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**SENT BY EMAIL ON April 7, 2014**

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ENE Comments related to the Draft DSM Assumptions for Nova Scotia Power Incorporated's 2014 Integrated Resource Plan Matter No. M05522

Dear Ms. Godbout:

ENE appreciates the opportunity to comment on Nova Scotia Power's draft *DSM and DR Assumptions – Levels and Costs* of March 28, 2014. ENE's submission is attached below.

Do not hesitate to contact me with questions.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Leslie Malone', is written in a cursive style.

Leslie Malone  
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Cc. David Landrigan, NSPI  
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S. Bruce Outhouse, Q.C., Board Counsel  
IRP 2014 Stakeholders

## ENE Comments related to Nova Scotia Power's 2014 IRP – DSM Assumptions

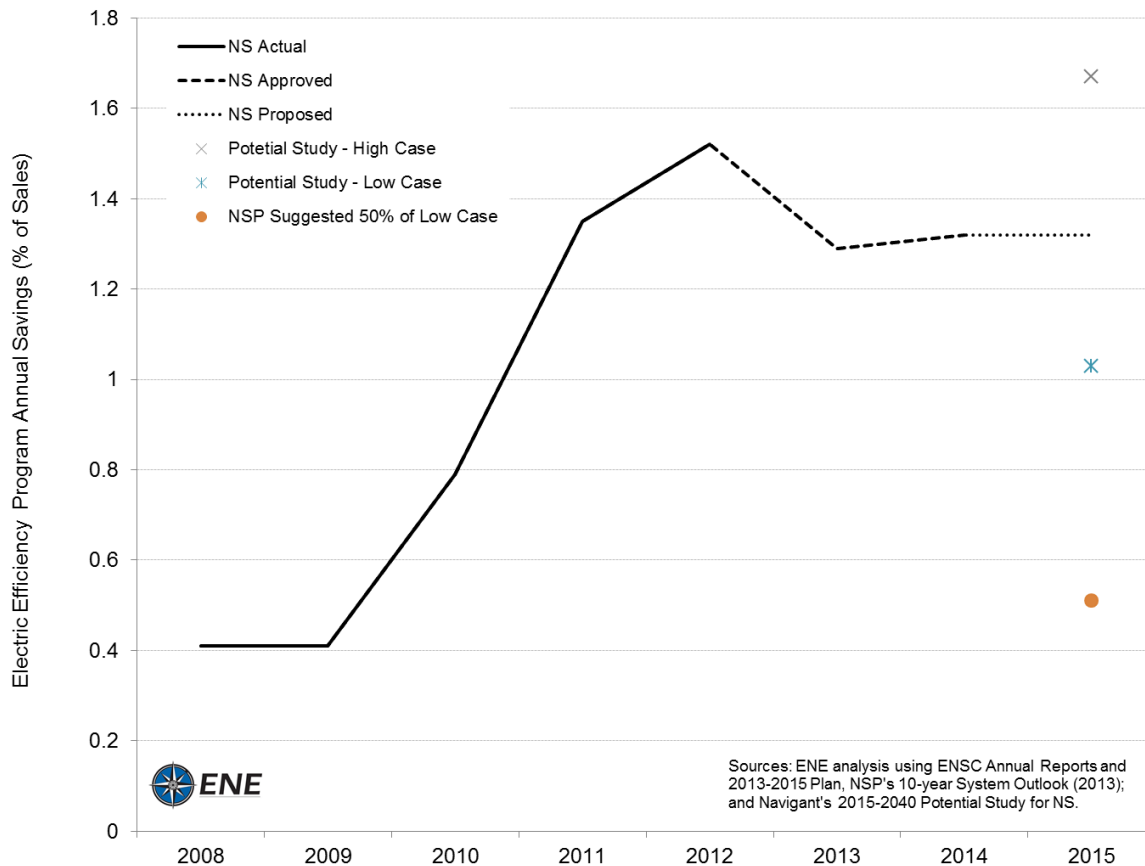
### 1. Proposed DSM Levels

ENE supports modeling the High and Low scenarios from the Navigant potential study. ENE strongly recommends that the Mid scenario be included as the third DSM scenario.

The 50% Low case would be a significant reduction compared to recent levels of effort, bringing the province back to approximately 2008/09 levels based on savings as a percent of 2012 sales (see Figure 1). Further, the program costs for the High, Mid, and Low scenarios were established through detailed measure characterizations and achievable potential based on different incentive levels. It is unclear how NSPI would develop first-year or levelized unit costs for the 50% Low scenario.

