Ecology Action Centre

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NOVA SCOTIA UTILITY AND REVIEW BOARD

IN THE MATTER OF: **THE PUBLIC UTILITIES ACT**

- and -

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

ECOLOGY ACTION CENTRE FINAL SUBMISSION

July 8, 2015

Chairman Gurnham, Vice Chair Deveau, Members of the Board,

SUMMARY

The Ecology Action Centre wishes to:

(1) express support for the stakeholder settlement agreement presented to the Board;

(2) articulate that the proposed settlement agreement represents a significant concession in the interests of short-term affordability, given its deviation from anticipated activity levels established only a year ago in the Integrated Resource Plan;

(3) connect the calculation of avoided costs to the quantifiable benefit of programs;

(3) reaffirm the necessity of mid-course adjustments;

(4) suggest a more appropriate discount rate for DSM programming; and

(5) submit our request for cost-recovery.

STAKEHOLDER SETTLEMENT AGREEMENT

The Ecology Action Centre urges the Board to support the Settlement Agreement signed by the Ecology Action Centre, EfficiencyOne, Small Business Advocate, Consumer Advocate, and Affordable Energy Coalition (Exhibit 61).

The Settlement Agreement builds on the Partial Settlement Agreement signed by all stakeholders (those listed above plus Nova Scotia Power and the Industrial Group) and presented in Exhibit 62. Exhibit 61 presents a few areas of majority consensus the EAC wishes to highlight.

DSM Investment Level

At $113.5 million, the Settlement Agreement proposes a level of investment $8 million lower than the level of investment initially proposed by E1 ($121.5 million) and $69.1 million lower than the mid-level DSM investment ($182.6 million) derived in the Navigant potential study and supported by the Board's consultants in the Integrated Resource Planning process.

E1 proposes to absorb an $8 million budget reduction while maintaining its targets of saving 405.9 GWh and providing 62.5 MW in incremental annual net demand savings over the three-year period. The Settlement Agreement suggests a graduated increase in annual DSM spending from 2016-2018 so as to further minimize potential impacts year over year.

Testimony from Ms. Vincent and Mr. Dunsky (June 16, 2015) clarifies the challenges E1 will face attempting to achieve proposed savings goals with reduced investment. E1 will have to be painstaking in seeking out the most strictly cost-effective savings. This may seem ideal on the surface, but in fact it will create a situation where low-income programming is jeopardized along with other programming that may have slightly higher upfront costs but be desirable for reasons of social imperative. With a higher level of investment, flexibility is created for such programs to be pursued while costs are balanced by particularly cost effective programs.

EAC asserts that the impacts to programming likely to result from the level of investment put forth in the Settlement Agreement represent the maximum program impacts acceptable in the interest of 'affordability'.

