spending need to be carefully analyzed.
>
> In the submission of the Consumer Advocate, it is not a matter of saying that Efficiency Nova Scotia is right and Mr. Whalen is wrong. Rather, it is a matter of identifying which alternative most adequately fosters ratepayer confidence in DSM spending. At the current time, with the transitional nature of Efficiency Nova Scotia's operations the most prudent course is the more cautious approach represented by the plan as filed.
>
> The Consumer Advocate acknowledges that special attention will need to be paid in 2013 and subsequent years to ensure that IRP targets are met. The 2012 DSM Plan as filed strikes a reasonable balance between the achievement of IRP targets and cautious spending of ratepayer dollars.
>
> [CA Closing Submission, pp. 2-3]

[68] Avon supported the overall budget and recognition of non-customer-funded program savings:

> The Avon Group is supportive of the overall program budget as filed with its recognition of non customer-funded program savings from Codes and Standards and the extra large industrial class.
>
> The overall program budget for 2012 is $43.7 million, up marginally from the 2011 budget of $41.9 million. The incremental savings targets are 233.6 GWh and 44 MW among the highest in North America as a percentage of utility revenue and demand.
>
> While some Intervenors and consultants may argue for higher spending levels, the 2012 DSM Plan as filed, exceeds the savings targets which were included in the 2009 IRP update.
>
> ...

While the thrust of the questions by the Ecology Action Centre were with a view to establishing that savings outside customer-funded efficiency programs should not reduce the DSM budget figure drawn from the IRP, none of the experts adopted that position. Indeed, the EAC consultant, Glenn Reed concurred that it was appropriate to include savings and that the savings estimate was "conservative".

...

The Avon Group supports the current budget and recommends the Board confirm that the inclusion of non-program savings is appropriate.

[Avon Closing Submission, pp. 1-3]

[69] NPB's position is that the proposed 2012 DSM budget should not be increased because the Plan exceeds the IRP energy savings target and all ratepayer classes support the proposed investment. NPB stated:

ENSC's proposed DSM budget of $43.7 million and the associated incremental savings targets of 233.6 GWh and 44 MW for 2012 are already among the highest in North America in terms of percent of utility revenues and percent of demand... NPB respectfully submits that the Board should reject any recommendations that would require ENSC to further increase the proposed DSM spending levels as part of its 2012 DSM Plan...NPB submits that ENSC has succeeded in striking an appropriate balance in setting the 2012 DSM budget in its pursuit of aggressive DSM savings targets.

...

ENSC has put forward a 2012 DSM Plan that meets, and in fact exceeds, the ambitious energy savings targets contained in the Integrated Resource Plan ("IRP"), at a budget level that is among the highest in North America on a percentage of utility revenues basis.

...

ENSC's plan meets its savings targets in part by relying on conservative estimates of energy efficiency savings from both codes and standards (10 GWh as opposed to the 21.8 GWh identified by ENSC's independent consultant) and projects by extra-large industrial ("ELI") customers that were implemented without funding from the NSPI/ENSC DSM programs (80 GWh instead of the 124.5 GWh identified by ENSC's independent consultant). Allan Crandlemire, interim CEO of ENSC, noted in response to Board counsel that ENSC wanted to be absolutely confident that they would have the 80 GWh, so the approach they took with respect to the savings from the ELI projects was a "conservative on conservative estimate". NPB also notes that due to preliminary information and time constraints, energy efficiency projects conducted by Bowater Mersey Paper Company Ltd. which were identified to ENSC were not included as part of the assessment.

...

...the proposed level of investment is supported, as NPB understands it, by representatives of all the ratepayer classes actively participating in this process. NPB respectfully submits that the Board should reject the suggestions from certain non-ratepayer class intervenor consultants that further increases to ENSC's budget are required at this time.

[NPB Closing Submission, pp. 1, 2, 6]

[70] In its Reply Submission, EAC supported increased levels of DSM savings:

> In the past, Nova Scotian stakeholders have agreed that DSM is the better ratepayer option to pursue, not only because it offered the least cost procurement option, when compared to supply options, but also because stakeholders have consensually recognized that energy efficiency can reduce the overall costs of the electricity system, most importantly the costs associated with the fuel and capacity requirements of NSPI. In turn, this provides widespread benefits for all.
>
> ...
>
> ...DSM overachievement gives a very positive indication of the substantial opportunities that exist for transformative efficiency and conservation measures in Nova Scotia and the positive system benefits that can be accrued, sooner, faster and with broader economic and environmental contributions for all Nova Scotians.
>
> ...
>
> ...the EAC recommends that the Board approve an increased DSM budget based on the proposals put forward by Board consultant Mel Whalen, and supported [by] Gil Peach, Tim Woolf and EAC consultant Glenn Reed.
>
> [EAC Reply Submission, p. 1]

4.2.1 Findings

[71] The Board understands that the targets for energy and demand savings are considered to be aggressive when compared to other jurisdictions; however, these targets and associated investments were established early in the DSM process and have been accepted during the IRP development. Further, as the interim administrator, NSPI has been able to successfully achieve and exceed those targets within the approved budgets.

[72] ENSC, as the new administrator, has indicated that the 2012 targets are achievable, but stated that it would be very challenging to meet those targets. A similar concern was expressed by some of the Intervenors.

[73] The Board recognizes that ENSC is faced with significant challenges as a new administrator and will need some time to fully develop its organizational capabilities. At the same time, it is critically important to ensure that the momentum

experienced with DSM savings is not eroded. This is an issue which the Board will monitor in future applications.

[74] ENSC and most Intervenors supported inclusion of savings resulting from non-program funded initiatives which, if included, would produce cumulative savings greater than those identified in the IRP, at a cost that would be less than that assumed in the IRP.

