BEFORE THE
NOVA SCOTIA UTILITY AND REVIEW BOARD

IN THE MATTER OF: ***The Public Utilities Act*, R.S.N.S. 1989, c. 380, as amended** **– and –** **IN THE MATTER OF:** **An Application by Efficiency Nova Scotia Corporation for Approval of its Electricity Demand Side Management Plan for 2012**	**))))))))))))))**	**NSUARB – E – ENSC – R – 10**

Written Submission on behalf of NewPage Port Hawkesbury Corp. and Bowater Mersey Paper Company Ltd.

May 13, 2011

Introduction

On February 28, 2011, Efficiency Nova Scotia Corporation ("ENSC") filed its 2012 DSM Evidence and Plan with the Nova Scotia Utility and Review Board (the "Board"). Please accept the following written submission on behalf of NewPage Port Hawkesbury Corp. and Bowater Mersey Paper Company Ltd. ("NPB") with respect to the 2012 Demand-Side Management ("DSM") Plan.

ENSC's proposed DSM budget of $43.7 million and the associated incremental savings targets of 233.6 GWh and 44 MW for 2012[1] are already among the highest in North America in terms of percent of utility revenues and percent of demand. For the reasons set out below, 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. The consideration to be given to short-term rate impacts of increased DSM spending, as well as various issues with respect to Mr. Whalen's responses to Undertakings 2 and 3, will also be discussed below. Given all the circumstances and the record before the Board, 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.

1. ENSC's PROPOSED 2012 DSM BUDGET SHOULD NOT BE INCREASED

At the outset, NPB believes it is important to emphasize the extensive ramp-up in DSM spending that has occurred in Nova Scotia over the past few years. As Mr. Dunsky notes in his November 25, 2010 report to ENSC, Nova Scotia has adopted a set of electricity savings goals that are "equivalent to – and **in some ways more aggressive than** – the targets of leading North American jurisdictions."[2] In order to achieve these targets, a significant level of DSM investment has been required to date. As Mr. Woolf confirmed in cross-examination by counsel for NPB, ENSC's current budgets are high relative to other energy efficiency program administrators in North America.[3] Mr. Whalen also confirmed he had no reason to disagree that the current level of DSM expenditures (about 3.5% of utility revenues) as a percentage of

[1] Ex. E-1, Figure 5.1, page 14.
[2] Ex. E-1, Appendix C, page 18 (emphasis added). Mr. Dunsky also notes at page 21 that the DSM targets for the 2011-2013 timeframe appear, with respect to both the level of savings and speed of ramp-up, to somewhat exceed anything envisaged in other leading North American jurisdictions.
[3] Transcript, page 225, lines 15-20.

revenues ranks among the highest rates in North America, based on information provided by Ms. Nancy Brockway (consultant on behalf of the Consumer Advocate) in last year's DSM proceeding and information provided by Mr. Dunsky, ENSC's consultant.[4]

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. As Mr. Whalen notes in his testimony, ENSC's proposed plan for 2012 will result in cumulative energy savings of 541 GWh, which is above the IRP target of 500 GWh for 2012.[5]

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[6]) 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[7]). 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".[8] 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.[9]

Mr. Crandlemire confirmed in response to questions from Commissioner Dhillon that the total budget is the same as that submitted for approval, and that ENSC expects to meet its targets for 2012, even if the federal government postpones the implementation date for the standard for general-service lamps.[10]

---

[4] Transcript, page 373, line 3 to page 374, line 21 and Exhibit E-28.
[5] Ex. E-12, page 6, lines 22-23. ENSC's proposed Plan will also provide cumulative demand savings of 99.6 MW, only slightly below the cumulative IRP demand target of 101 MW.
[6] Ex. E-7, response to Multeese IR-6, Page 1.
[7] Ex. E-7, response to Multeese IR-8, Attachment 1, Page 82.
[8] Transcript, page 129, lines 11-14.
[9] Ex. E-7, response to Multeese IR-8, Attachment 1, Page 79 and Transcript, page 375, lines 4-19.
[10] Transcript, page 195, lines 11-15 and page 196, lines 14-18.