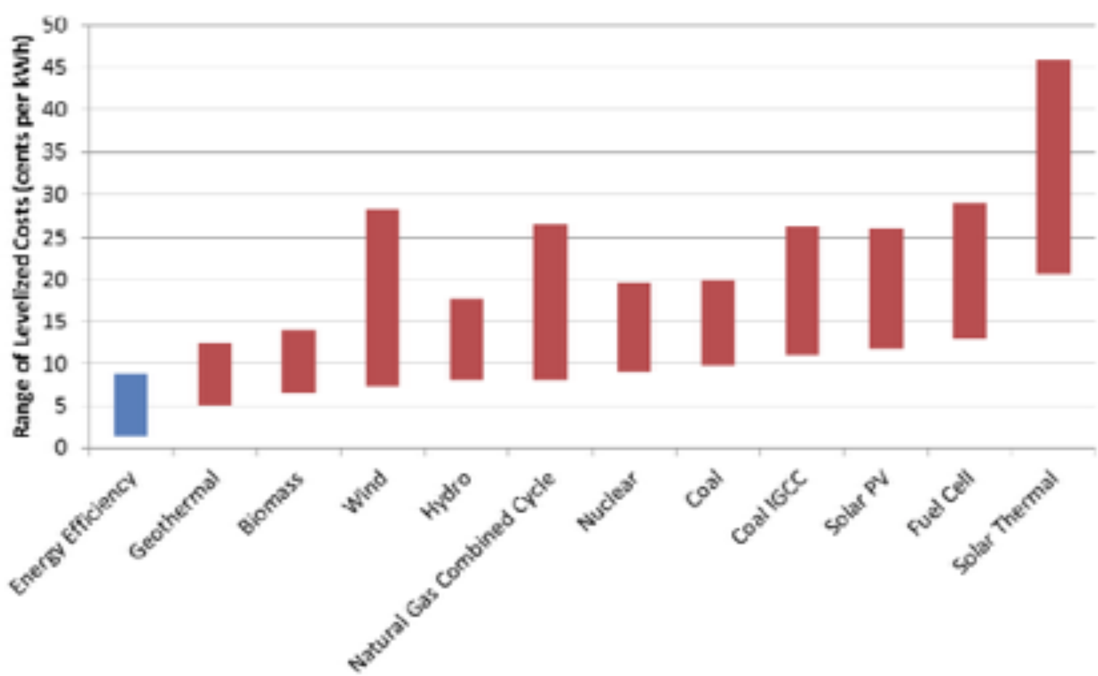
Much has been made of affordability throughout this hearing, particularly in the form of potential implications for electricity rates from DSM investment levels. While it is of course necessary to consider impacts to consumers, EAC strongly emphasizes the following:

1) As outlined by the exchange between Mr. Gogan and Mr. Blunden (June 18, 2015), it has always been in the Board's mandate to seek the lowest cost option for ratepayers. In other words, the consideration of affordability is nothing new for the Board. This fact is in large part responsible for

the existence of DSM programming in Nova Scotia in the first place: the Board found it to be the lowest cost investment for ratepayers. DSM is already the cheapest element of our electricity system. Asking it to keep getting extra cheap while increasingly putting programming at risk is not in current or (in particular) future ratepayers' best interests.

2) EAC spotlights Mr. Blunden's acknowledgement in testimony (June 18, 2015) that consumers experience the impacts of power costs through electricity bills rather than electricity rates. Mr. Blunden goes on to describe the negative perception Nova Scotians have of rising electricity rates. EAC submits it is the role of the Board and stakeholders to consider the issue of affordability inasmuch as it directly impacts consumers through electricity bills. Negative perception can have troubling consequences but rests outside of the purview of this proceeding and is better addressed in other realms of public debate and dialogue.

Exhibit 24 Comparison of the Costs of Energy Efficiency & New Generation for Nova Scotia[57]



(From ICF International study for the Nova Scotia Department of Energy, 2014)

Small Business Energy Study

As outlined in the Evidence provided by John Athas (Exhibit 41) on behalf of the Small Business Advocate (SBA), some constituents of the small business sector fail to participate in and benefit from DSM programs they pay for because of the operating realities of the sector. EAC applauds the proposal of a Small Business Energy Study that might calculate better means of aligning efficiency programming with the needs of this sector. There is no doubt that DSM programming has room to grow and improve; shortcomings must not be viewed as justifications for eliminating programming but as opportunities to recalibrate and fine-tune.

Principles of Equity

EAC supports the Affordable Energy Coalition's closing remarks on the Principles of Equity clause of the Settlement Agreement.

THE LIMIT OF ACCEPTABLE COMPROMISE

The initial proposed investment levels offered by each of the parties to the Supply Agreement are too low to maximize benefits of DSM to the Province. Even E1's starting proposal would mean a huge divergence from what Nova Scotia could achieve cost-effectively.

EAC agrees with the following statement from Tim Woolf's June 18 testimony:

> "I think that, based upon what I've seen in the IRP and in the limited Rate and Bill Impact Analysis from EfficiencyOne, that the budgets could actually be expanded above what EfficiencyOne's proposed with very small rate impacts that are well worth it, given the cost reductions we'd see over the medium and the long term."