[75] Nothwithstanding the suggestions of Board Counsel Consultants and EAC, the Board is persuaded that ENSC should be afforded some flexibility during its developmental stage and also accepts that including savings from non-program funded initiatives would satisfy the IRP targets. Therefore, the proposed 2012 investment of $43.7 million for ratepayer funded DSM programs is approved.

4.3 Cost Allocation

[76] Avon recommended the Board reduce the costs directly assigned to the large industrial class from $1.473 Million to $1.01 Million. In its Closing Submission Avon stated:

> The 2012 program costs that have been assigned to the large industrial customer class relate to three categories: Prescriptive Rebate program, Custom program as well as the Enabling Strategies. The C&I Custom program is for any commercial or industrial customer that completes energy studies and audits and implements efficiency measures in their facilities. The C&I Custom program includes a new construction component to offer incentives to create more efficient buildings. The Prescriptive Rebate program (which also includes a new construction component) comprises the "Smart Lighting Choices" and Business Energy Rebates (BER). The BER program: offers incentives in the form of rebates for eligible products like lighting, motors, drives, HVAC, refrigeration and compressed air. Those programs are available to any of the six tariffs that comprise the general and industrial customers of Nova Scotia Power as well as municipal customers (and their customers) and certain residential customers who are on charitable rates such as hockey rinks.
>
> . . .

> ENSC, however, has no evidentiary basis to support the take-up of these programs (and expenditures in relation to) large industrial customers. The figure is nothing more than an estimate or a guess. ENSC has no record of any large industrial customers which in 2010 accessed any of the Business Energy Rebate program, the Core Performance path or the While Building path of the Custom program. At the time of preparing the 2012 Plan, ENSC was not aware of any new construction projects planned by large industrial customers.
>
> [Avon Closing Submission, pp. 4 & 5]

[77] The CA expressed concern about the allocation of enabling strategies. In his Closing Submission the CA stated:

> As the Board is well aware, the current cost allocation of DSM programming was the subject matter of a settlement agreement involving all of the ratepayer classes. That settlement agreement did not address the issue of cost allocation for spending associated with enabling strategies.
>
> Allocating enabling strategy costs on the basis of customer accounts is not equitable and should be the subject of immediate revision by the Board.
>
> First, an allocation on the basis of customer class is directly at odds with the uncontested crossclass impact of these benefits. Residential ratepayers only have access to approximately 50% of the DSM spending and yet are being asked to pay over 90% of the costs associated with enabling strategies.
>
> Second, the dramatic increase in spending on enabling strategies makes reference to previous compliance filings irrelevant. The fact that $1M in education and outreach costs were apportioned in a certain way two years ago is not justification for the manner in which $5M – to be spent in significantly differently ways - is to be allocated in 2012.
>
> Allocating the cost of Enabling Strategies on the basis of electricity consumption by rate class, spending by rate class, or forecast energy savings by rate class each represents a more equitable and appropriate method of cost allocation given the evidence presented at the hearing.
>
> [CA Closing Submission, p. 3]

4.3.1 Findings

[78] With respect to the submission of the CA, the current cost allocation was the subject matter of a Settlement Agreement in the 2010 DSM proceeding. That Settlement Agreement, approved by the Board, calls for a review of cost allocation in connection with a 2013 DSM Plan. In the Board's view it would not be useful or appropriate to make *ad hoc* changes with respect to cost allocation in advance of a full

review in 2013. Accordingly, the Board is not prepared to make any changes to the cost allocation undertaken by ENSC for purposes of the 2012 DSM Plan. With respect to the submissions of Avon, the Board is not prepared to second guess the allocations done by the Administrator who has analyzed this issue. The Board also recognizes that there is a true-up mechanism which would respond to Avon's concerns in the event they turn out to be justified.

4.4 Bill Impacts

[79] In his direct evidence on behalf of Board Counsel, Mr. Woolf discussed the need to establish key principles regarding how to quantify bill and rate impacts due to increasing DSM budgets in order that these rate and bill impacts can be properly evaluated when brought to the Board. He summarized his recommendations as follows:

- Rate impact analyses should estimate the impacts of energy efficiency on customer bills, as well as customer rates, because the primary direct benefits of efficiency measures are reflected in the customer bills.
- Rate and bill impacts should separately identify the impacts on (a) program participants, (b) program non-participants, and (c) all customers on average.
- Rate and bill impact analyses should estimate the number of program participants, in order to provide an indication of the portion of customers that experience bill reductions.
- Rate and bill impact analyses should account for impacts over the long-term (e.g., using a study period that includes at least the average life of energy efficiency measures), in order to capture the full effect of energy efficiency savings.
- Rate and bill impact analyses should compare (a) the estimated rates and bills resulting from the energy efficiency programs associated with IRP targets to (b) the estimated rates and bills resulting from different levels of efficiency programs.
- Rate and bill impact analyses should account for all the costs of energy efficiency that are expected to affect rates.

> - Rate and bill impact analyses should account for all the benefits of energy efficiency that are expected to affect rates, including avoided generation costs, avoided transmission costs, avoided distribution costs, and avoided environmental compliance costs.
>
> [Exhibit E-13, pp. 13-14]

[80] In its Closing Submission the Province recommended that ENSC should engage the Program Development Working Group ("PWDG") and NSPI in consultations with respect to providing a more comprehensive picture of rate and bill impacts on customers associated with future DSM plan expenditures. In its Reply Submission ENSC responded as follows:

> ENSC agrees that this is an important issue, and supports the suggestion from NSDOE that NSPI, the PDWG and ENSC collectively review this issue further to develop such principles to determine how this information can or should be incorporated into DSM plan filings.
>
> [ENSC Reply Submission, p.4]

4.4.1 Findings

[81] The Board is persuaded that there is a need to have better information on rate and bill impacts in future proceedings and directs ENSC to undertake the necessary consultation with a view to providing enhanced information as suggested by Mr. Woolf in connection with the 2013 DSM Plan.