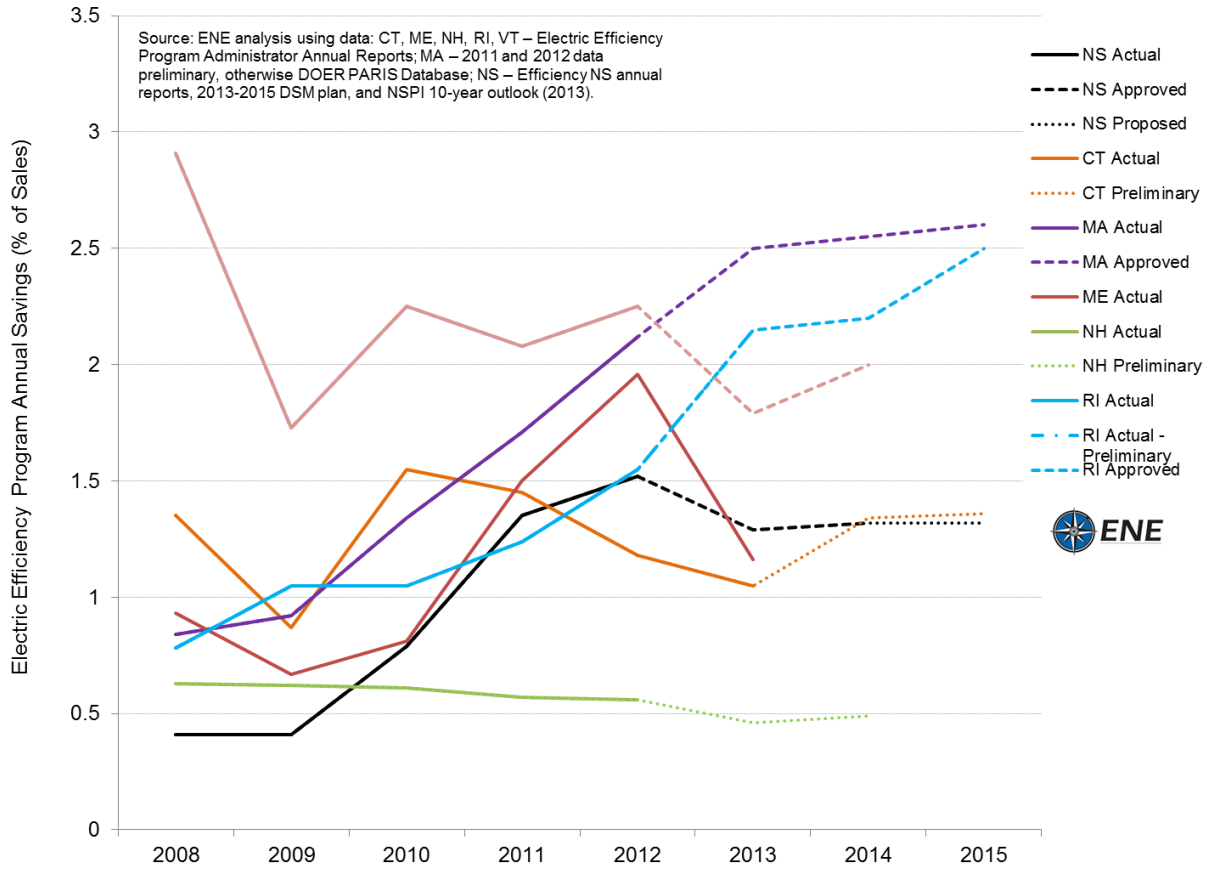
Typically, IRP processes seek to procure the least cost resources first to minimize utility revenue requirements and thus ratepayer costs. Savings levels in the High scenario have been deemed cost-effective by the Navigant study. While it is prudent to consider lower cost efficiency resources and levels, the 50% Low scenario sets an arbitrarily low cap on DSM that would preclude significant opportunities to bring low-cost efficiency resources into the NS system, thus reducing the efficacy of the planning process.

**Figure 1: Nova Scotia Annual Electric Efficiency Program Savings (Actual, Approved, and Proposed) and NSPI's Suggested DSM Scenarios in 2015 – All Savings Levels as a % of 2012 Electricity Sales**



It is also worth noting that Nova Scotia was on track to be a North American leader in terms of procuring cost-effective energy efficiency (see Figure 2). In 2011 and 2012, Nova Scotia's savings levels (as a % of 2012 sales) were in-line with those of Rhode Island, which has just approved a three-year plan with annual savings targets of 2.6% by 2017 (equal to Massachusetts' 2015 target). Massachusetts is currently ranked #1 in ACEEE's 2013 assessment of energy efficiency efforts in the US. As shown by Figures 1 and 2, the 50% Low scenario would be a significant backslide compared to current efforts, and relative to leading jurisdictions.