That being said, stakeholders have put forward a Settlement Agreement that attempts to balance long-term cost-effective savings and short-term affordability considerations. EAC supports the Settlement Agreement as an absolute *minimum* level of investment required to avoid significant near-term rate impacts while also protecting long-term bill stability and maintaining momentum on DSM in the province. EAC emphasizes that this plan deviates substantially from the guidance provided by the IRP and reaches the limit of acceptable compromise.

The Alternate spending plan offered Nova Scotia Power is draconian in its cuts to efficiency programming. Programming at the minimal cost per megawatt hour suggested by Nova Scotia Power would entail little or no service to hard-to-reach sectors. Those who have been underserved would likely become unserved, resulting in a difficult situation for low-income people, renters, and other residential ratepayers whose resources help to fund programming.

AVOIDED COSTS AND BENEFIT

Tim Woolf's evidence (Exhibit 37) on behalf of Synapse and as the Board's consultant suggests it would be appropriate for the Board to consider avoided costs beyond avoided capacity costs for DSM. Specifically, Mr. Woolf suggests the Board might consider avoided energy costs, avoided transmission costs, avoided distribution costs, avoided environmental emissions.

In a research report (2015) conducted for the American Council for and Energy-Efficient Economy (ACEEE), Brendon Baatz calculates and compares the benefits to program participants and nonparticipants alike of energy efficiency programs in over half of US states (http://aceee.org/sites/default/files/publications/researchreports/u1505.pdf).

Everyone Benefits: Practices and Recommendations for Utility System Benefits of Energy Efficiency finds that the majority of benefits accrue to participants and non-participants as a result of avoided costs as follows:

Table ES1. Utility system benefits of energy efficiency

Benefit	Description
Avoided cost of energy	Avoided marginal cost of energy produced
Avoided cost of capacity	Avoided cost of generating capacity
Avoided cost of transmission and distribution	Value of avoiding or deferring the construction of additional transmission and distribution assets
Avoided cost of ancillary services	Value of avoided ancillary services (e.g., spinning reserves) required to operate
Avoided cost of environmental compliance	Avoided cost of compliance with existing and future environmental regulations
Demand reduction induced price effects (DRIPE)	Value of energy or capacity market price mitigation or suppression resulting from reduced customer demand
Utility nonenergy benefits	Value of cost savings to a utility stemming directly from energy efficiency programs, e.g., reduced arrearage carry costs, insurance premiums, cost of reconnections
Avoided cost of renewable portfolio standards	Value of a reduced cost of compliance with renewable portfolio standards as electricity sales decrease

Baatz' description of beneficial avoided costs overlap with Mr. Woolf's additional avoided cost considerations.

Concerns over the relative benefit to program participants and nonparticipants have arisen again and again throughout this hearing. EAC suggests those concerns are in part due to a failure to consider a broader range of avoided costs. When avoided costs are viewed through a wider lens, it becomes easier to identify the benefits of DSM programming.

MID-COURSE ADJUSTMENTS

The ability to adjust to changing conditions is critical to effective energy efficiency programming. The planning cycle for a three-year agreement generally starts one to two years in advance of the three-year cycle, meaning that plans are being made as many as five years ahead of implementation of the last year of the agreement. Best-practice programming allows for mid-course correction, understanding that changes in economic conditions, changes in technology or pricing, changes in consumer attitudes, and even climate events can each change what is the most cost-effective opportunity.

Making processes for mid-course corrections unduly burdensome has two effects: It makes programming less flexible and it drives costs up. In the current cycles of programming, such a restriction could eliminate the possibility for smart action based on the results of the research currently underway on the needs of low-income renters. Should that research provide productive paths forward to effective programs to assist these underserved Nova Scotians, there should be an easy path to create and implement cost-effective programming as quickly as possible, rather than waiting until the next contract period.

DISCOUNT RATES

EAC argues that too much attention has been paid in the current hearings to the issue of "unit cost" as a decision criteria among programs and measures. Cost per megawatt hour is a poor focus because of its lens on first-year savings only rather than a lifetime stream of savings. How those future benefits are valued in cost-effectiveness screening is an important area of policy rather than a prescriptive financial equation.

