

NOVA SCOTIA UTILITY AND REVIEW BOARD

IN THE MATTER OF: The ***Public Utilities Act***, R.S.N.S. 1989, c.380 as amended

IN THE MATTER OF: An 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 Resource Plan

CLOSING SUBMISSIONS

ON BEHALF OF THE INDUSTRIAL GROUP

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INTRODUCTION

1. This submission is filed on behalf of the Industrial Group. Below we outline our position on the following matters: (I) The all-party Consensus Agreement Respecting Non-Budgetary items; (II) The Dollar Budget and Program Savings; (III) Affordability; (IV) Operational Flexibility and the Impact on Customers; and (V) Conclusion and Recommendations.

(I) NON-BUDGETARY CONSENSUS AGREEMENT

2. The Industrial Group was a signatory to the all-party Consensus Agreement¹ which addresses a number of non-budget items. There are three issues which the parties agree should be addressed through the DSM Advisory Group for the Board's approval: the establishment of a standardized filing for future applications; a review of DSM cost allocation and DSM cost recovery methodology; and the rate and bill impact analysis. All of these would benefit from further collaboration, outside a contested proceeding.
3. In addition, EfficiencyOne ("E1") agreed to withdraw its request to establish a reserve fund and the signatories agreed they will not challenge E1's ability to apply on an expedited basis to the Board for relief respecting "extraordinary or unforeseen circumstances outside of normal operations". (This clause also preserves the parties rights to challenge the merits of any such claim.)
4. Finally, the parties agree with the three year performance targets (cumulative annual energy savings and cumulative annual peak demand savings), and performance indicators as listed. The timing and content of evaluation and reporting is set out in the Schedule "I" to the Agreement.
5. The Industrial Group had reserved its rights to make submissions with respect to the breadth of flexibility sought by E1 to move money between Programs, having regard to customer rate impacts. This will be addressed in further detail below.
6. Subject to this issue, the Industrial Group recommends approval of the terms of Exhibit E-62 noting that it has broad support among representatives of all customer classes who participated – Residential (Consumer Advocate ("CA") and Affordable Energy Coalition ("AEC")), Small General, General and Small Industrial (Small Business Advocate ("SBA")) and Medium and Large Industrial customers (the Industrial Group). In addition, Nova Scotia Power Inc. (NSPI) has endorsed the terms of Exhibit E-62. Where there is such broad stakeholder support, the Industrial Group submits that the Board should weigh this heavily in considering whether to approve the terms of this document.

(II) DOLLAR BUDGET AND PROGRAM SAVINGS

7. The Industrial Group was not a signatory to Exhibit E-61, the Agreement among E1 and two customer class stakeholder groups (residential and small business) (the "Budget Agreement"). For the reasons which follow, the Industrial Group does not support an investment level for DSM activities over the 2016 – 2018 contract period of \$113.5 million (\$116 million in actual dollars in year of expenditure²) and an investment level

¹ Exhibit E-62.

² EfficiencyOne Undertaking U-3 (Exhibit E-68).

corresponding to cumulative energy and demand savings targets of 405.9 GWh and 62.5 MW respectively as set out in EfficiencyOne's resource plan filing.³

8. The position of the Industrial Group is that this level of energy savings is not needed to meet NSPI's system requirements and, while participants benefit, a much greater percentage of ratepayers – indeed, 80% of residential customers – will just see higher rates.⁴ As shown by Mr. Drazen who did a full revenue requirement analysis, non-participants (on average), are worse off for over 20 years.⁵
9. There are no risks to the system of backing off the aggressive DSM and the filed information suggests the energy savings can be delivered at a lower cost.

(a) Proposed Target Energy and Demand Savings Are Not Needed

10. There is no dispute that, from the perspective of NSPI's system, E1's targeted energy and demand savings are not needed during the contract period. As shown in figure 4.1 (revised) of the NSPI evidence, DSM savings in the range of approximately 100 GWh per year and associated demand savings would enable NSPI to avoid adding any additional generation capacity until 2032.⁶
11. E1 did not dispute that NSPI does not need any DSM during the period of 2016 to 2018 to meet RES or power system demand requirements.⁷
12. With reference to the IRP, E1 has proposed the equivalent of "base" DSM (at low DSM spending levels) and NSPI's alternative scenarios are modeled to achieve low level DSM (at half low spending). There is no difference in the capacity additions required for these two levels of DSM savings, as acknowledged by E1:

Mr. Clark: With respect to the low DSM and the base DSM, between the low and the base there is no difference in necessary capacity additions until 2032; correct?

*Mr. Aguinaga: That is correct.*⁸

(b) No System Risks by Not Undertaking Higher Levels of DSM

13. The Industrial Group explored with the NSPI panel what the risks would be if the DSM energy savings were set at the low level. In response to questions, NSPI indicated that there are no system requirement risks or RES compliance risk of lower DSM savings:

Ms. Stewart: Okay. And so with the low case are there NSPI system requirement risks between 2016 and 2018?

³ For the same reasons, the Industrial Group does not support higher levels of investment, nor did E1 (Transcript, June 16, 2015, p.326, line 16 – p.327, line 12).

⁴ Exhibit E-43, EfficiencyOne Application, REVISED June 3, 2015, Appendix D, Attachment 3, p.2/24; and see Transcript, June 15, 2015, Cross-examination of Ms. Vincent at pp.143-147.