5.0 OTHER ISSUES

5.1 Total Resource Cost ("TRC")

[82] ENSC's application proposes to use the TRC test at the program level and not at the measure level starting in 2012:

> ENSC is proposing that the TRC test for the 2012 DSM Plan be applied at the program level, not at the measure level as was previously required. ENSC is seeking the flexibility

> to consider factors in addition to TRC, when selecting measures. In some cases, a measure that fails the TRC test may provide strategic or long-term benefits, such as stimulating demand for newer technologies to achieve economies of scale.
>
> The TRC test compares the net present value of lifetime benefits (avoided cost of energy and avoided cost of capacity) to the net present value of the total costs (the sum of ENSC's investment and the participants' cost). Each program in 2012 has a TRC value greater than 1.0, indicating that the lifetime benefits exceed the total cost.
>
> [Exhibit E-1, p. 17]

[83] Mr. Foote, consultant for the CA, noted that "ENSC makes a reasonable case for using the TRC on a program basis and has provided precedents from other jurisdictions...The program TRCs provided by ENSC appear reasonable and justifiable." (Exhibit E-10, p.11).

[84] Mr. Reed, consultant for EAC, provided the following in his direct evidence:

> ...Further, while the TRC test is widely accepted in many jurisdictions, the test does have its limitations. Most notably, the test considers all costs, but in most jurisdictions only resource benefits – energy and water - are considered. There are often, particularly in existing and new home programs, a multitude of non-energy benefits that are often not quantified. This results in some potential asymmetry when using the TRC test and may deem a measure not cost-effective due to the inability to quantify these non energy benefits. This is further reason not to use the TRC test as an absolute determinant of whether a measure should be included in a given program as the TRC test may tend to undervalue measure benefits and yield a lower benefit cost ratio.
>
> [Exhibit E-11, p. 8]

[85] Mr. Whalen, consultant for Board Counsel, supports ENSC's proposal and provided reasons in his direct evidence.

[86] The Province, in its Closing Submission, noted that:

> As part of its application, ENSC is proposing that the TRC test for the 2012 DSM Plan be applied at the program level, rather than at the measure level as previously required. ... NSDOE supports the application of the TRC test at the program level, rather than the measure level.
>
> [Province Closing Submission, p. 4]

5.1.1 Findings

[87] The Board has considered the ENSC's request to change the TRC test from the measure level to the program level. There appears to be no opposition to this request and the Board agrees with the benefits and flexibility which will be provided to ENSC with this change.

[88] The Board approves ENSC's request that TRC test be applied at the program level starting January 1, 2012.

5.2 Free Ridership and Spillover

[89] The Board in its Decision on the 2011 DSM Plan considered free ridership and spillover and directed that:

> [31] The Board has reviewed the recommendations of a number of the parties and agrees that further study of the impact of free ridership and spillover on the DSM Plan is warranted. Accordingly, the Board directs that ENS proceed with a collaborative process to consider and develop an approach to deal with these two factors in a Nova Scotia context.
>
> [2010 NSUARB 155, p. 17]

[90] NMR reviewed the issue of free ridership and spillover in its evaluation report and noted that:

> For each program, aside from LIH, NMR calculated a net-to-gross ratio, based on estimates of free ridership and, in some cases, spillover. NMR relied on survey results to estimate free ridership and spillover. The net-to-gross ratios for each program are presented in Table 2-1. Additional detail on the methods employed in the determination of net-to-gross ratios and net impacts for each program can be found in the individual program reports.

...

Table 2-1: 2010 Energy & Demand Net-to-Gross Ratios

Program	Net-to-Gross Ratio
Efficient Products –Retail: CFLs	133%
Efficient Products –Retail: Fixtures, Controls & Appliances	44%
Efficient Products –Retail: Appliance Retirement &Replacement	74%
Low Income Households	100%
EnerGuide for Existing Houses	76%
New Houses	46%
C&I Custom	90%
Efficient Products - Direct Install	77%
Small Business Lighting Solutions	87%
Smart Lighting Choices	84%
Business Energy Rebates	54%

[Exhibit E-2, pp. 8-9]

[91] The SVS made the following recommendation:

Recommendation 11: The DSM Administrator should consider whether or not it may be useful to revisit approaches to assessing free-ridership. Currently, NMR is using an improved variant of the Oregon Energy Trust/Research Into Action method. Just as the original multiplicative method used in the first Program Year understated free-ridership, it may be that for certain programs the current method somewhat overstates free-ridership.

[Exhibit E-3, p. 10]

[92] Mr. Foote, in his direct evidence, recommended that ENSC provide estimates of free ridership and spillover for 2012 programs and compare these with the actual results later at the evaluation stage.

[93] EAC, in its direct evidence, suggested that ENSC should determine a net-to-gross ("NTG") ratio at the measure level.

> ...As previously noted, the 2012 Plan incorporates NTG ratios at the program level, with the exception of the New Houses Program. Lacking better data this might be an appropriate approach. However, moving forward ENSC should consider developing NTG ratios at the measure level or at least the measure category level for key measures or measure categories.

[Exhibit E-11, p. 8]

[94] The Province, in its Closing Submission, recommended that:

> ENSC has signaled in this filing that it intends to refine the evaluation of free ridership and spillover effects as programs evolve, and that it intends to undertake this evaluation through stakeholder consultation. NSDOE endorses this approach as part of complying with the recommendations set out in the Savings Verification Study.
>
> [Province Closing Submission, p. 3.]