**Figure 2: Nova Scotia Annual Electric Efficiency Program Savings as a % of 2012 Sales Compared to Actual and Proposed Savings Levels in the New England States (2008-2015)**

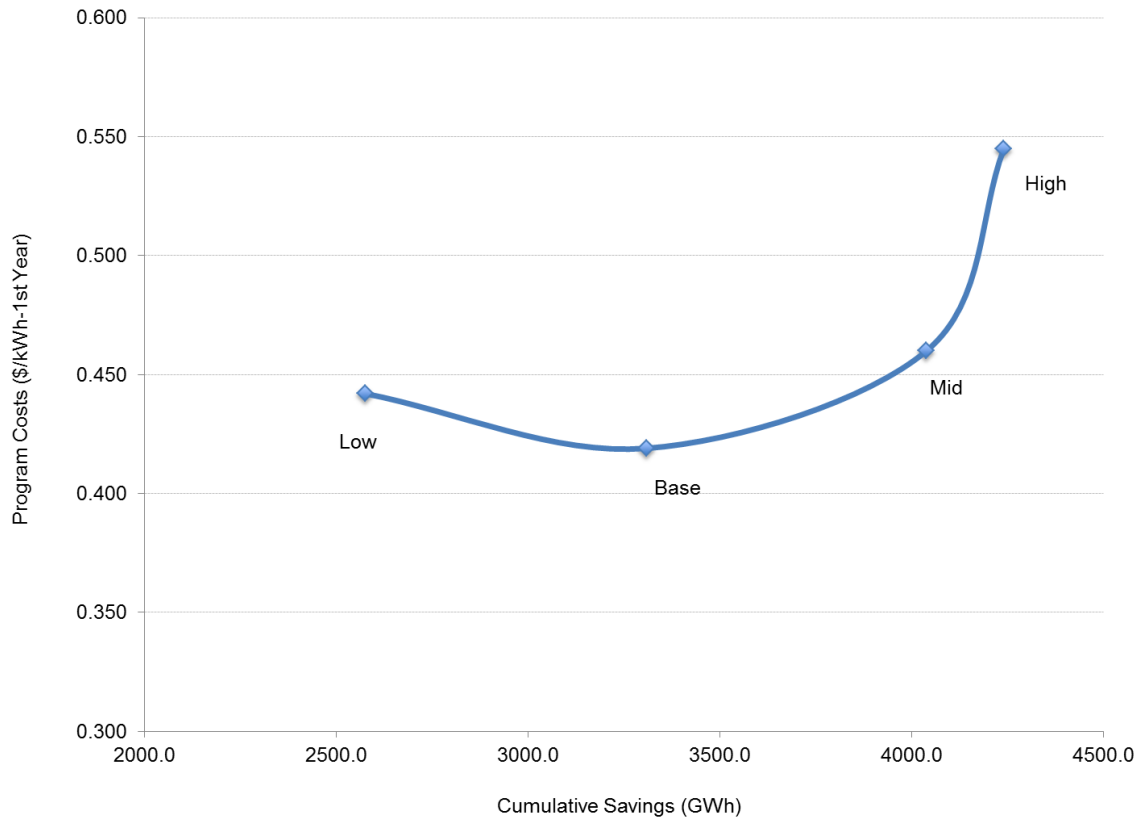


The Mid scenario delivers almost as many cumulative savings as the High scenario at a first-year unit cost that is only slightly higher than that of the Low scenario (see Figure 3). The optimal amount of DSM in the IRP will be the highest block of energy savings that are lower than supply-side costs. Only including scenarios with low savings and higher costs than the base case (i.e. Low scenario), or high savings but significantly higher costs (i.e. High scenario) makes it less likely that the IRP will be able to find an optimal level of DSM.

The Mid scenario provides significant energy savings without running into significant diminishing returns with respect to savings per dollar invested. Not including this scenario will likely reduce the model's ability to find the most cost-effective level of DSM from a system perspective. ENE also fully supports continuing to include the High scenario since that level of

DSM could still be cheaper than the supply-side options, as has been the case in other jurisdictions.