⁵ Exhibit E-40, Evidence of Drazen Consulting, p.18 and Schedule 2.

⁶ Exhibit E-33, NSPI Revised Evidence, p.35.

⁷ Transcript, June 15, 2012, pp. 115-116.

⁸ Transcript, June 15, 2015, p.126 (see also transcript, June 16, 2015, p.320 and transcript, June 19, 2015, pp.925-926).

Mr. Blunden: Yeah, a plan that delivers 100 GWhs a year, year over year, and 18 MW of demand savings would prevent any capital investments for new capacity or for new renewables out to 2032.

Ms. Stewart: And are there any compliance – RES compliance risks?

Mr. Blunden: I should add that that is based upon the IRP assumptions.

Ms. Stewart: Based on the IRP assumptions. And are there any RES compliance risks associated with low-level DSM for the next three years?

Mr. Blunden: No, we believe we have compliance for that period under control.

I should mention the COMFIT energy that is generated is not in the IRP forecast as per the Renewable Electricity Regulations. And when we were looking at the – early on we believed that would be 100 MW, roughly 300-something under 300 GWh a year program. And now it's looking like it's going to be something-when it's fully built out over the next year or so, it will closer to a 500GWh program.

So those numbers are not in this forecast, so they actually present a pretty substantial margin for compliance. So that's even with that 100 figure that I gave you, so...⁹

14. Operationally then, there appears to be no risk that the long-term benefits of the IRP would be lost. With no capacity additions required until 2032, adequate RES compliance, an additional cushion offered by COMFIT that was unaccounted for in the IRP, and more significantly, the fact that this contract period is for three years rather than a locked-in 25 year plan, the Industrial Group observes there is ample time to revisit the savings target in three years (and in 3 year cycles after that) to modify the DSM savings trajectory if required.
15. In addition to there being no apparent risks to the NSPI system to “low” levels of DSM, there are operational *advantages*. During the IRP, NSPI utilized a modeling tool, Plexos which demonstrated operational advantages to lower levels of DSM investment through to 2030 including minimum curtailment, minimal uneconomic exports of excess energy and maximum economic Maritime Link and New Brunswick energy purchases.¹⁰ As explained by Mr. Sampson during cross-examination of the NSPI panel, Plexos models the transmission system and transmission constraints, giving the ability to model details of the generating units. That modeling showed:

⁹ Transcript, June 18, 2015, pp. 857-858.

¹⁰ As cited in Exhibit E-69, IRP, Slides 46-48.

... some of the high-wind, low-load scenarios – and by low-load, I mean those that had higher levels of DSM – suffered more curtailment on economic exports and didn't utilize the economic potential of the Maritime Link to the same extent.¹¹

16. While there was much focus in this hearing on the NPV of certain levels of DSM, there was not the same consideration of the operational challenges of lower electrical loads from implementing higher level of DSM. The IRP showed operational advantages to “low” levels of DSM and this should be equally considered when determining the optimum level of DSM energy savings and the spending to achieve that.

(c) Vague and Unquantified Risks to “Efficiency Industry”

17. E1 has argued not to have its budget reduced due to what it postulates will be negative short and longer-term impacts “including loss of industry capacity, erosion of an energy-efficient culture, steep rate increases in the future, loss of economies of scale, and reduced benefits to Nova Scotians.”¹²
18. With respect, these are little more than generalized assertions without any evidentiary foundation.
19. When speaking of the need to redevelop industry capacity due to a loss in trained and certified experts, E1 drew comparisons to the costs associated with the lag time for building capacity when E1's energy savings targets nearly doubled from 2010 to 2011. Apart from the fact that those costs were not quantified for the Board's evaluation, this comparison is ill-placed. 2011 was the first full year of operations by Efficiency NS. The “industry” was in its infancy and EfficiencyNS had no experience on the delivery of DSM programs. If there were to be a lag time for people to be re-hired or re-deployed in the next three years, this is a qualitative and quantitative difference when compared to educating, training and deploying an inexperienced work force in a new industry by a new entity.
20. In terms of its ability to deliver on its targeted savings, as evidenced in cross-examination, while the budget in 2015 was reduced from 2014 (~\$49 million to \$39 million), this did not and has not resulted in worse unit costs to date; E1 acknowledged it is on track for its targeted savings goal in 2015.¹³
21. Of course, as demonstrated in cross-examination, in 2014, E1's actual spend was 80% of its budgeted spend so in fact it was comparable to the 2015 budget, but it still exceeded targeted energy savings by 10.2%:

Mr. Clarke: ... Could we put up Exhibit 1, page 7, please? ... on line 16, E1 has identified energy savings for 2014 exceeded target by 10.2%. That's accurate?

Mr. MacDonald: That's correct.

¹¹ Transcript, June 18, 2015, p.866.

¹² Exhibit E-1, E1 Application, pp.32-33.

¹³ Transcript, June 16, 2015, pp.332-335.

Mr. Clarke: Yes. And then if we could go to Exhibit 24, which should be EfficiencyOne's answer to Multeese IR-7. And here, in 2014 your budget for DSM spending was approximately \$48.7 million. Is that correct? Twenty Fourteen (2014).

Ms. Thompson: That is correct.

Mr. Clarke: And your actual spend was \$38.7 million?

Ms. Thompson: That is correct yes.

Mr. Clarke: So your actual spend was 80% of the planned spend?