[95] ENSC, in its Closing Submission, agreed with the recommendations from Intervenors:

> ENSC will carefully consider the comments and recommendations provided by Dr. Peach regarding his evaluation of free ridership and spillover.
>
> With respect to continued refinements in the process of how free ridership and spillover are assessed and incorporated into DSM planning and reporting, ENSC agrees with the suggestions put by Board Counsel to the ENSC Panel on cross-examination that this process "is in Efficiency Nova Scotia's hands" and is not something that requires specific UARB approval.
>
> [ENSC Closing Submission, p. 8]

5.2.1 Findings

[96] The Board has considered the evidence filed by the parties and agrees that a free ridership and spillover study, as ordered by the Board in its Decision on the 2011 DSM Plan, is required. In its Closing Submission, ENSC has agreed to carry out this study in 2011. The Board orders that this study be completed as noted by ENSC and submitted to the Board no later than December 15, 2011.

5.3 Pilot Programs

[97] ENSC's Application included three pilot projects: Residential Fuel Substitution; Clean Nova Scotia Green School; and Nova Scotia Home Builders Association Eco Home.

[98] The Dunsky report explained the development and implementation of a Residential Fuel Substitution Pilot. The report outlined the approach to be followed to implement the Pilot and the expected results. The report also included recommendations on new technology; degrees of incentives for each technology; eligibility criteria for measures; and where the Pilot should be implemented first. The report also describes a participation process which includes participant, installer and ENSC. The report concludes with the measurement and evaluation plan and the anticipated results for each technology.

[99] Wanda Baxter, on behalf of Clean Nova Scotia, prepared the "Green Schools Nova Scotia: Facilitating a Culture of Environmental Sustainability Report" which was included in the Application. The report noted that the Pilot is expected to reduce the use of electric energy by 10% to 15% and also provide support for sustainable development. Among the report's recommendations is to start the program in 2011 in selected schools in one or two School Boards. The success of each pilot program is dependent upon the full support from the school and its administration. To be eligible, selected schools should have relatively high energy consumption.

[100] ENSC included in its Application a copy of the presentation prepared for the Program Development Working Group dated December 14, 2010 on the Eco Home Pilot. The project has two phases: a design phase, which is complete, and a build phase. The next step in the Pilot is to request construction bids from developers and build the designed house. The Pilot proposes a monetary incentive of up to $100,000 for building products and material which are energy efficient.

5.3.1 Findings

[101] The Board has considered the three pilot projects proposed by ENSC. There appears to be general support for these projects with which the Board agrees.

[102] The Board expects ENSC to implement these projects in 2011 and to provide updates in its future filings to the Board.

5.4 Reporting of Energy and Demand Savings

[103] The Application notes that the proposed target for the 2012 DSM Plan includes savings for ELI projects of 80 GWh in energy and 12 MW in demand. The proposed savings from the adoption of energy efficiency codes and standards are 10 GWh of energy and 2.7 MW of demand.

[104] ENSC defined the reporting of energy savings as follows:

> Previous DSM plans relied exclusively on customer-funded, incentive-based DSM programs to meet IRP targets. The 2009 IRP Update is based on the assumption that energy savings from sources in addition to DSM programs would contribute to targets. Consistent with the IRP Update, ENSC is recording incremental energy and demand from two sources outside of customer-funded DSM programs:
>
> - savings from energy-efficiency projects implemented by the Extra-Large Industrial (ELI) class of electricity customers
> - savings from the adoption of energy-efficiency codes and standards
>
> **5.1.1 Extra-Large Industrial Projects**
>
> ELI customers completed efficiency projects in 2009 and 2010. The resulting energy and demand savings contribute to the IRP targets and are reported in this filing because they are incremental to customer-funded DSM and were not included in the 2009 IRP Update.
>
> The cumulative ELI energy and demand savings are estimated to be 80 GWh and 12 MW. These estimates are based on a preliminary investigation completed on behalf of ENSC by third-party specialists and, as such, are necessarily conservative. These projects will undergo evaluation in 2011. Variances between estimates and final verified results will be reported in the filing of the 2013 DSM Plan.

5.1.2 Adoption of Energy-Efficiency Codes and Standards

In this filing, ENSC has reported energy savings attributed to the adoption of codes and standards from two sources: a new residential energy code and a new federal standard for general-service lamps to be phased in over the course of 2012. Additional information is provided in Section 13. Both of these changes are incremental to the electrical load forecast in the 2009 IRP Update.

[Exhibit E-1, pp. 15-17]

[105] ENSC plans to consider savings, which are not included in this year's plan, as a part of the 2013 plan:

ENSC has not included Nova Scotia Power initiatives in the 2012 DSM Plan savings projections. However, ENSC recognizes the significant savings contributions that could be realized from NSPI initiatives such as conversion of street lights to Light-Emitting Diode (LED), Voltage control, smart metering and rate design. ENSC will discuss opportunities for energy savings with NSPI for potential inclusion in 2013 and future DSM Plans.

[Exhibit E-1, p. 17]

[106] ENSC proposes to support and promote new opportunities in energy codes and standards:

A number of opportunities are emerging in the residential and commercial sectors for ENSC to support and promote new energy codes and standards. In particular, two areas to be pursued in the short-term are:

- the adoption of a high-performance T-8 lighting standard (building on the market transformation achieved through the Smart Lighting Choices program)
- the adoption in Nova Scotia of a forthcoming national energy code for commercial buildings

[Exhibit E-1, Appendix A, pp. 34-35]

[107] Mr. Foote, in his direct evidence, stated that:

Any discussion of whether to include non-program standards and at what level should not distract the UARB and stakeholders from the main purpose of this process which is to ensure spending proposed by ENSC is rationalized and justified and is at a level appropriate to meet future energy demand while complying with environmental regulation.

