2015 **M06733**

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**

AFFORDABLE ENERGY COALITION FINAL STATEMENT

Introduction

The Affordable Energy Coalition urges the Board to support the Settlement Agreement signed by the Affordable Energy Coalition, EfficiencyOne, the Consumer Advocate, the Small Business Advocate and the Ecology Action Centre (Exhibit 61), which incorporates the Settlement Agreement signed by the same 5 interveners/applicants plus NS Power and the Industrial Group (Exhibit 62).

Two provisions of that agreement are especially important from our point of view. We believe they are necessary in order to ensure that low income renters will have access to efficiency services over the 3 year term of the Electricity Efficiency Services contract and beyond. The first is clause 9, “Principles of Equity” and the second is clause 2, “DSM Investment Levels”. We will also comment briefly on other elements of the agreement.

Principles of Equity: The proposed principles of equity were supported by evidence supplied by four expert witnesses: George Foote and Paul Chernick (for the Nova Scotia Consumer Advocate)[1]; Tim Woolf (for the Counsel to the Utility and Review Board)[2]; and Elizabeth Chant (for the Ecology Action Centre)[3]. Low income households pay for efficiency services in their

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[1]Evidence of George Foote on behalf of the Nova Scotia Consumer Advocate, June 2, 2015, pp 11 and 12. Direct Testimony Of Paul Chernick On Behalf Of The Consumer Advocate, Resource Insight Inc. - June 2, 2015, pp 34 and 38-9.

[2] Direct Testimony of Tim Woolf On The Topic of The EfficiencyOne 2016-2018 DSM Plan On Behalf of Counsel to Nova Scotia Utility and Review Board - June 2, 2015, pp 28 and 30-32.

[3] Direct Evidence of Elizabeth Chant Vermont Energy Investment Corporation On Behalf of Ecology Action Centre - June 2, 2015, p 14.

electrical bills as do other ratepayers. It is a fundamental principle of fairness that they should have access to efficiency services they help pay for. The fact that high electricity costs place a greater burden on low income households only underscores the importance of this principle when it comes to efficiency services. Low income renters are excluded from the HomeWarming program paid for by NS Power's charitable donation.[4] They must be served through the efficiency services funded by the supply agreement between NS Power and EfficiencyOne. Adopting the proposed Principles of Equity will help make this possible.

DSM Investment Levels: We believe the DSM investment levels recommended by the Settlement Agreement in clause 2 are the minimum necessary to make efficiency services for low income rental households possible. Mr. Dunsky testified that EfficiencyOne will have difficulty meeting its goals with this reduced level of funding. Low income services are of necessity more expensive to overcome the financial and other barriers low income households face. Efficiency funding above the amount recommended in the Settlement Agreement would place low income programming on a stronger footing. Efficiency funding below the recommended amount will severely undermine the likelihood of low income rental programming being initiated in the next 3 years.

Even the Direct Install program that offers limited efficiency help for low income renters is not likely to survive the program reductions that NS Power's $22 million recommendation would entail or the slightly higher amount advocated for by the Industrial Group. NS Power's "preferred option" in Appendix B of June 1st evidence explicitly reduces the funding for residential programming by 70% and eliminates residential lighting which is the largest portion of the Direct Install program that benefits low income renters.

More fundamentally, the low income rental research and program development that is underway right now will have a much bigger impact on low income renters. A new program for low income renters is much less likely if funding drops below the recommended $113.5 million for 2016-18. If low income rental programming is crippled before it starts, the consequences are likely to be long term – we expect that funding following the current 3 year agreement would also be unlikely. Undermining funding for low income rental programming in the short term or the long term is unacceptable in our view.

Context: Energy burden and efficiency

As noted in our Opening Statement, we are strong supporters of efficiency programming and funding for expanded programs for low income rental accommodations within the E1 proposal. Low income households are more severely affected than most by electricity prices that have

[4] 2016-2018 DSM Plan (NSUARB M06733) NSPI Responses to Affordable Energy Coalition Information Requests, AEC IR-1 and response, page 1.

risen dramatically over the last decade, primarily due to increased fossil fuel prices. They face the highest "energy burden", the % of income they pay on energy services. They suffer the consequences of energy poverty more than any other sector in NS. The lowest income quintile in NS pays 11.8% of income on energy compared to an average of 3.8% for all Nova Scotians and as little as 2.5% at the top end of the income scale. About one-half of those costs are for electricity[5]. Efficiency is one of the best ways to help these households, by lowering their energy use and therefore their bills.