Ms. Thompson: I haven't done that calculation, but I will –

Mr. Clarke: Subject to check –

Ms. Thompson: Yes.

22. Further, regarding fears of the “erosion” of an energy-efficient culture, it is worth noting that despite the reduction in advertising and marketing year over year, E1 has proudly touted that knowledge of E1 (or Efficiency NS) and its programs have grown during this same time period: “In 2014, unaided awareness increased from 22 percent to 35 percent (average quarterly results).”¹⁴ In fact, in recognition of the increased awareness of E1, E1 plans that this aspect of its advertising budget will be decreased in 2015.¹⁵
23. In terms of the other potential impacts – steep rate increases, loss of economics of scale and reduced benefits to Nova Scotians – there was nothing presented which suggests a “steep” rate increase will be required in future if the DSM budget is scaled back for the next three years. From a system perspective, as demonstrated in the IRP, there is no need for the higher levels of DSM so there should be no need for a DSM rate increase, let alone a “steep” one.
24. As noted by Mr. Drazen, “While it is a hypothetical possibility, it is not a reason to incur more cost than necessary now.”¹⁶ Further, a smaller program does not mean that DSM activities will decrease proportionately, particularly where according to E1, Nova Scotia has an “efficiency culture”. That, plus the decrease in the cost of items in the market, should increase activity by NSPI's customers in improving the efficiency of their homes and businesses. Mr. Drazen also notes that even if there are higher costs in the future (and there is no information that based on the IRP that this will be necessary), NSPI and its ratepayers have been able to modulate the effect of unexpected cost changes in the past through deferrals and amortizations.¹⁷

¹⁴ Exhibit E-1, p.17, lines 10-22.

¹⁵ Exhibit E-10, E1(NSPI) IR-1.

¹⁶ Exhibit E-40, Evidence of Mark Drazen, p.19.

¹⁷ Exhibit E-40, Evidence of Mark Drazen, p.19.

25. As to the reduced benefits, it is the nature of DSM, that participants will enjoy energy savings by lowering their energy usage. But, from the perspective of the vast majority of rate-payers who are cross-subsidizing this, a higher level of DSM spending is not a benefit at all.
26. From the Board's perspective, it is important that the decision on the investment level and savings targets be based on evidence, not fear and speculation. We have nothing but general statements with respect to industry risks and short and long-term impacts of scaling back the DSM budget. Despite having the opportunity to provide details as to how these have been quantified, E1 failed to do so. E1 simply did not offer any evidence respecting the cost, if any, of ramping up or pausing or restarting DSM.¹⁸
27. On the other side, Mr. Pickles provided evidence that rather than embedding a *status quo* approach, the level of industry capacity should rise and fall with the need for the DSM resource. This inherent flexibility is one of the advantages of DSM investment. As indicated in response to questioning by Mr. Gogan:

Mr. Gogan: *There has been much evidence, Mr. Pickles, about the need to preserve DSM industry capacity. Do you support that concept, that DSM – a consistent level of DSM investment is necessary to maintain industry capacity?*

Mr. Pickles: *I believe that the level of industry capacity should rise and fall with the level of need for the DSM resource itself, much the same way that the level of capacity to build generation should vary with the amount of generation anticipated.*

I generally disagree with much of EfficiencyOne's evidence about the need to support excessive industry capacity for an extended period of time under the assertion that it's difficult or more costly to ramp-up in the future. That has certainly not been the case of many certainly US jurisdictions that have ramped up from zero savings to savings in excess of 1% in a manner of 12 or 18 months. There are significant examples of that.

*So for me, the metric is what's the cost of carrying that excess capacity and for how long versus what will it cost to recreate it in the future, particularly since the future may be less costly as prices of efficiency measures come down and as people adopt more of that technology naturally. I think there's strong evidence that carrying those costs is questionable.*¹⁹ [Emphasis added]

28. And later:

Mr. Gogan: *Mr. Pickles, you would agree it takes time to build up the infrastructure necessary to deliver a successful DSM portfolio? Is that correct?*

¹⁸ Transcript, June 16, 2015, cross-examination of Mr. Crandlemire, pp.550-551.

¹⁹ Transcript, June 18, 2015, pp.651-642.

Mr. Pickles: I'd say it's very specific to the nature of the programs. There are certain programs that can be ramped up very very quickly in a manner of months, if not weeks. There are other programs, particularly those that engage trade allies, that take longer. But I think it's a case-by-case determination and a cost-specific determination.

Mr. Gogan: So is it your evidence, if required, EfficiencyOne could dispatch a program when it's needed and ramp up in response to a market need?

Mr. Pickles: Yes.²⁰ [Emphasis added]

29. Mr. Pickles was challenged with his testimony in a 2009 South Carolina Docket and he explained in response:

Mr. Pickles: And it's not inconsistent with my evidence here today in that you need to time the introduction of the programs, accounting for the fact that some programs have a short lead time and some programs have a longer lead time. You need to compare that to the carrying costs associated with building those programs too early or, indeed, too late. And you need to ramp them up as appropriate with the system needs.

Mr. Gogan: So you would agree it's not simply a matter of dispatching a program when it's needed, as you said earlier in your evidence?

Mr. Pickles: It's a matter of dispatching a program when needed, as I suggested, with an eye to the time between when you need that program to take full effect in the market.

...