Savings from non-program sources are relevant to the discussion to the extent that they can be shown to reduce the need for new or replacement generation capacity and can assist in meeting environmental targets.

[Exhibit E-10, p. 5]

[108] EAC does not support the inclusion of non-program savings and noted that:

> ...The "found" ELI savings again reinforces the uncertainty of the DSM planning and forecasting process. ENSC should maximize the amount of efficiency it can obtain in each year in order to reach or exceed its cumulative savings goals. There will always be uncertainty as to whether ENSC will be able to meet any one particular annual goal. If the opportunity presents itself to exceed an annual IRP target, it should be pursued. There is little if any downside to front loading savings and doing so potentially provides ENSC greater flexibility in out years to pursue more innovative and comprehensive savings strategies under reduced pressure to meet any one specific annual incremental savings target.
>
> [Exhibit E-11, pp. 6-7]

[109] Mr. Whalen testified that "The savings from large industrials and from the introduction of codes and standards are appropriately estimated. Their inclusion in the 2012 Plan is consistent with the [2007] IRP and should be approved." (Exhibit E-12, p. 2).

[110] Mr. Woolf, consultant to Board Counsel, supports ENSC's estimates for energy savings.

[111] NPB in its Closing Submission stated that:

> None of the various consultants who filed testimony in this proceeding were opposed to the inclusion of energy efficiency savings from codes and standards and ELI projects, and the Board's verification consultant, Dr. Peach, also confirmed that this is the "proper way to do it." NPB submits that for future certainty it would be helpful if the Board confirmed in this decision that it is appropriate for ENSC to include as part of its DSM plans, significant and verifiable efficiency savings that occur which are in addition to the applicable IRP load forecast.
>
> [NPB Closing Submission, p. 3]

[112] ENSC, in its Reply Submission, further added:

> Keeping in mind that such additional savings from the ELI sector and Codes & Standards are inherently conservative, ENSC contends that the proposed 2012 DSM Plan providing overall cumulative energy savings of 233 GWh with a program investment of $43.7M strikes a reasonable balance at this point in time by respecting the interests and concerns of stakeholders while maximizing the continued success of cost-effective DSM programs for the benefit of all Nova Scotians.
>
> [Exhibit E-14, p. 4]

[113] In its Closing Submission, Avon stated "The Avon Group supports the current budget and recommends the Board confirm that the inclusion of non-program savings is appropriate".

5.4.1 Findings

[114] The Board has considered the issue of including non-program savings in the overall cumulative savings planned for 2012. ENSC is proposing to include savings from work already undertaken by the ELI customers and expected changes to codes and standards.

[115] ENSC has confirmed in its evidence that the ELI estimates are conservative, based on estimates prepared by its consultant. During the hearing, the Board questioned the savings from codes and standards, given that implementation may be delayed from the target date of January 1, 2012. ENSC indicated that it can still meet the savings targets without any contributions from codes and standards.

[116] The Board has considered and approves the targets as proposed, including non-program contributions from the ELI customers and codes and standards.

5.5 Integrated Multi-Fuels Mandate

[117] ENSC noted that the Province is in the process of changing its mandate and future responsibilities:

> With the expectation that ENSC will obtain a multi-fuels mandate in time for integration with 2012 electricity DSM programs, program designs will be adjusted to streamline processes, reduce costs and increase savings. ENSC will pay particular attention to avoid cross-subsidization of programs between electricity customers and taxpayers.
>
> [Exhibit E-1, p. 31]

[118] The Dunsky report outlines current experience in other parts of North America:

> Throughout Canada and the U.S., efficient and effective DSM program delivery is often challenged by the existence of a patchwork of DSM administrators. In some regions, for example, a variety of electric and gas utilities, in addition to provincial or state agencies, may offer different and sometimes overlapping programs and incentives. The resulting multiplicity of actors and program offerings can act as a powerful barrier to clear communication with both customers and market channel actors, and can further result in duplicative administrative, marketing and outreach costs.
>
> [Exhibit E-1, Appendix C, p. 17]

[119] Mr. Whalen supports ENSC's integrated multi-fuel mandate, provided a robust method to separate costs for each fuel is established and approved by the Board.

[120] During the hearing, ENSC elaborated on the current status of negotiation with the Province and how it plans to re-organize after the change in mandate. ENSC proposes to submit its plan for the Board's approval in the fall of 2011.

[121] Avon, in its Closing Submission, noted its concern with respect to shared services and allocation of costs and recommended that:

> ...The Avon Group recommends that the Board direct ENSC to prepare a report with respect to the allocation of shared services, quantifying the impact upon 2012 programs and its proposal for allocations going forward. The Avon Group further recommends that such report be made public and accessible to intervenors and interested parties for comment and debate as appropriate.
>
> [Avon Closing Submission, p. 7]

[122] The CA requested that a plan be developed soon to avoid subsidization by electric customers to others:

> The Consumer Advocate would respectfully request that Efficiency Nova Scotia be directed to swiftly develop a detailed plan containing specific steps to ensure that electricity ratepayers are in no way subsidizing activities associated with non-electricity users.
>
> [CA Closing Submission, p. 3]

[123] The Province, in its Closing Submission, noted that:

> NSDOE recommends that the Board direct ENSC to develop a clear methodology for tracking costs associated with electricity DSM program and energy efficiency programs related to the use of other fuels, as ENSC works towards obtaining multi-fuel mandate in time for integration with the 2012 electricity DSM programs.
>
> NSDOE in particular sees a need for the development of a mechanism by way of a code of conduct, or protocol for the identification of time spent by ENSC's employees and executives on electricity DSM matters, and work on efficiency and conservation programs dealing with other fuels, to ensure that ratepayers are not subsidizing costs associated with other fuels efficiency programs.
>
> [Province Closing Submission, p. 5]

[124] ENSC, in its Closing Submission, further added that:

> ENSC is fully committed to ensuring that no cross-subsidization occurs of non-electricity efficiency programs from approved DSM funds. In addition to confirmation of the segregated accounting of DSM funds received from electricity ratepayers, ENSC has committed to seeking expert assistance in determining the most effective and transparent allocation methodology for the sharing of common expenses that benefit both electric DSM and non-electric efficiency programs.
>
> [ENSC Closing Submission, p. 9]

5.5.1 Findings

[125] The Board understands that ENSC's mandate is being expanded to manage non-electricity efficiency programs. Some transition is already underway and formal negotiations are to be concluded in the near future. ENSC, at this time, does not have a formal written policy to track time and costs for its activities, but plans to finalize the policy in the near future and submit it to the Board for approval.

[126] Intervenors have expressed concern with the delay in the development of the policy and the potential for cross-subsidization by electricity customers of other fuel customers. The Board shares this concern and orders ENSC to develop and file, no later than September 30, 2011, its policy to track time and costs for electric and other fuel mandates.

5.6 Multi Year Performance Based Model ("PBM")

[127] ENSC seeks Board approval to engage stakeholders to assess the use of a Performance Based Model ("PBM") for future submissions to the Board. ENSC stated that:

> Under such a multi-year, performance-based model, the UARB's oversight role would evolve while continuing to protect the interests of stakeholders and ratepayers through evaluation and verification. Whereas the current regulatory framework focuses on pre-approval of a one-year DSM Plan and strict application of benefit-cost screening mechanisms such as the TRC test at the individual measure level, a performance-based model would focus on the approval of overall investments, savings targets and other relevant indicators, followed by review and validation of performance.
>
> In this filing, ENSC is seeking approval to engage the UARB and stakeholders in 2011 to further assess the options for implementing such a model in the future.
>
> [Exhibit E-1, p. 29]

[128] The Dunsky report noted that:

> ...
>
> The move to a performance-based model would provide ENSC with increased flexibility to adjust and adapt its plans as needed, as situations arise and as feedback comes in. Furthermore, an oversight model focused on outcomes can significantly reduce the time, energy and talent that the DSM administrator must devote to formal regulatory hearings and processes, freeing them up to focus more on ensuring targets are met.
>
> [Exhibit E-1, Appendix C, pp. 12-13]

[129] Mr. Whalen had no objections to ENSC's request, provided such a move is permissible under the *Public Utilities Act,* R.S.N.S. 1989, c. 380, as amended.

[130] The Province, in its Closing Submission, supported ENSC's request to explore the use of a PBM:

> NSDOE supports ENSC's proposal to engage the UARB and stakeholders in 2011 to assess the possibility of adopting a performance based model for the delivery and oversight of DSM programs. ...
>
> [Province Closing Submission, p. 4]

[131] EAC's Closing Submission also supports the PBM discussion among the stakeholders:

> The Ecology Action Centre (EAC) supports the move towards a performance based approach at Efficiency NS and the efforts to provide more versatile energy efficiency programs for Low-Income rate-payers in the 2012 DSM plan. As well, EAC supports efforts to increase outreach education for Nova Scotian ratepayers to take advantage of Efficiency NS program offerings, in the 2012 plan. As well, EAC supports the use of the TRC at the program level.
>
> [EAC Closing Submission, p. 2]

[132] Board Counsel explored this issue further with ENSC during the hearing:

> MR. OUTHOUSE: And why do you believe you need the Board's approval to engage in consultation?
>
> MR. CRANDLEMIRE: I don't think we need the Board's approval to engage in consultation. What we were looking for from the Board is this; if the Board had the perspective of that -- not interested in performance-based approach, no way, no how, obviously there's no reason to have extensive consultation with stakeholders, build some consensus around approach that has no possibility of flying but to the extent that the Board can provide an early indication that they're open to consideration of that kind of option, why then I think we want to have that discussion not only with stakeholders but also with representatives of the Board.
>
> [Transcript, p. 165]

[133] ENSC, in its Closing Submission, further elaborated on the process it intends to follow with stakeholders, if the Board approves the request for a PBM consultation:

> ...the approval that ENSC is seeking from the Board at this time is to engage in necessary consultation and dialogue to further assess the available options for implementation of a future multi-year regulatory model, which will still provide "cost-recovery" rates to pay for DSM expenditures and will allow greater flexibility and performance in the delivery of DSM programming by ENSC.
>
> [ENSC Closing Submission, p. 13]

5.6.1 Findings

[134] ENSC suggests exploration of a PBM with stakeholders for future approval by the Board. The Board noted its concerns during the hearing and ENSC elaborated on the issue in its closing submission.

[135] Based on this, the Board has no objection to ENSC discussing a PBM with the stakeholders.