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[11], and the Board's verification consultant, Dr. Peach, also confirmed that this is the "proper way to do it."[12] 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.[13]

Despite the fact that ENSC's 2012 Plan as filed meets, and in the case of the energy targets exceeds, the ambitious savings targets set out in the IRP, Mr. Whalen and Mr. Reed have taken the position that ENSC's budget should be further increased to achieve additional savings that would be, in the words of Mr. Crandlemire, "…very significantly above the IRP" for 2012.[14] Mr. Woolf's position is less clear, as he states in his evidence that an assessment of the 2012 DSM budget is outside the scope of his testimony, but also that ENSC should at least maintain, if not exceed, the savings goals from the 2011 DSM Plan.[15]

In contrast, Mr. Foote, testifying on behalf of the Consumer Advocate, stated as follows in response to questions from the Ecology Action Centre (emphasis added):

> … **I haven't seen any compelling reason why they should go beyond what they've already put forward** which, you know, is the beyond the IRP when you include all savings they put forward; program and non-program so I haven't seen a compelling reason.
>
> And I'm looking at – you know, and I think Mr. Whalen mentions in his evidence the importance of momentum and I think momentum is important, but I think **it's also equally important to develop support for the level of funding which I think most people agree is fairly significant**, and we heard our past witness, Tim Woolf, elaborate on this point a little bit in terms of the North American context.
>
> So I think it's important that we, you know – at some point, **it may be useful and this may be a good point to kind of pause and consolidate the gains that**

---

[11] Ex. E-10, page 4, line 11 to page 5, line 9 (Mr. Foote); Ex-E-12, page 9, line 14 to page 10, line 6 (Mr. Whalen); Ex. E-13, page 7, line 17 to page 8, line 4 (Mr. Woolf); Transcript, page 270, lines 9-15 (Mr. Reed).
[12] Transcript, page 318, lines 13-20.
[13] See discussion at Transcript, page 134, lines 9-17.
[14] Transcript, page 214, lines 8-9. Note that the Transcript reference is to 2011, whereas the 205 GWh figure is the IRP target for 2012.
[15] Ex. E-13, page 8, lines 7-8 and page 10, lines 22-24. See also Transcript, page 223, line 8 to page 224, line 20.

> **have been made today; make sure we've got confidence in the savings that we've achieved and the projections that we've got for 2012 and beyond.**
>
> So no, I don't see any particular need, at this point, to go and achieve the same level of programs in 2012 as were achieved in 2011.
>
> …
>
> . . . **I think there's a balance here about how far do we go versus some of these other factors** that I and Efficiency's raised - - and we get some of these arguments around this point, I think there's a balance there. And **I think we've got a fair balance** for the 2012 plan.[16]

NPB agrees with the comments made by Mr. Foote. The significant ramp-up in DSM spending in Nova Scotia has occurred over a relatively brief time period. As Mr. Reed confirmed in cross-examination by counsel for NPB, the largest amount of verified savings to date has only been based on a level of spending of $22.7 million, which was recently evaluated and verified for 2010.[17] 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.[18] In such circumstances, NPB submits that it is prudent to ensure that cost-effective DSM savings are achievable at current budgetary spending levels before ramping DSM spending up even further, particularly given that the proposed DSM budget is already relatively high compared to the rest of North America, and ENSC's proposed 2012 Plan is in any event expected to achieve or exceed the IRP savings targets.

NPB also notes Mr. Crandlemire's testimony regarding the challenges facing ENSC and the aggressive nature of the energy savings targets in the 2012 Plan as filed (emphasis added):

> **MR. CRANDLEMIRE:** 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.**
>
> **MR. VOGEL:** Do you see any consequences in not being more aggressive in terms of your own program delivery to meet the 2012 targets?

[16] Transcript, page 251, line 9 to page 252, line 8 and page 253, lines 16-20.
[17] Transcript, page 279, lines 12-17.
[18] Transcript, page 178, line 14 to page 180, line 6.