Mr. Gogan: But if we have an existing supplier community in Nova Scotia for the delivery of DSM, a marked reduction in DSM has the potential to risk – to harm that delivery system, does it not? Contractors, for example, would exist [sic – exit] the marketplace; there'd be a loss of confidence in the utility. One – would you not agree with that proposition?

Mr. Pickles: It would depend upon how it is done. Utilities commonly enter and exit markets and programs, and when programs are terminated it is appropriate to notify and work with the trade ally community and to honour obligations to them and to customers. But – and through participation in the programs, many trade allies learn how to sell energy efficiency on their own and they no longer need the subsidies that – or the incentives that the utility was paying. ...

²⁰ Transcript, June 18, 2015, p.655.

Mr. Gogan: ... It may be significantly difficult to bring those contractors back into the marketplace if increased investment is required in the future. Is that not correct?

Mr. Pickles: No.

Mr. Gogan: You don't consider there would be harm done to the relationship?

Mr. Pickles: Not if the exit from a particular program is well and appropriately communicated. And if you consider the example of many of the incentives that are provided by manufacturers of equipment for their own high-efficiency services, those manufacturers provide incentives for a period of time, then they stop providing incentives. They might introduce something again in the future, and it's something that, I think, the trade ally community, in large part, is used to, so long as they can do appropriate business planning around it. I think there are a few trade allies who expect the utilities to fully subsidize and support the entirety of their business model. [Emphasis added]

30. What E1 has failed to do is demonstrate what it would cost to recreate the capacity in future, should DSM spending be scaled back, so that a valid cost comparison can be made to the spending proposed for the next three years which is in excess of the current system requirements.

31. As Mr. Drazen stated:

So to put this in a parallel comparison, if NSPI came forward and said, "we want to sign up some new generation, it looks – it looks like its reasonably priced," but if it turns out that NSPI doesn't need the generation then it doesn't matter that it's reasonably priced. If you don't need it there's no point in selling it. The same goes for DSM. So you have to look at what the needs of the system are in terms of capacity, energy and reliability.²¹

32. It is not the role of the Board to prop up or sustain an industry, regardless of the impassioned evidence of speakers in the public session who have enjoyed an expansion of their business under E1. The arguments with respect to the number of jobs created is not a matter of concern for this Board unless they directly connect to costs associated with the delivery of the programs. Job creation is a policy matter for the Province, not the Board under the **Public Utilities Act**. Furthermore, it should be evident from the early submissions and the basis for intervention by Nichent, that there are businesses in Nova Scotia which are prepared to deliver efficiency to consumers outside of the circle of preferred providers or suppliers to E1.

²¹ Transcript, June 19, 2015, p.1036.

(d) Incentives Are Too High

33. The evidence of Mr. Drazen and others highlighted a concern that E1 is not as “efficient” as it could be in terms of the delivery of its targeted energy savings. In other words, either it is overpaying its incentives or its administrative costs are too high.
34. The Industrial Group submits that it is not sufficient to point to funding levels in other jurisdictions whose rates bear little relationship to Nova Scotia’s to determine incentive levels. As acknowledged by Mr. Dunsky in questioning by the CA, there are measures that are so good that incentives are not required – an answer, perhaps, Mr. Merrick did not expect:

Mr. Dunsky: *So I understand the question to be whether it’s possible that there are programs or that there are measures that do not need incentives? Is that –*

Mr. Merrick: *Is it a phenomena [sic] that you’ve run into before where programs are so beneficial that there’s no need to provide incentives?*

Mr. Dunsky: *So measures are – measures on their own are very beneficial?*

Mr. Merrick: Yes.

Mr. Dunsky: *That does happen. And that’s the professional judgment, I think, that any good program administrator makes in looking at all of the opportunities. There may be opportunities where you don’t need to incent and there are many opportunities where you do need to incent. The one thing I’ll say is that there’s only one way to know and that is through understanding the market.*²² [Emphasis added]

35. In terms of the actual E1 portfolio (as opposed to theoretical measures), it was acknowledged that there are measures in Nova Scotia that pay for themselves, from the customers’ perspective without the need for any incentive at all:

Ms. Rubin: *Would you acknowledge that there are measures in your portfolio that pay for themselves from the customers’ perspective without any incentive from EfficiencyOne? On an economic basis.*

Ms. Vincent: Yes.

Ms. Rubin: *And some of them would pay for themselves in as little as three to four months?*

²² Transcript, June 15, 2015, pp.174-175.

Ms. Vincent: *Some may. We haven't specifically looked at every one.*²³

36. The fact that E1 had not looked at the incentive levels and the payback periods by measure is a matter of some concern. In the technical tables produced in response to Undertaking U-8 it appears there are some 44 measures with a payback period in *under 12 months* (Column 7b). Even with this very favourable return on investment, in many of these, E1 shows that it is paying up to 100% of the incremental measure cost as an incentive (Column 8).
37. E1 acknowledged that NSPI's rates are relevant and that customers' payback should be taken into account in establishing the level of incentive for those measures.²⁴ Nonetheless, there is no satisfactory evidence on the record that E1 has tested or modeled lower incentive levels, having regard to the rates in this province.
38. Follow-up questions from the Chair highlighted this concern:

The Chair: *... How does Efficiency Nova Scotia or EfficiencyOne satisfy itself that the incentives paid are not too much?*

Mr. Faulkner: *So there are a few factors we consider. When we're designing a new program, one of the common things we would do is look to other jurisdictions to see if they offer similar programs and what incentives they offer and reach out to them and understand how they arrived at that, was there research, etc.*

But even in our – whether it's an established program or a new program for us, there are a number of things that we would base our decision on. One of them is research. If we have data or we can get data on what the customers' desired price point is, we would look at that.