Energy efficiency generally requires upfront costs to gain future savings. Costs now are compared to benefits later using net present value, which is highly influenced by discount rate used. In the early days of utility DSM programming, it became routine to use utility cost of capital as the discount rate. While utility cost of capital is an appropriate discount rate for utility-based screening, it is not the appropriate discount rate for screening for society as a whole.

The Vermont Public Service Board (VT PSB) considered this issue in 2012 (http://psb.vermont.gov/sites/psb/files/orders/2012/2012-4/OrderReCostEffectivenessScreeningofHeating.pdf, p. 20-21) and decided the following:

> "We determine that it is more appropriate to use a societal discount rate, and that three percent (real dollars) is a reasonable proxy for the societal discount rate at this time."

EAC believes it is worth taking this issue, and how it has been approached in a comparable jurisdiction, into account while considering 'affordability' now and how it may be calculated for DSM programs in the future.

COST RECOVERY

As a non-profit organization, EAC respectfully submits the request to recover costs in the amount of $27,500 . Details are appended below.

CONCLUSION

Nova Scotia's model of energy efficiency program provision has been a leader in Canada. At this time, when more efficiency, not less, is needed to reduce effects on climate, that leadership needs to be encouraged rather than hindered.

The EAC wishes to acknowledge the high level of dialogue between stakeholders throughout the hearing process. Particularly given the precedent-setting nature of this proceeding, EAC is encouraged the majority of stakeholders were able to reach consensus on several issues. We hope this tone of open and good-faith negotiation characterizes the lead-up to the 2019-2021 DSM Plan hearing.

Sincere thanks,

Catherine Abreu, EAC

Jamie Thomson, EAC

Elizabeth Chant, VEIC

COST RECOVERY DETAILS

Vermont Energy Investment Corporation: $20,000 (see invoice)
Jamie Thomson, Consultant: $1,500 ($50/hr x 30hrs)
Ecology Action Centre: $6,000 (see spreadsheet)
TOTAL: $27,500

Invoice

Vermont Energy Investment Corporation

July 2, 2015
Invoice No: 9301272

Catherine Abreu
Ecology Action Center
2705 Fern Lane
Halifax NS B3K 4L3
Canada

4064-0000 Ecology Action Centre

Professional Services from April 6, 2015 to June 30, 2015
Professional Personnel

	Hours	Rate	Amount	
Principal Consultants				
Chant, Elizabeth M	83.25	190.00	15,817.50	
Foster, Rebecca	.75	190.00	142.50	
Senior Analyst				
Juillerat, Juliette	4.50	150.00	675.00	
Analyst				
Eckert, Claus	42.50	130.00	5,525.00	
Totals	131.00		22,160.00	
	1.0 times	**22,160.00**	**22,160.00**	
	1.0 times	**22,160.00**	**22,160.00**	
Total Labor				**22,160.00**

Reimbursable Expenses

Travel	682.71	
Travel-Mileage	116.16	
Travel-Other	91.08	
Lodging	357.93	
Meals	110.93	
Total Reimbursables	**1,358.81**	**1,358.81**

Indirect

Indirect Fee	9.80 % of 1,358.81	133.16	
Total Additional Fees		**133.16**	**133.16**

Billing Limits	**Current**	**Prior**	**To-Date**	
Total Billings	23,651.97	0.00	23,651.97	
Limit			20,000.00	
Adjustment				**-3,651.97**
		Total this Invoice		**$20,000.00**

VEIC Federal Employer ID No. 03-0304418

Please contact Peg Adorisio with any questions regarding this invoice at 802-540-7789 or padorisio@veic.org

Salaries	
Catherine Abreu, Energy Coordinator	
Subtotal Salaries	*5,000*
Payroll Taxes & Employee Benefits	*355*
Subgrants to other organizations	
none	
Subtotal subgrants	*0*
Travel, Conferences & Meetings	
none	
Subtotal travel conferences and meetings	*0*
Rent, utilities and communication costs	
none	
Subtotal rent, utilities and communication costs	*0*
Other Professional Services	
none	
Subtotal other professional services	*0*
Overhead (1) Standard 15% EAC Administration Cost	*735*
Total Project/Program Budget	**6,090**