> **MR. CRANDLEMIRE: I don't categorize meeting a target of 233 or 234 gigawatt hours in 2012 as not being aggressive**.[19]
>
> …
>
> **MR. CRANDLEMIRE:** …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**.[20]

Although the forecast savings from ENSC's program budgets may be lower in 2012 than in 2011, it must be emphasized that the 2012 DSM Plan should not be seen as a "regressive step", as Mr. Whalen appears to characterize it in his evidence.[21] As Mr. Faulkner and Mr. Dunsky explained in response to questions from Board counsel, there are several reasons why there has been a decline in the amount of energy savings that can be achieved per dollar spent, such as the impact of codes and standards, the diminishing returns effect and the increased amounts spent on enabling strategies which do not have energy savings attached directly to them.[22] In fact, as Dr. Peach confirmed in cross-examination by counsel for NPB, the overall budget of the DSM Plan is an important measure of the level of effort, and the proposed 2012 Plan's budget is, in fact, higher than the 2011 plan.[23]

The cost at which energy savings can be achieved will fluctuate on an annual basis based on available opportunities. NPB agrees with ENSC's comments in its Reply evidence that "Nominal budgets contained in the IRP are not prescriptive and energy savings should not be based on set forecasted expenditures from the IRP."[24] ENSC's 2012 DSM Plan as filed is expected to meet or exceed the cumulative savings targets. There is no basis to require ENSC to increase its 2012 budget further simply to match the DSM funded savings targets for its 2011 programs, as Mr. Whalen suggests.

---

[19] Transcript, page 86, lines 5-16.
[20] Transcript, page 187, line 18 to page 188, line 5.
[21] Ex. E-12, page 5, lines 13-14.
[22] Transcript, page 144, line 22 to page 147, line 22.
[23] Transcript, page 331, line 11 to page 332, line 1.
[24] Ex. E-14, page 3, lines 18-19.

Neither Mr. Whalen, Mr. Woolf, nor Mr. Reed has offered any compelling reason to suggest that ENSC's 2012 Budget should be increased. As ENSC states at page 2 of its Reply evidence (Ex. E-14), it has "…given extensive consideration to various options regarding the appropriate level of program spending and energy savings in the development of the 2012 DSM Plan, including expert opinion and evidence from leading sources and advice and input from stakeholders."[25] NPB noted in its opening statement that:

> " . . .the collaborative process envisioned by the Board in setting the timetable for this hearing was successful and as the Board intended . . . The result is a 2012 DSM Plan that exceeds the aggressive savings targets included in the 2009 IRP Update by a significant margin, while minimizing to the extent possible the rate increases that customers will see on their bills in 2012 on account of DSM spending".[26]

Importantly, 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.

2. ASSESSMENT OF RATE IMPACTS AND MR. WHALEN'S ANALYSIS

In Mr. Woolf's pre-filed testimony and during the hearing, there was discussion about the impact of DSM spending on customer rates and how such impacts should be assessed in considering ENSC's overall DSM budget. This is an issue that often arises in many jurisdictions in the context of DSM applications, as explained in the following excerpt from page 56 of Summit Blue's 2006 DSM Potential Study (introduced as Exhibit E-26 in NPB's cross-examination of Mr. Reed):

> A key issue in each jurisdiction, not always explicit, is resolving the conflict between wanting to procure all cost-effective energy efficiency and concern about the resulting immediate effect on rates. In many jurisdictions it is evident some compromise was struck allowing for a significant yet limited rate impact to support a meaningful suite of programs. Budgets based solely on findings from an IRP or from a benefit-cost assessment would come down squarely on the side of accepting whatever rate effects are necessary to secure a long-term overall resource plan. Energy efficiency might enable fewer kilowatt hours to meet the regions energy needs, but at a somewhat higher price for each kilowatt hour.

[25] Ibid, page 2, lines 22-26.
[26] Ex. E-17, page 1, 3rd paragraph.

In putting forward recommendations to further increase the level of DSM spending by a minimum of $9.7 million (in excess of a level of spending that is already among the highest in North America on a percentage of utility revenues basis), neither Mr. Whalen, Mr. Woolf, nor Mr. Reed included any specific assessment or consideration of the immediate effect that such an increase would have on rates in 2012. In response to questions by counsel for NPB, Mr. Whalen indicated that he had considered "back-of-the-envelope" calculations in terms of the impact on the rates of the ELI customers[27], and in response to Undertakings 2 and 3, Mr. Whalen provided additional rate impact calculations for the ELI and other customer classes.

In his description of his "back-of-the envelope calculations" given during the hearing, Mr. Whalen suggested that using the overall higher budget for DSM he proposed would be "break even, maybe even a little beneficial for the large guys".[28] However, a review of Undertaking response U-2 from Mr. Whalen, which asked him to provide the calculations supporting the rate impact of the 2012 DSM Plan on ELI customers assuming the Plan is at the 158.5 GWh level as he proposed, indicates serious issues with his analysis. As there was no opportunity to cross-examine Mr. Whalen on his Undertaking responses, as they were filed after the close of the hearing, we will address the primary issues in this Submission.