We – on a – for a larger project basis, we do things like negotiate with a customer directly and determine what their required incentive is and ask them to document that in a contract for us.

A number of programs we've done research on already so financing, green heat – and what was the other one we've got here? Instant savings. We've looked at the optimal price point for the customer and we've set it accordingly. And –

The Chair: *But how do you determine that?*

Mr. Faulkner: *The marketing folks – this is getting out of my engineering expertise but the marketing folks, they have what they call the optimal price point for certain technologies or products and they survey a significant number of people to understand what their optimum price point is, say for LED lighting. ...*

²³ Transcript, June 16, 2015, p.336.

²⁴ Evidence of Mr. Faulkner; Transcript, June 16, 2015, p.338.

The Chair: *So do you think you bring some rigor to that process? In other words, is it a rigorous process to determine whether you're not paying too much in terms of incentives?*

Mr. Faulkner: *Certainly it's multi-faceted. So there are pieces of it that are probably less rigorous that are formal [sic] than others.*²⁵

39. Mr. Dunskey indicated that his firm does primary research to understand the cost differential in a specific market and understand market barriers to determine the incentives required. However, he acknowledged he has not looked at the process E1 uses to determine the appropriate level of incentives in a comprehensive way.²⁶
40. In response to Undertaking U-4, E1 provided additional information regarding its assessment of incentive levels attaching certain research it had carried out. It is noted that E1 states that the "setting and adjusting of incentive levels follows a generally cyclical process, and it is not uncommon to adjust incentive levels multiple times over the lifecycle of program offerings."²⁷ However, in the Workbook produced by E1, in contrast to this statement, the incentives appear to remain constant over the three-year period.²⁸ If E1 does adjust incentive levels then it has built in for itself a cushion by straight-lining incentives over three years.
41. Furthermore, despite the "iterative process" discussed in response to U-4, nowhere has E1 shown that it has taken into account the level of NSPI rates, including the expected increase in rates starting in 2017 when Muskrat Falls Energy is added to NSPI's portfolio. Attachment 7 to U-4 was a CRA study, "Appliance Retirement Program Incentive Evaluation" whose overall goal was to determine if the per transaction participant incentives could be reduced without reducing the program uptake. It is noted that there was considerable interest in a program that offered free removal of older, energy inefficient appliances, *even without additional incentives*. Why then, does E1 continue to offer additional financial incentives?
42. Attachment 3 to U-4 is another CRA study from February 2012 respecting LED lighting. That study did not focus on reducing incentive levels *per se* but rather to identify what conditions might prompt Nova Scotians to purchase LED light bulbs. It appears that the data respecting the current cost of bulbs in that 2012 study is out of date and no longer reflects the market. It notes that the then-current cost of bulbs was about \$40 and a rebate that brought bulbs to the \$20 range may be required to encourage purchases.²⁹
43. E1's workbook³⁰ shows a cost of \$13 - \$17 for two types of LED bulbs and a proposed incentive of 100% of the cost. Given the information in the study, and the expectation that the cost of LED bulbs will decrease further, it is not clear why any incentive is needed and E1 has not explained how it arrived at the proposed incentive. Not insignificantly, E1 proposes to spend over \$2.5 million per year on these two measures.

²⁵ Transcript, June 16, 2015, pp.480-483.

²⁶ Transcript, June 16, 2015, p.485.

²⁷ Undertaking U-4, p.1.

²⁸ Exhibit E-7, E1(NSPI) IR-10, Workbook, Column 63.

²⁹ Undertaking U-4, pdf pp.4-5.

³⁰ Exhibit E-7, E1(NSPI) IR-10, rows 233-234.

44. With respect to the Instant Saving Pricing Research (Attachment 6 to Undertaking U-4), it finds that the rebate offered by EfficiencyNS at the time for an Energy Star light bulb brought the cost within a consumer's acceptable price range. Despite this finding, E1's workbook shows the proposed 2016-2018 incentive to be 100% of the measure cost. Likewise, at page 14/57, the Research discusses the cost of a dimmer switch and an optimal price range net of rebate. The Workbook shows a measure cost of \$13 (row 222) and a rebate of \$5 (38% of \$13). E1 does not explain why the rebate is needed if the retail price is already within the acceptable range for a consumer.
45. The Industrial Group is very concerned that E1 has not sharpened its pen in terms of the appropriate level of incentives.
46. In addition, the Industrial Group is concerned that the established service delivery framework for E1 which requires it to deliver its targeted energy savings disincentivizes E1 from eliminating incentives. E1's performance will be measured against achievement of those targets and failing to do so, puts it at risk of losing its franchise. E1's formal process for evaluation and verification does not allow it to "count" its "Enabling Strategies" (which include measures such as education and advertising) towards its performance targets. In other words, if a consumer may be persuaded solely by information to undertake an efficiency measure because it will pay for itself in a relatively short period of time, E1 cannot count this toward its performance target; however, if that education or information is coupled with an incentive then E1 can measure and count it.³¹
47. E1's Enabling Strategies, including "Education and Outreach" (which also includes corporate advertising) is discussed in the evidence of E1, Section 2.2.3, pages 14 – 18. In response to IRs from NSPI, E1 confirmed:
- ... there are no energy or demand savings directly attributable to Enabling Strategies over 2016-2018, with the exception of the energy savings from the holiday light exchange program.*³²
48. The holiday light exchange is an example of a 100% E1 funded initiative whereby customers exchange old inefficient holiday lights for new ones, at no cost to the customer. While it is categorized under "Enabling Strategies" (and the Industrial Group queries why it is not more properly classified as part of the Residential Program) it is an example of information coupled with a 100% subsidized measure.
49. In cross-examination, Mr. Pickles noted a number of specific incentive levels and how they appear excessive in comparison to other jurisdictions. For example, the incentive level assumed for an LED bulb is \$10; other utilities with which he is familiar pay anywhere between \$1.25 and \$5.00. Likewise, adjustable speed drives were modeled at an incentive of \$600 per unit; in Mr. Pickles' experience the average incentive for these is around \$120 within a range of \$85 to \$250.³³