Settlement Agreement signed by 5 intervenors/applicants:

a. *Principles of Equity – Clause 9*

Clause 9 of the Settlement Agreement reads: **"All ratepayers are entitled to an equitable opportunity to participate in DSM programs. Low income tenants and homeowners as well as marginally viable commercial and industrial customers are some of the most difficult and most expensive customers to serve. Services that recognize the barriers these customers face must be offered so they can participate. Cost effectiveness screening must take into account the extra costs involved."**

The issues from the Issues list for this hearing that this statement addresses are: Issues 5-b – Affordability, 5-c – Cost effectiveness screening; 5-g Evaluation and reporting, and Issue 11 – Compliance with Electricity Efficiency and Conservation Restructuring (2014) Act .

In this first 3 year contract under the new system adopted by the 2014 Electricity Efficiency and Conservation Restructuring Act, principles will be established that will influence the decisions that result from this hearing as well as the decisions made at future hearings.

Equity and Low Income Households

For reasons very well explained in Alice Napoleon's July 14, 2014 testimony for the Utility and Review Board hearing on Efficiency Nova Scotia's 2015 DSM Plan, low income programming is more expensive because of the need for 100% financing and other incentives - but it also has greater impact on the lives of its' recipients and those recipients have the same right as other customers to have access to efficiency services.[6]

[5] The figures for electricity are: 5.8% for the lowest quintile, 2.1% for all households and 1.3% for the top quintile. All figures for the year 2011 from Statistics Canada Table 203-0022 and Survey of Household Spending Household Characteristics.

[6] Case M06247 - Evidence of Alice Napoleon On Behalf of Counsel to the Nova Scotia Utility and Review Board On the Topic of the Efficiency Nova Scotia 2015 DSM Plan, July 14, 2014 – pages 5-7.

Issue 5a – Affordability and Issue 5-c – Cost effectiveness screening:
Four expert witnesses in this year's hearing for the 2016-18 Electrical Efficiency Supply Agreement argued that equity of access must be recognized as an important element of affordability and that cost effectiveness screening must take equity into account in the new system. They have specifically referred to low income households as being one group that is difficult and expensive to serve and offered some suggestions about how to ensure they have access to efficiency services.

See Appendix A for excerpts from evidence supplied by the four experts, with key phrases that we have bolded and yellow highlighted. The four expert witnesses were: George Foote and Paul Chernick (for the Nova Scotia Consumer Advocate)[7]; Tim Woolf (for the Counsel to the Utility and Review Board)[8]; and Elizabeth Chant (for the Ecology Action Centre)[9].

The Affordable Energy Coalition believes that it is essential that equity of access be considered a key element of affordability.

Regarding cost effectiveness screening, Clause 7 of the Settlement Agreement reads:
"Through collaboration within the DSM Advisory Group, the parties agree to work to achieve consensus as to the methodology and assumptions of the cost-effectiveness screening test to be applied to future DSM Resource Plans."

We believe it is essential that the DSM Advisory Group be required to take Clause 9 into account while determining the methodology and assumptions of the cost effectiveness screening test to ensure that programs for hard to serve customers including low income households are not arbitrarily excluded due to their higher costs.

Issue 5-g Evaluation and reporting
The Settlement Agreement signed by all parties discussed mid-course adjustments under this heading (clauses 5 e and 5g). The main concern with mid-course program changes was the possibility of rate class impacts.

In view of the research being done this year on low income rental programming, we believe it is essential that there is sufficient flexibility for a new low income rental program to be funded during the 2016-18 period beginning with pilot projects in 2015 and growing to a fully funded program by 2018. This will involve a significant mid-course program change.

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[7] See footnote 1, page 1.
[8] See footnote 2, page 1.
[9] See footnote 3, page 1.

This kind of mid course adjustment can only be accommodated within the residential rate class if the funding for that rate class is substantial. EfficiencyOne proposes approximately 50% of program funding being directed at residential programs. The witnesses quoted in Appendix A argued that a substantial residential program is required for equity reasons – to ensure as many ratepayers as possible have access to efficiency services.

To enable growth of a new low income rental program as a mid-course program adjustment, the Affordable Energy Coalition believes it is essential that there is substantial funding for residential programming, in order to enable such a change within the residential rate class.

Issue 11 – Compliance with Electricity Efficiency and Conservation Restructuring (2014) Act .

Section 79-L subsection 9 of the Act states that "The Board's assessment of the proposed electricity efficiency and conservation activities for the purpose of the approval must take into account their affordability to Nova Scotia Power Incorporated's customers, along with any other matters considered appropriate by the Board or as may be prescribed."