First, Mr. Whalen's analysis is premised on an unsupported key assumption that fuel cost savings for the 158.5 GWh of presumed energy reductions will be at an avoided cost of $80/MWh. In NSPI's non-confidential version of its 2010 Annual Report to the Board on the ELI 2 Part-RTP Tariff, NSPI noted that for the reporting period November 1, 2009 to October 31, 2010, the average on-peak marginal cost posted was $48.73/MWh, while the average off-peak marginal cost posted was $44.69/MWh[29]. As the avoided fuel cost is the key assumption in the fuel cost savings calculation, the use of an unsupported $80/MWh figure, which does not appear to reflect current realities on NSPI's system, suggests Mr. Whalen's "back-of-the-envelope" calculations of avoided fuel costs may be significantly overstated.

---

[27] Transcript, page 371, line 19 to page 372, line 4.

[28] Transcript, page 371, lines 8-9.

[29] Extra Large Industrial Two Part Real Time Pricing Tariff (ELI 2P-RTP) 2010 Annual Report, Redacted, at page 9. The Report notes that "Marginal costs during this period were typically lower than the Standard Energy Charge and predominately reflected natural gas prices and coal prices. The average marginal cost of coal fired power production units was quite similar to those using natural gas. Natural gas was substantially lower priced than heavy fuel oil. This made it more cost effective for NSPI to combust natural gas at the Tufts Cove power plant rather than to resell gas purchased on a long term contract. The three Tufts Cove steam units and the two LM6000 combustion turbines were often on the margin for the purposes of pricing the ELI 2P-RTP tariff." (pages 8-9)

Second, Mr. Whalen simply assumes that the 158.5 GWh of energy savings will materialize (being 34.4 GWh of additional energy savings beyond that contemplated by ENSC's proposed DSM budget savings) notwithstanding the challenges expressed by ENSC's panel, as previously noted, as to the level of effort required to achieve its budgeted energy savings, and the fact that ENSC has not developed a plan to meet the additional savings.[30]

Third, Mr. Whalen's analysis focuses solely on energy, and does not account for the fact that certain fuel related costs are allocated by class based on each class' relative share of system demand. As the ELI class does not participate in the DSM programs, and as the DSM programs are expected to lower system demand as well as energy usage, the ELI class will be allocated a greater portion of those costs.

Fourth, similar to point three, as the DSM programs will lower non-ELI system demand and energy use, the ELI class will be allocated a greater portion of the non-fuel fixed costs of the utility (depreciation, capital, etc.). As the Board is aware, the move to increased renewables development by NSPI is leading to ever increasing fixed costs on the system.

Fifth, Mr. Whalen's calculations simply assume that every class receives 100% of the fuel savings based on its percentages of class sales and makes no adjustment for any classes revenue/cost ratio. In the ELI situation, as its R/C ratio is below 1, the ELI class will be allocated a smaller share of the savings than shown by Mr. Whalen.

For all of the foregoing reasons, NPB respectfully submits that Mr. Whalen's comments at the hearing with respect to the potential positive rate impact of his proposal on the ELI class (as subsequently expanded upon in Undertaking responses U-2 and 3) are questionable at best.

More importantly, however, when asked at the hearing by counsel for NPB if he had conducted any rate impact analysis that customers might be facing in addition to the DSM costs, Mr. Whalen stated he had only conducted the above discussed analysis for "the large

[30] Transcript, page 84, lines 2-15, where Mr. Faulkner notes that the information provided in response to Mr. Whalen's information request was simply a preliminary analysis, which was not built on detailed models and was just a scaling-up of the detailed Plan.

customers, like the ELI customers".[31] It is not clear whether Mr. Whalen also believed at the time of filing his testimony that his proposed increase in DSM spending would have a positive rate impact on the other customer classes. However, in response to Undertaking 3, where Mr. Whalen was requested by the Board Chair to provide calculations similar to those in U-2 for all classes, Mr. Whalen ultimately provided his calculations in MCI-U3 (Expanded) which show that on his analysis there is an incremental net cost to every rate class in 2012 from his proposal (other than the ELI class, the calculation for which has been dealt with above).