6.0 ROLE OF PROGRAM DEVELOPMENT WORKING GROUP

[136] On March 5, 2008, NSPI and most of the Intervenors in the 2009 DSM proceeding signed a Settlement Agreement ("SA") and filed that agreement with the Board as part of an amended DSM Plan. The SA was approved by the Board and communicated to the parties in a letter dated April 18, 2008. Clause 8 of the SA stated:

> The Parties agree to establish a Program Development Working Group ("PDWG") to assist with program design and implementation, including considering performance measures for the new administrator. The PDWG will be a small, collaborative, working group to support implementation of 2008 and 2009 programs. The PDWG should include NSPI, Board staff, Conserve Nova Scotia and stakeholder representatives. NSPI, Conserve Nova Scotia, stakeholders, and Board staff may include their expert consultants in the work of the PDWG as they deem useful. The PDWG will have access to consultants, as necessary, as had been proposed for the DSM Advisory Committee. The PDWG will develop Terms of Reference that support transparency and regular reporting to the UARB and non-participating stakeholders.
>
> [2008 NSUARB 47, p. 8]

[137] The PDWG was intended to support the 2008 and 2009 programs; however, the new Administrator, ENSC, was not fully functional until the latter part of 2010. With general support of NSPI and the DSM participants, the Board approved the continuation of the PDWG until transition to the new Administrator was complete:

> There was strong support shown by all parties for the continuation of the PDWG throughout the transition process in order to ensure a measure of continuity for program development, review, and implementation. The Board accepts that the PDWG should retain its current role until the transition to ENS is completed. At that time, ENS can then determine whether the continuation of the PDWG, or another committee, would be appropriate.
>
> [2010 NSUARB 155, p. 55]

[138] In its Application, ENSC stated:

> The Program Development Working Group (PDWG), established during NSPI's tenure as interim DSM Administrator, has advised ENSC during the transition from NSPI to ENSC and during the preparation of the 2012 DSM Plan. The PDWG is a valuable resource and stakeholder forum, providing ENSC and NSPI, as the interim administrator, with expert knowledge and sound, thoughtful advice on important issues. ENSC sees value in having the PDWG continue its role in 2011, receiving periodic progress reports on DSM programs, and advising ENSC on the design of new programs and any mid course adjustments based on program results or changing circumstances.
>
> ENSC is committed to broad, transparent and effective stakeholder consultation. As noted by the UARB, in its 2011 DSM Plan Decision, ENSC is now engaged with members of the PDWG in a review of the role and composition of the PDWG. A broader group of stakeholders will be consulted in 2011 on necessary changes to the PDWG or the creation of a new stakeholder process.
>
> [Exhibit E-1, pp. 2-3]

[139] During the hearing, there was little mention of the PDWG. The Board notes that in their Closing Submissions, none of the Intervenors opposed the ENSC proposal regarding the PDWG. The ENSC Closing Submission stated:

> ENSC sees continued value and support in having the PDWG continue throughout 2011, as ENSC engages both the PDWG and broader stakeholders on necessary changes to the PDWG or creation of a new stakeholder process.
>
> ENSC submits that there is expert and stakeholder support for this process, and that it should be approved by the Board.
>
> [ENSC Closing Submission, p. 10]

6.1 Findings

[140] The Board recognizes the valuable contributions made by the PDWG while NSPI served as the interim DSM Administrator and also during the transition process from NSPI to ENSC as the new DSM Administrator. The Board accepts the ENSC proposal to have the PDWG continue its current role while ENSC engages broader stakeholders regarding changes to the PDWG or creation of a new stakeholder process. ENSC is directed to file the results of this review as part of its 2013 DSM Plan.

7.0 PROGRAM MONITORING

[141] During the hearing, several comments were made regarding the aggressive DSM targets facing ENSC and its ability to meet these significant challenges. In his opening statement, Mr. Crandlemire said:

> Nova Scotians are set to achieve some of the most ambitious electricity savings in North America: 234-million kiloWatt hours.
>
> ...
>
> At Efficiency Nova Scotia, we've been going full-speed since December and now have a staff of about 45 going flat-out to deliver energy savings programs for all Nova Scotians.
>
> [Exhibit E-20, pp. 2 & 4]

[142] In response to questions from EAC, Mr. Crandlemire stated:

> In terms of level of effort on DSM, the 2011 targets are approximately double the 2010 targets. I can assure you that Efficiency Nova Scotia has got its foot on the gas pedal hard to the floor this year in terms of achieving those targets and we don't have any intention to let up in the foreseeable future.
>
> [Transcript, p. 86]

[143] Board Counsel questioned ENSC on whether the targets were achievable:

> MR. OUTHOUSE: I guess, Mr. Faulkner, going forward -- these numbers on the face of them give me some concern that you can achieve the targets that you have projected going forward. I just wanted to give you the opportunity to address that...
>
> I'm just trying to find out whether you see the targets that you've set as being achievable for the dollars you're predicting.
>
> ...
>
> MR. CRANDLEMIRE: I'll just add a couple of lines to Mr. Dunsky's comments.
>
> I don't want anyone to think for a minute that the targets in 2010 weren't challenging, that the targets in 2011 aren't challenging or they're not going to be challenging in 2012.
>
> We had people in the office between Christmas and New Year's scratching for savings in 2010 to meet that target, so I'm not expecting that it will be a bit different in 2011. As I mentioned earlier this morning, gas pedal hard to the floor going full out, getting savings.
>
> ...

MR. OUTHOUSE: I take it the outcome of all that is that despite the challenge, you remain confident that the targets are realistic. Achievement of the targets is realistic, I should say.

MR. CRANDLEMIRE: Yes, it is.

[Transcript, pp. 185-189]

[144] Counsel for ENSC also explored this topic during cross-examination of Mr. Whalen:

MR. FOREMAN: In fairness the evidence that Mr. Crandlemire gave yesterday also clearly indicated, with respect to that foot on the pedal analogy, that they do have -- or from his perspective, from Efficiency's perspective, they have the pedal, like, pushed fully down.

MR. WHALEN: I certainly would agree with Efficiency Nova Scotia that 2011 is a big challenge. I did not hear the corporation say that they had doubts about meeting that.