**Figure 3: Potential Study Scenarios First-year Unit Program Costs vs. Cumulative Savings Levels**



## 2. Total Resource Cost Perspective

**ENE again strongly recommends that NSPI consider DSM resources from a utility cost perspective.**

In a process that is intended to inform future investments based on utility system revenue requirements, it is not appropriate to factor in costs that will not be borne by the utility. Program administrative and incentive costs should be included; however, the dollars that would come directly out of the pockets of households and businesses should not be claimed by NSPI as a utility cost.

Assessing DSM from a total resource cost perspective in the IRP – i.e. including both program and participant costs – is biased against DSM and effectively places a premium on supply-side resources.

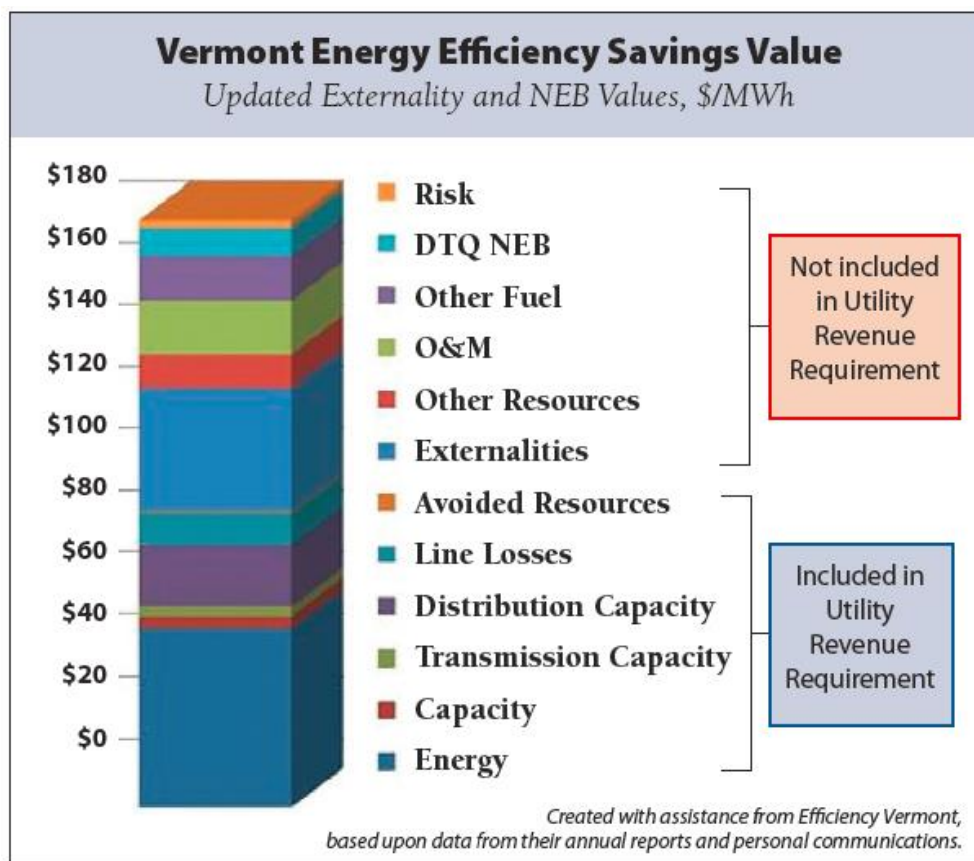
If NSPI uses the total resource cost approach based on the fact that the TRC test is its preferred screening test, then it is only fair and reasonable to also factor in Other Program Impacts (OPIs). The Board’s consultant has released a report that states:

“The TRC test includes the impacts to both the utility and the program participant, and therefore should account for all of the costs and all of the benefits that are experienced by the utility and the participants. This requires including all of the participant-perspective OPIs.”

And;

“If a state chooses not to account for OPIs, then it should screen for cost-effectiveness using the PAC test.” (Synapse, 2013)<sup>1</sup>