The Affordable Energy Coalition believes equity of access is an important element of affordability as argued in the opening part of this section. Even if for some reason this interpretation is rejected, "any other matters" provides the Board with ample flexibility to include equity of access as an essential element of how the scale and type of programming in electricity supply agreements will be determined.

The Affordable Energy Coalition therefore believes a directive requiring equity consideration in program cost effective testing will support the intent of the act and be in compliance with the Act.

b. DSM Investment Level – Clause 2 of the Settlement Agreement

Clause 2 of the Settlement Agreement reads:

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

"i) $36.9 million in 2016
"ii) $37.8 million in 2017
"iii) $38.8 million in 2018"

The issues from the Issues list for this hearing that this statement addresses are: Issue 5a – Program Development and the central question of the agreed contract cost for electricity efficiency supply services.

As we suggested in our Opening Statement, there is a compelling case for a substantial new program to provide major efficiency upgrades for low income renters with high electricity bills. Approximately 50% of low income households are renters.[10] Low income homeowners are already well served by the HomeWarming program. Services for renters are much smaller and less well developed. The reason is simple: complexity. Renters have landlords and live in a wider variety of accommodations than owners.

The 2015 Settlement Agreement[11] stated in clause 8a that "***ENS shall dedicate a portion of its 2015 DSM Enabling Strategies to research in the area of efficiency upgrades in electrically heated low income rental accommodation in relation to a comprehensive, long term plan for major efficiency retrofits in low income rental accommodation.***"

This research is underway now. But this hearing is determining funding for the next 3 years so there is a timing problem. The research could not be completed in time for Efficiency One's February submission or even for this hearing date.

It is our contention that during the 2016-18 contract period, there must be funding to enable programs recommended by this year's low income rental research to be implemented. This should start with pilot projects next year and should result in full program implementation by the year 2018 on a scale similar to the low income homeowner program. It is our view that this is an important element of equity of access, extending the benefit of major efficiency savings to one half the low income population that has had very limited access to efficiency measures to date.

To meet the goal of substantial efficiency savings in low income rentals, sufficient funding is critical. We believe a robust budget is essential to enable EfficiencyOne to make these new programming initiatives possible. Philippe Dunsky stated in cross examination that he was concerned about EfficiencyOne's ability to deliver the proposed savings with the reduced budget in the Settlement Agreement. Several witnesses concluded that a budget on the scale proposed by NS Power or the Industrial Group would shred residential programming. Such a drastic reduction would make a new low income rental program highly unlikely if not impossible. It would also threaten the less substantial direct install program that benefits low income households.

[10] See EfficiencyOne Reply Evidence, June 9, 2015 page 12: " Statistics Canada's 2013 Survey of Household Spending indicates that 60 percent of Nova Scotians in the lowest income quintile (earning, on average, $18,289 before tax per year, per household) are renters." Some low income renters who would be eligible for low income efficiency programming would be in the 2nd lowest income quintile, where renters are a lower % of households. Accurate estimates of the % of low income households that are renters are being developed by this year's research into low income rental programming.

[11] UARB September 8 2014 Decision and Order approving Efficiency NS' Electricity Demand Side Management Plan for 2015. Clause 8a of the Settlement Agreement included in this approval.

NS Power's argument about the effect of increased rates on non-participating low income households is also relevant to the question of affordability. While low income households have the highest energy burden as already explained, they pay the lowest average energy costs. In 2011, the lowest income quintile paid an average of $850/year on electricity.[12] With rising rates, this would be about $1,000/year in 2015 or $85/month. The potential increase in rates in the range of 1.4% to 1.9% that would arise from a $37.5 million/year efficiency investment compared with NS Power's $22 million/year would add about $1.50/month to an average low income rental electricity bill. This is a small increase in comparison with the savings that each household would be eligible for through a new low income rental program and a robust Direct Install program, over time.

The Affordable Energy Coalition urges the Board to accept the funding level proposed in the partial Settlement Agreement in order to ensure that a new low income rental program can be implemented over the course of this agreement and the direct install program can continue to assist low income households in reducing their bills.

c. *Other issues in the Settlement Agreements*

i. NS Power's Charitable Contribution

The Affordable Energy Coalition is represented on the advisory group for the HomeWarming program that uses NS Power's charitable contribution to fund substantial efficiency retrofits in electrically heated homes owned by low income households. We are pleased that EfficiencyOne and Clean are coordinating the two parts of this program well. However we believe there would be value in having the results of the electricity portion of the program reported to the UARB to coordinate oversight of electrical DSM programming, as encouraged by clause 10 of the Settlement Agreement.