³¹ Transcript, June 16, 2015, pp.499-502.

³² Exhibit E-7, E1(NSPI) IR-2(b).

³³ Transcript, June 16, 2015, pp.743-744.

50. Mr. Dunskey himself volunteered that a three year payback is “very quick” but pointed out that even with such a very quick payback, adoption could vary from 20% or up to 50% as each measure is different and faces different barriers.³⁴

(e) Alternative Proposal

51. The Industrial Group presented one simple approach used in Florida in designing DSM Plans. There, the Florida Public Service Commission screens out efficiency measures with a payback of two (2) years or less which, because of their very quick payback, should not be incented.³⁵

52. Mr. Drazen offered an alternative methodology to develop a revised budget in his evidence. He suggested this could be done by applying two rules:

(1) a measure with a TRC less than a certain level should be excluded unless E1 shows a compelling reason to include it; and

(2) the higher the TRC ratio, the less of an investment is needed from E1. The latter rule is based on the fact that measures with high TRC ratios are very cost-effective for customers to do on their own.

53. In response to Undertaking U-8, Mr. Drazen provided the workbook which implemented his suggested methodology. Mr. Drazen screened at a TRC of 1.1. Applying his methodology to exclude measures with very low TRCs and to vary the incentives for those with high TRCs (i.e. the payback is very good, a lower incentive is given, and vice versa), he derived a financial budget of approximately \$81 million for the three year contract period. If one were to use the Florida approach screen out measures with a very quick (2 year) payback period, this further reduces the budget by approximately \$8 million a year.
54. If E1 educates its customers that the measures are cost-effective without any (or a reduced) subsidy, the energy savings remain but E1’s costs are reduced.
55. Mr. Pickles also provided in response to Undertaking U-7 a methodology for the Board’s consideration to ensure that incentive levels are “right-sized”. A number of points overlap with the Drazen proposal. As noted on page 1, he states that only measures with a net TRC benefit cost ratio greater than 1.0 (i.e., the TRC ratio multiplied by the estimated measure net-to-gross ratio) should be included, unless a specific justification is provided as to why incorporation of the measure is required. It is noted that Mr. Chernick also supports this approach with respect to individual measures.³⁶
56. Mr. Pickles also goes on to recommend that the simple payback period (in years) prior to any incentives, defined as [incremental cost/annual bill and O&M savings] is to be calculated for each measure. Where appropriate, the calculation should be unique to each rate schedule and customer type. Mr. Pickles goes on to suggest that for measures with a simple payback of less than two years, it is presumed that barriers

³⁴ Transcript, June 16, 2015, p.347.

³⁵ Exhibit E-67, Florida Public Service Commission, November 25, 2014 Decision, various dockets – Duke Energy Florida, Inc. etc.

³⁶ Exhibit E-42, Evidence of Paul Chernick, p.5, footnote 1.

other than financial payment are most significant and non-incentive based promotional techniques are appropriate. Incentives may still be proposed, but will require a more detailed justification.

57. EfficiencyOne has testified that if ordered, it would build a plan at a lower level.³⁷ It expressed a concern that if ordered to create a plan with a step change, it would result in a three to six month delay. However, it is notable that even now, E1 has not presented a final formed implementation plan. As stated by E1,

As with prior DSM and DSM Resource Plans, EfficiencyOne has presented a high-level planning proposal in its application. The 2016-2018 DSM Resource Plan is not an implementation plan; detailed program budgets have not yet been developed. [Exhibit E-7, E1(NSPI) IR-12(g)(viii)]

58. Where the detailed program budgets have not yet been developed and there is no implementation plan, the nature of and reasons for the delay are unclear. Further, even if it is a three month delay (or six months), when dealing with a three year contract period this would seem to be a reasonable endeavour to avoid undertaking programs which are unnecessary to achieve savings reduction beyond system requirements.