[Transcript, p. 350]

[145] The Closing Submission of the CA also raised concerns about the increased level of spending for 2012 and the early stage of organizational development at ENSC:

. . .

2. The proposed budget for 2012 represents a 100% increase on the 2010 DSM spending. In fact, proposed program spending in 2012 will come close to equaling the cumulative 2008-2010 spending.

3. Efficiency Nova Scotia is a new entity. Management positions were created and filled during mid-year 2010 and operational responsibilities for DSM administration were completely transferred to Efficiency Nova Scotia by December, 2010. 2011 will mark the first full year of Efficiency Nova Scotia operation of DSM programming.

...

[CA Closing Submission, p. 2]

[146] A similar point was raised by NPB in its Closing Submission:

The administration of DSM has recently been transferred to ENSC, and 2011 will be its first full year of operation. Matters with respect to its organization, such as a formal protocol for the segregation of costs between the electricity and non-electricity aspects of its business, are still under development.

[NPB Closing Submission, p. 4]

7.1 Findings

[147] The Board notes that while ENSC stated it has the "gas pedal hard to the floor going full out" in order to achieve targeted savings, Mr. Crandlemire has also indicated that the targets are achievable. He has not suggested the targets would not be met. Despite these assertions, the Board considers the extend of questioning on this matter to be an indicator that parties have some doubt, which was further expressed in some of the Closing Submissions.

[148] In order to address these concerns, the Board directs ENSC to meet with Board Staff and Consultants on a quarterly basis to review its progress in program implementation, program expenditures, and achievement of the targeted energy and demand savings.

8.0 ECOLOGY ACTION CENTRE REQUEST FOR COSTS

[149] In its Final Submission, EAC stated:

> 1. It is submitted that the EAC acted responsibly and prudently as an intervener in these hearings. The interventions have been novel and brought a different perspective to the proceedings. As such, it is submitted that the EAC has behaved in a civil and responsible manner to incur only such costs as were necessary to complete the evidence before the Board concerning the issues in this application, including bringing forward expert witness Glenn Reed to testify to the issues.
>
> 2. It is submitted that the arguments submitted by the EAC have contributed to the "better understanding" of the issues affecting customers in this application for the approval of the 2012 DSM plan by the new administrator, Efficiency NS.
>
> [EAC Final Submission, p. 21]

[150] EAC advised that the costs it sought "...would include a reasonable sum for costs incurred in the EAC's participation...", the details of which would be provided if the Board allows the request for costs.

[151] ENSC indicated in its Reply Submission that it: "...has requested that EAC provide it with a proposed Bill of Costs following closure of the hearing and submissions."

[152] If EAC and ENSC are unable to agree on EAC's entitlement to, or quantum of costs, the Board reserves jurisdiction to rule on costs.

9.0 SUMMARY OF BOARD FINDINGS

[153] The Board accepts the 2010 DSM Plan evaluation and verification, with the qualification made in the SVS for a 10% reduction for the Efficient Products-Direct Install program.

[154] The Board understands that ENSC is actively working to address the data systems problems identified by NMR. The Board is satisfied that ENSC is reviewing the SVS recommendations, and orders ENSC to file its response to them no later than July 31, 2011, for consideration by the Board.

[155] The Board is persuaded that ENSC should be afforded some flexibility during its developmental stage and also accepts that including savings from non-program funded initiatives would satisfy the IRP targets. Therefore, the proposed 2012 investment of $43.7 million for ratepayer funded DSM programs is approved.

[156] The Board has considered and approves the targets as proposed, including non-program contributions from the ELI customers and codes and standards.

[157] In order to address concerns about whether the targeted savings can be met, the Board directs ENSC to meet with Board Staff and Consultants on a quarterly

basis to review its progress in program implementation, program expenditures, and achievement of the targeted energy and demand savings.

[158] The Board considers that it would not be useful to review cost allocation prior to the review scheduled in connection with the 2013 DSM plan. The Board also accepts as reasonable the cost allocations done by the Administrator recognizing there is a true-up mechanism to respond to any misallocation.

[159] The Board directs ENSC to undertake the necessary consultation with a view to providing enhanced information on rate and bill impacts in future proceedings, as suggested by Mr. Woolf, starting with the 2013 DSM Plan.

[160] The Board agrees that changing the TRC test from the measure level to the program level will provide ENSC with benefits and flexibility. The Board approves ENSC's request to apply the TRC test at the program level starting January 1, 2012.

[161] The Board orders that the free ridership and spillover study, as ordered in its 2011 DSM Plan decision, be completed and submitted to the Board no later than December 15, 2011.

[162] The Board expects that ENSC will implement the Residential Fuel Substitution, Green School and Eco Home pilot projects in 2011, and that ENSC will provide updated information on them in future filings.

[163] The Board shares the concerns of Intervenors resulting from the expansion of ENSC's mandate to manage non-electricity efficiency programs. The Board orders ENSC to develop and file, no later than September 30, 2011, its policy to track costs for electric and other fuel mandates.

[164] The Board has no objection to ENSC's proposal to explore a PBM with stakeholders.

[165] The Board accepts ENSC's proposal to have the PDWG continue its current role while ENSC engages broader stakeholders regarding changes to the PDWG or creation of a new stakeholder process. ENSC is directed to file the results of this review as part of its 2013 DSM Plan.

[166] As noted above, if EAC and ENSC are unable to agree on EAC's entitlement to, or quantum of costs, the Board reserves jurisdiction to rule on costs.

[167] An Order will issue accordingly.

DATED at Halifax, Nova Scotia, this 30th day of June, 2011.

Peter W. Gurnham

Kulvinder S. Dhillon

Roberta J. Clarke