*ii. **Performance Targets, Indicators and Thresholds** (Clause 3 of the Settlement Agreement signed by 7 intervenors/applicants)*

Setting performance targets over 3 years rather than annually as agreed in this clause is very important for enabling mid-course flexibility and in particular for enabling introduction of a new low income rental program. We urge the Board to approve this recommendation.

[12] Statistics Canada Table 203-0022 and Survey of Household Spending Household Characteristics, previously cited.

Conclusion

The Affordable Energy Coalition believes that the new Electricity Efficiency Supply Agreement can create conditions that will significantly improve the lives of low income renters by redressing the gap in programming for low income rental households. This will be an important step toward equity and affordability in electricity bills. The proposed equity provision and a sufficient budget are the key conditions that are needed.

This will also influence the character and scale of future Supply Agreements. A low income rental program is a long term project, as has been demonstrated by the low income homeowner program. That program has been in operation for more than 6 years and the goal is to complete all electrically heated homes owned by low income households in another 10 years.

Non-participating low income rental households will experience a very small rise in costs during this period with the prospect of a substantial reduction in bills over the medium term. We believe this is a trade-off worth making that will improve the lives of low income renters in a smart, significant way. It is based on a principled, long term approach that is practical and beneficial.

Thank you for the opportunity to present this statement.

Yours sincerely,

Donna Franey and Brian Gifford
Affordable Energy Coalition

AFFORDABLE ENERGY COALITION FINAL STATEMENT

APPENDIX A
EXCERPTS FROM EVIDENCE SUPPLIED BY FOUR WITNESSES RELATED TO THE IMPORTANCE OF EQUITY IN DESIGN OF AN EFFICIENCY PROGRAM
(Yellow highlighting added)

I. Evidence of George Foote on behalf of the Nova Scotia Consumer Advocate, June 2, 2015

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Access to ENSC programs is important to ensure fairness to ratepayers who are paying for the DSM initiative. It is recognized that some groups face higher barriers to participation than others. These barriers can be of a financial or technical nature.

NS Power proposes a substantial reduction in spending on Residential programs and this would mean a corresponding reduction in energy efficiency services for low-income homeowners and renters.

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In its response to Consumer Advocate IR-29, Efficiency One estimates that NS Power's alternate DSM scenario reduces total DSM funding by approximately 46 percent, including a reduction in lighting and domestic water heating measures investment of 65 per cent. It estimates that in its plan an estimated $6.9 million would have been spent on these measures for low income participants versus $2.4 million for low income participants under NSPI's alternate scenario.

Efficiency estimates the percentage of potential low income participants in its programs as roughly 10 per cent of total participants (Response to Synapse IR-19 and IR-20).

Affordability is a particularly important issue for low income renters and homeowners. Reduced energy use will in the longer term make electricity costs more affordable. Significant reductions in residential demand side management investment will likely have a disproportionate effect on low income participants as electricity costs are for many of them a higher percentage of income than for higher income ratepayers.

This will be offset for low income owners of electrically heated homes by the HomeWarming Program Nova Scotia Power is funding and which will be offered by Clean Nova Scotia. The Program as described under Section 3.1 of its evidence indicates that up to 6,600 homes per year will participate at a cost of up to $37 million over 10 years.[13]

[13] The HomeWarming program serves only homeowners and not renters as explained elsewhere in this statement.

II. Direct Testimony Of Paul Chernick On Behalf Of The Consumer Advocate, Resource Insight Inc. - JUNE 2, 2015

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VI. Affordability Issues

Q: How should the Board deal with affordability of the DSM portfolio?

A: The concern with affordability requires a two-step process. First, the Board (or parties working under the Board's guidance) must determine whether a proposed DSM portfolio would result in excessive rate and bill effects to some class or group of customers. Second, if such excessive effects are identified, the equity of the portfolio should be improved by changing cost allocation, **increasing cost effective DSM services to underserved customer groups,** and/or reducing spending and/or savings in ways that do not create lost revenues and that minimize the reduction in net benefits.

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B. Improving Affordability and Equity of a DSM Portfolio

Q: How can concerns about affordability be addressed in DSM portfolio development?

A: One of the best solutions is to have a well-balanced portfolio of DSM programs that gives all customers an opportunity to reduce their electricity usage.

Q: In deriving its $22 million DSM budget and Alternative Plan, did NS Power take into consideration the importance of developing a well-balanced portfolio?

A: No. Despite NS Power's concern about affordability, **75% of the end-use specific DSM expenditures that it eliminated from EfficiencyOne's plan were in residential end-use categories. While NS Power reported in its 2014 compliance cost-of-service study that the residential class constituted 47% of energy load and 53% of revenues, NS Power's proposes to spend only 25% of the DSM budget on the residential class and would deliver only about 27% of the DSM savings to that class**. The NS Power proposal is thus heavily tilted toward the commercial and industrial customers.