(III) AFFORDABILITY

59. All participants have spoken about affordability and what it means. The Industrial Group wishes to make it clear that it does not favour short-term affordability at the expense of long-term risks. The Industrial Group has satisfied itself and feels there is sufficient evidence before this Board that undertaking a DSM trajectory at a lower level not only has near-term benefits for affordability but does not create longer-term risks. The IRP should not be viewed as a prescriptive and directory tool mandating a certain level of DSM. In fact, it seems clear that if the period of the IRP were in line with best practices in electric utility resource planning, the planning horizon would be in the range of 10-20 years.³⁸ Over this time period, certainly, lower levels of DSM have both NPV and operational advantages.
60. Furthermore, and as noted, there will be many chances to review the level of spending at every three year interval. Both the level of energy savings and the costs associated with achieving these savings can be increased or decreased from time-to-time to reflect the ongoing and shifting needs of NSPI and its customers.
61. It is particularly challenging for customers to consider the impact of DSM on rates when it is one element being evaluated in isolation from a GRA proceeding. One could reasonably *infer* that NSPI will be able to absorb within its existing rates a DSM level in the range of \$22 million a year as NSPI did not file for a GRA in May of this year. However, what is not known is whether there is additional room beyond which NSPI will not be able to achieve savings in other areas. The current fuel forecast, we are told, will be of a magnitude that all DSM will be incremental to rates.

³⁷ Transcript, June 16, 2015, p.331.

³⁸ Exhibit E-60, "Best Practices in Electric Utility Integrated Resource Planning," Synapse Energy Economics Inc., June 2013.

62. If the “room” from the DSM rider is all required for fuel, then all incremental costs will create added pressure on rates. Beyond a certain level, rates will increase – whether through the FAM or a GRA.
63. The Industrial Group recommends that the Board direct NSPI to provide information in future DSM proceedings so that the Board and customers may assess the rate impact factors during the three year contract period, absent a GRA. Mr. Whalen in response to Undertaking U-9 set out the types of information which could be required which would facilitate that enquiry. The Industrial Group recommends the Board direct that NSPI, as a deemed co-applicant, be required to provide this information.
64. Along the same lines, it would have been preferable for E1 to have modeled different funding levels (including at a “step change”), so that the Board and participants would have a full range of options before them to evaluate not only operational risks of such a program but also the measures themselves.
65. The Industrial Group recommends that in future filings, E1 be directed to model various funding scenarios and not simply its preferred plan.

(IV) OPERATIONAL FLEXIBILITY SOUGHT IMPACTS CUSTOMER RATES

66. E1 delivers programs to two sectors: the Residential Sector and the BNI Sector (Business, Non-Profit and Institutional). Over the three year contract period, the budget for each is \$53.6 million and \$57 million (expressed in 2016 dollars).³⁹
67. E1 proposes that in the event it “contemplates proposing significant changes to elements within the approved 2016-2018 DSM Resource Plan, advance notice will be provided to the UARB and stakeholders within the APR (Annual Progress Reports).⁴⁰ It defines “significant change” as increasing or decreasing the three year plan budget for either the total Residential Sector or the total BNI Sector by more than 25% or increasing or decreasing the planned savings target for each sector by more than 25%. In other words, it can move money around up to 25% at any time and without advance notice.
68. The problem for customers is that while, operationally, E1 may wish to have this flexibility to facilitate it meeting its performance targets, it is customers who are paying for the price of that flexibility. DSM costs are set based upon a forecasted budget and modeled participation. If E1 does not manage its spending at a customer class level, year over year, customer classes can see huge swings in their DSM costs. Regardless of whether there is an overall stable budget, there is not stability at a customer class level. E1 acknowledged this:

Ms. Rubin: *And those who are paying to meet your need may be subject to some unanticipated results as a result of moving the monies around; correct?*

Mr. Faulkner: *Yes. So certainly by rate class, you know, sometimes when you have to move budgets between programs*

³⁹ Exhibit E-1, Application, Appendix A, derived by adding the investment shown in Figure 1.2, 1.3 and 1.4 at pp.3-5.

⁴⁰ Exhibit E-1, Evidence, p.44, lines 28-30.

you may be moving budgets between rate classes. We certainly monitor that and attempt to manage it as close as we can.

It's very challenging, and it's one of the downfalls of the current cost allocation and recovery model that it's very, very difficult to land those on target every year, and while making sure you still make a priority your bottom-line energy and demand savings targets. So we manage it as closely as we can within the significant challenges it creates.

Ms. Rubin: *I hear you when you say you manage it, but the need for the rate-smoothing adjustment was prompted by unanticipated higher levels of participation in 2012 by a number of customer classes; correct?*

Ms. Vincent: *Unanticipated, because when that forecast was built there was no history of Efficiency Nova Scotia's administration of DSM in order to inform that forecast.*⁴¹

69. Mr. Faulkner's assurance that E1 will "monitor and attempt to manage" rings hollow with the Industrial Group when E1 spent three pages of its evidence outlining its issues with constraining participation by rate class.⁴²
70. Looking at the Large Industrial Class as an example, E1 projected \$1 million in spending in 2014; by the end of the year, it had exceeded that budget by almost 70%.⁴³ E1 explained in response to IRs that approximately 38% of the investment in the Large Industrial Rate class occurred in December 2014 and was not forecasted by ENSC as it anticipated a completion date in early 2015.⁴⁴ While E1 asserted that deferring applications to another time period "could cause dissatisfaction", members of the Industrial Group were not canvassed for their views and in fact, would prefer that costs be appropriately and prudently managed so as to avoid a 70% swing in rates associated with DSM.
71. Fundamentally, E1 has stated that its priority is:
- To reduce demand on the system, regardless of where that demand is coming from. If customers in a particular rate class are willing to participate in ENS's programs, ENS should be able to allow those willing customers to contribute to its achievement of energy savings.*⁴⁵
72. With respect, E1 must recognize that it has not simply a primary goal in relation to its own franchise but, as a regulated utility, it owes obligations to its customers. In fact, the issue of affordability is embedded as an underlying principle in the legislation which

⁴¹ Transcript, June 16, 2015, pp.370-371.