Mr. Whalen's response to Undertaking MCI U-3 (Expanded) demonstrates the short-term upward impact that his proposal to increase DSM spending would have on customer rates. Mr. Whalen's recommendation in this proceeding is for the Board to approve $9.71 million in additional DSM spending in order to achieve an incremental 34.4 GWh in energy savings. Mr. Whalen's estimates with respect to the rate impact of this approach show that this $9.71 million cost would result in $2.752 million in avoided fuel cost savings in 2012 (and only if the marginal cost of fuel in 2012 turns out to be as high as $80/MWh, as Mr. Whalen assumes, but which appears inconsistent with current data as noted above).[32] This would represent a net <u>cost</u> paid by all ratepayers of $6.96 million in 2012, based on the off-setting fuel costs avoided by the incremental DSM spending. Non-participating ratepayers in the various classes that have access to the DSM programming will bear a disproportionate impact of this increase, as they will not see corresponding bill reductions on account of lower usage from the DSM funded energy/demand programs.

Obviously, there are expected to be additional benefits that will accrue in the future on account of any economic incremental DSM spending, as the measures of most of the programs carry forward for a number of years. Furthermore, the (anticipated) overall impact of the DSM spending is to avoid the cost of additional infrastructure required in the future, and these types of benefits also accrue to all ratepayers over the long-term, even non-participants. Yet the overall analysis provided by Mr. Whalen, which identifies the estimated net cost of DSM spending to Nova Scotia ratepayers in 2012, highlights the concern over the impact of short-term increases in rates versus their cost-effectiveness over the long-term. It is precisely for this reason that jurisdictions seek to strike a balance between procuring all cost-effective energy efficiency each year and the resulting immediate impact on rates. As Mr. Woolf states in his

[31] Transcript, page 369, lines 8-14.
[32] Page 2, Exhibit MCI-U3 (Expanded).

testimony at page 16, "One of the Board's goals should be to strike the appropriate balance between increasing rates and achieving the overall benefits of energy efficiency programs."[33]

Given the fact that the proposed DSM budget is already among the highest in North America on a percentage of utility revenues basis, it is important that the Board consider rate impacts, particularly when faced with suggestions to further increase DSM spending to achieve savings in excess of the IRP targets. In response to cross-examination by counsel to NPB as to whether a rate impact to a customer of a 3, 4, or 5 percent increase would be considered small, Mr. Woolf indicated that this is a judgment to be made by the Board and other stakeholders.[34] In response to questions from the Board Chair, Mr. Woolf agreed that it is important to also take into account other pressures on rates in making these determinations.[35] NPB agrees. In this regard, it is notable that Mr. Reed was not aware of the potential magnitude of other increases to Nova Scotia customer bills in 2012 in recommending an increase in DSM spending and Mr. Whalen did not specifically consider such impacts.[36] NSPI has since formally announced its intention to seek a significant general rate increase in 2012.[37]

It is likely that the interplay between near term rate impacts and the achievement of DSM savings will be an ongoing issue as it pertains to ENSC's future DSM plans. However, NPB believes that the Board should take significant comfort regarding the 2012 Plan currently before it, since (i) ENSC's current and proposed DSM budgets are already among the highest in North America as a percentage of utility revenues; and (ii) ENSC's Plan is expected to meet (or exceed) the IRP savings targets. In this context, NPB respectfully submits that there is no compelling justification to increase the 2012 DSM budget to achieve savings in excess of IRP targets, particularly when ratepayers are facing other significant, immediate cost pressures on electricity rates in Nova Scotia. NPB believes that ENSC has struck the correct balance in its Application.

[33] Ex. E-13, page 16, lines 17-19 (emphasis added).
[34] Transcript, page 228, lines 17-22.
[35] Transcript, page 233, lines 3-21.
[36] Transcript, page 286, lines 3-6 and page 371, lines 11-22.
[37] See: http://www.cbc.ca/news/canada/nova-scotia/story/2011/04/20/ns-power-rate-increase.html

Conclusion

For the reasons set out in this Submission, 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 believes the collaborative nature of the development of ENSC's 2012 DSM Plan was a success and is supportive of the approach taken by ENSC and the budgeted level of expenditures.

ALL OF WHICH IS RESPECTFULLY SUBMITTED this 13th day of May, 2011.

Signed by:

David S. MacDougall

Signed by:

James MacDuff

Counsel for NewPage Port Hawkesbury Corp. and Bowater Mersey Paper Company Ltd.