In contrast, EfficiencyOne proposes to spend 48% of the DSM budget on residential customers and get 43% of the portfolio energy savings from that class; these values are much closer to the residential share of NS Power's load and revenues.

Q: Other than designing a well-balanced DSM portfolio, what can be done to minimize any identified rate impacts and bill inequities?

A: Several mechanisms are available for minimizing rate or bill problems, such as the following:

- **Removing market barriers, minimizing cash requirements, and targeting marketing efforts to increase the ability of vulnerable customers (low income**

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residentials, marginally viable commercial and industrial firms) to participate and reduce their bills.

- In some situations, careful program design may be able to overcome market barriers while charging participants a substantial portion of measure costs, either at the time of installation or through energy-service charges.
- If rate effects are excessive in early years, with low avoided costs, the timing of retrofit programs can be stretched out (but not suspended) to coincide with higher avoided costs in later years.

The last two options should be undertaken only with great caution, since sloppy exercise of these options may reduce DSM savings, result in lost opportunities and increase the cost of energy services.

III. Direct Testimony of Tim Woolf On The Topic of The EfficiencyOne 2016-2018 DSM Plan On Behalf of Counsel to Nova Scotia Utility and Review Board - June 2, 2015

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Affordability

Q. Do you agree that NSPI's alternative DSM plan will be more affordable than E1's DSM plan?

A. No. There are several different aspects of affordability, with regard to electricity services. One aspect is electricity rates: lower rates are more affordable than higher rates. Another aspect is electricity bills: lower bills are more affordable than higher bills.

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Q. What are the likely rate impacts of E1's and NSPI's DSM plans?

A. To answer this question properly, it is important to consider the rate and bill impacts over both the short-term and long-term future. In general, increased spending on cost-effective DSM programs will result in:

- increased rates over the short term;
- similar rates over the long term; and
- lower average bills over both the short and the long term.

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Please summarize your points regarding the affordability of the E1 DSM Plan and the NSPI alternative DSM plan.

A. NSPI's discussion of affordability is incomplete, because it focuses only on the short term rate impacts while ignoring the short term bill impacts and the long-term rate and bill impacts. A complete analysis of the affordability of the two DSM plans suggests that (a) the E1 DSM Plan will result in significantly lower net costs than NSPI's plan, and (b) the E1 DSM plan will result in higher rates over the short term but very similar rates over the long term. This more complete picture suggests that E1's DSM Plan will be more affordable than NSPI's.

Q. Is affordability the only factor to consider when evaluating DSM plans?

A. No. Affordability, both in terms of electricity costs and electricity rates, is an important consideration when evaluating DSM plans, but it is not the only consideration. It is also

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necessary to consider issues that are more difficult to quantify but are important nonetheless. For example, **it is important to consider customer equity impacts and best practices in program design.**

Q. How should customer equity impacts be considered when designing and evaluating DSM programs and plans?

A. Customers who participate in DSM programs will experience immediate reductions in electricity bills. **DSM programs should seek to provide opportunities for all customer types, and indeed all customers, to participate in DSM programs in one way or another. Broader, more comprehensive customer participation will make the set of DSM programs more equitable, while narrow, more limited customer participation will make the DSM programs less equitable.**

Q. How is NSPI's alternative DSM plan likely to affect the equity of the efficiency programs?

A. **NSPI's alternative DSM plan explicitly excludes the most expensive efficiency measures in order to reduce the cost of the programs, even though these measures are cost-effective and less expensive than supply-side alternatives.** This approach will reduce the number of efficiency measures being provided, and will reduce the extent to which customers will be able to participate in the programs and reduce their bills.
For example, low-income and small business customers are some of the most difficult and most expensive customers to serve. By narrowing down the list of available efficiency measures, the NSPI DSM plan will make it more difficult for these customers to be served. This is an inequitable outcome.

In fact, if NSPI's rationale were taken to its logical extension, that only the lowest-cost efficiency measures should be supported, then this would lead to a set of programs where only the medium and large business customers are provided with efficiency services. This would clearly be an inequitable outcome. A better approach would be to promote the implementation of all cost-effective efficiency measures, in a way that serves as many types of customers, and as many customers, as possible.

IV. Direct Evidence of Elizabeth Chant Vermont Energy Investment Corporation On Behalf of Ecology Action Centre - June 2, 2015

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Programming at the minimal cost per MWh suggested by NSPI would require 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.