⁴² Exhibit E-1, Application, pp.61-63.

⁴³ Exhibit E-1, Application, Figure 5.1, p.60.

⁴⁴ Exhibit E-23, E1(IG) IR-8.

⁴⁵ Exhibit E-1, Application, p.60, line 17 – p.61, line 3.

created the franchise. Affordability includes an obligation upon E1 to monitor, mitigate and address rate-class impacts *at a customer level*.

73. For the Large Industrial Group which is comprised of fewer than 30 customers, when a \$600,000 increase in the budget can result in a 70% increase in DSM rates, what are the risks to that customer class when E1 is looking for flexibility to move up to 25% of a three year \$50 million budget between sectors? Despite the customer rate risks, E1 did not even consider doing modeling or analysis to investigate what impact on a customer class a 25% change in a sector budget could have:

Ms. Rubin: *So you don't know and you can't tell us what effect this degree of flexibility that you're looking for can have on a customer rate class, assuming the existing cost allocation?*

Ms. Vincent: *In terms of a specific percentage impact on rate classes or a particular dollar percentage impact, we don't know.*

74. In cross-examination, the Industrial Group sought E1's recognition of its obligation in relation to its customers but could not extract any commitment without caveats:

Ms. Rubin: *Now, does Efficiency recognize it has an obligation to manage its programs within an envelope of spending?*

Mr. Faulkner: *Yes.*

Ms. Rubin: *And do you recognize that your management obligation extends to ratepayer classes who will ultimately be paying for those programs?*

Mr. Faulkner: *Yes. And with the caveat that don't have clarity on exactly what the cost allocation methodology would be for 2016 to 18 and the additional caveat that its very operationally difficult to hit those on the nose because of so many other operational challenges that come with them.*

Ms. Rubin: *I realize it's operationally difficult for you, but it's customers who are paying for your operations. So I'm looking for your commitment to manage your obligations within a range of forecasted spending by customer classes. Are you prepared to undertake to do that?*

[short pause]

Mr. Faulkner: *Certainly we recognize that the customer classes don't – would prefer that we don't over spend under the current model, and we do our level best to manage that. It's worth pointing that that's to the detriment of those customers sometimes because it means they can't participate and can't save the energy. And I'll just remind folks that in the latter part of our evidence we listed a number of the challenges that came with managing the*

*rate classes this way, and that could be to the detriment of some customers.*⁴⁶

75. The Industrial Group respectfully requests that the Board not approve E1's requested flexibility which would permit it to move monies around up to 25% at a sector level if on an annual basis, it will impact customer classes greater than 25%. The Industrial Group would also seek a direction from the Board to E1 reminding that its management obligations extend to ratepayer classes bearing in mind customer rate impacts.

(V) CONCLUSION AND RECOMMENDATIONS

76. This was the first contract to be negotiated between E1 and NSPI. It is unfortunate that the parties were not able to reach agreement however, the silver lining is that the process provided more information and more insight with respect to E1's processes and plans and NSPI's system requirements than in prior proceedings.
77. As with GRAs and other contested proceedings, the Industrial Group requests that the Board consider including in its Timetable, a dedicated period of time for discussions among the participants for settlement negotiations. The Industrial Group recognizes the inefficiency of starting and stopping the hearing to allow for continued discussion and finalization of consensus items. Some additional time within the schedule would be beneficial.
78. With respect to the specific matters at issue, the Industrial Group recommends the Board:
1. Approve the Non-Budgetary Consensus Agreement including those matters to be addressed through the DSM Advisory Group for the Board's subsequent consideration.
 2. Reject the proposed investment level for DSM activities of \$113.5 million (\$116 million in the year of expenditure) with cumulative energy and demand savings targets as set out in E1's filing as per the Agreement among E1 and some of its supporters.
 3. Direct E1 to implement a plan at a three year spending level of approximately \$80 million to achieve DSM energy savings of 100 GWh per year and associated demand savings. (Recognizing that NSPI modeled spending at \$66 million to achieve ~100 GWh per year, this should be an achievable target.)
 4. Direct E1 in its next filing to demonstrate that its incentives are set at the appropriate level, having regard to high electricity costs in Nova Scotia and payback periods to customers.
 5. Direct E1 to re-allocate the costs and savings from the holiday light exchange to the Residential Sector.

⁴⁶ Transcript, June 16, 2015, pp.389-390.

6. As part of its programming, direct E1 to consider providing information to customers with respect to payback periods and particularly, to develop and make available a web-based calculator for payback periods. This information should be available across measures and customer classes.
7. Direct E1 to model different funding levels (including at a "step change") in future contract periods so that the Board and participants have a full range of options to evaluate.
8. Not approve E1's requested flexibility which would permit it to move monies around up to 25% at a sector level if, on an annual basis, it will impact customer classes greater than 25%.
9. Remind E1 that its management obligations extend to ratepayer classes, bearing in mind customer rate impacts.
10. Direct NSPI to provide information in future DSM proceedings consistent with the information outlined by Mr. Whalen in response to Undertaking U-9.

ALL OF WHICH IS RESPECTFULLY SUBMITTED this 8th day of July, 2015.



Nancy G. Rubin, Q.C.



Maggie Stewart