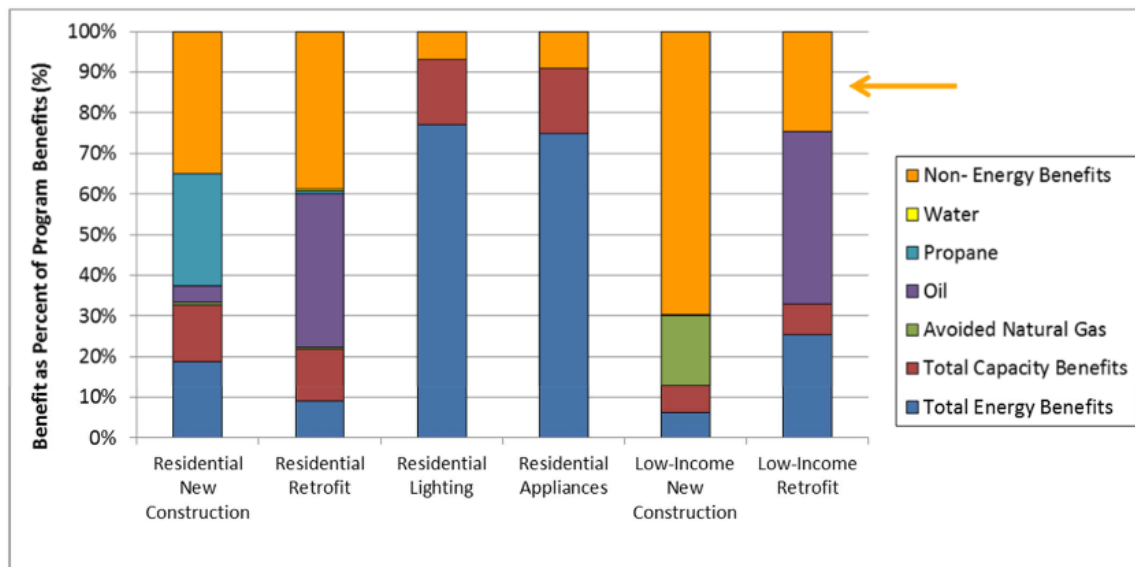
Appendix C of the Synapse study includes examples of OPIs – such as other fuel and water savings and improved comfort – and values for Non-Energy Benefits (NEBs) that have informed the NEB values incorporated into utility planning processes in Massachusetts and Rhode Island. Also, below is a visual taken from a Regulatory Assistance Project (RAP) report that shows the components of Efficiency Vermont’s energy efficiency savings value.<sup>2</sup>



<sup>1</sup> Synapse Energy Economics, Inc. (2013, October 2). *Energy Efficiency Cost-Effectiveness Screening in the Northeast and Mid-Atlantic States*. Available at: [http://www.ncep.org/Assets/uploads/files/emv/emv-rfp/emv-products/EMV\\_Forum\\_C-E-Testing\\_Report\\_Synapse\\_2013%2010%2002%20Final.pdf](http://www.ncep.org/Assets/uploads/files/emv/emv-rfp/emv-products/EMV_Forum_C-E-Testing_Report_Synapse_2013%2010%2002%20Final.pdf)

<sup>2</sup> Regulatory Assistance Project (2013, September). *A Layer Cake of Benefits: Recognizing the Full Value of Energy Efficiency*. Available at: <http://www.raonline.org/document/download/id/6739>

Including OPIs, which NSPI should if it wishes to use the TRC approach, will mean a significant increase over the utility’s typical avoided cost value. The following visual – taken from a presentation by Tim Woolf of Synapse – shows that avoided energy and capacity costs are generally only a fraction of the total program benefits delivered by residential and low-income energy efficiency programs in Massachusetts.<sup>3</sup> The majority of the benefits come from other energy and water savings and NEBs.



If NSPI does not yet have research related to OPIs, an alternative to quantifying and including all the other fuel and water savings and NEBs in this IRP process would be to include only those components associated with the PAC test (i.e. assess DSM resources from a utility perspective). This approach could act as a proxy for a comprehensive TRC approach.

### 3. Discount Rate

**ENE again recommends using a discount rate that is equal to a recent average of the historic yields from a ten-year government bond.**

The utility weighted avoided cost of capital, even the after-tax WACC, is too high relative to the low risk of efficiency programs. A lower discount rate places energy efficiency on a level playing field with supply-side options.

A summary of the discount rates used in cost-effectiveness test in six US states is summarized by Synapse on page 9 of its report – *Energy Efficiency Cost-Effectiveness Screening in the Northeast and Mid-Atlantic States* (referenced above).

<sup>3</sup> Presentation by Tim Woolf of Synapse to the NEEP EM&V Forum Annual Public Meeting (2013, December 12) – *Survey of Energy Efficiency Screening Practices in the Northeast and Mid-Atlantic*. Available at: [http://www.neep.org/Assets/uploads/files/emv/Annual-Public-Meeting/Cost-Effectiveness\\_Synapse\\_EMV-Forum-APM\\_2013Dec12.pdf](http://www.neep.org/Assets/uploads/files/emv/Annual-Public-Meeting/Cost-Effectiveness_Synapse_EMV-Forum-APM_2013Dec12.pdf)