
Nova Scotia Utility and Review Board

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

-and-

IN THE MATTER OF AN APPLICATION by 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 (M06733).

2016-2018 DSM Plan

**Nova Scotia Power
Closing Submission**

July 8, 2015

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1 **1.0 OVERVIEW**

2
3 Nova Scotia Power Inc. (NS Power or Company) is required under the *Public Utilities*
4 *Act* (Act) to enter into a supply agreement with EfficiencyOne (E1) for the supply of
5 cost-effective and affordable demand side management (DSM) for the period
6 commencing on January 1, 2016 and ending on December 31, 2018 (Contract Period).

7
8 On February 27, 2015, E1 filed an application with the Nova Scotia Utility and Review
9 Board (UARB or Board) seeking approval of a DSM Resource Plan for the Contract
10 Period (E1 DSM Plan). The E1 DSM Plan proposes a total energy savings of 405.9 GWh
11 over the Contract Period (an average of 135 GWh per year) for an aggregate spend of
12 \$121.5 million.

13
14 In assessing the E1 DSM Plan, the Act mandates that the Board must satisfy itself that the
15 plan put forward by E1 is “affordable” and in the “best interests of NS Power’s
16 customers”. NS Power submits that the inclusion of such a requirement reflects a
17 deliberate intent on the part of the legislature to ensure the level of DSM approved is only
18 what is determined to be affordable for Nova Scotians and that short-term affordability
19 must be taken into account when making such determination. For customers, near-term
20 can mean from tomorrow to five years depending on the circumstances of the customer.
21 The legislature has deemed three year contracts to be the appropriate term and so that is
22 another way to define near-term for the purpose of determining affordability.

23
24 In addition, under the terms of the Act, the onus in this proceeding is on E1 to provide the
25 information and evidence to justify the level of DSM it is proposing to undertake for NS
26 Power.¹ Notwithstanding this, E1 did not include with its application any alternative
27 DSM plans or scenarios for the Board to consider in fulfilling its statutory obligation of
28 determining whether the DSM programs proposed by E1 were affordable and in the best

¹ Public Utilities Act, R.S.N.S. 1989, c.380, s. 79L(8).

1 interests of NS Power customers. Indeed, at no point in this proceeding has E1 produced
2 such information for stakeholders and the Board.

3
4 NS Power has requested the Board approve a more measured and affordable DSM plan.
5 While NS Power is supportive of a meaningful level of DSM programs that would
6 provide stable and affordable electricity prices for Nova Scotians, the Company is of the
7 view that the E1 DSM Plan is not in the best interests of customers and does not address
8 the issue of affordability. The evidence is clear that the levels of energy savings and
9 efficiency costs proposed by E1 are not required to meet any of NS Power's regulatory
10 compliance obligations or necessary to avoid capacity additions up to 2032. In addition,
11 the E1 DSM Plan is comprised of a higher level of incentives than needed to achieve
12 efficiency targets.

13
14 NS Power has recommended the Board direct E1 to develop a more affordable DSM plan
15 that would provide annual energy savings of approximately 100 GWh per year over the
16 Contract Period which NS Power's evidence demonstrates can be achieved at a cost of
17 \$22 million per year.

18
19 A Consensus Settlement Agreement was reached during the hearing among E1, NS
20 Power, the Consumer Advocate (CA), the Small Business Advocate (SBA), the Industrial
21 Group (IG), the Affordable Energy Coalition (AEC) and the Ecology Action Centre
22 (EAC) on a number of non-financial issues.² As such, the main issues left before the
23 Board are the level of DSM spending required for the Contract Period and E1's
24 cumulative energy and demand savings targets. In this Closing Submission, NS Power
25 will focus on those matters which are outstanding based on the evidence before the
26 Board. For any matters that are not addressed, the Company refers to both its oral
27 testimony and its written evidence. The Company submitted its written evidence to the
28 Board on April 10, 2015 as well as Rebuttal Evidence on June 9, 2015. The Company

² Exhibit E-62, Consensus Settlement Agreement – E1, NS Power, CA, SBA, IG, AEC & EAC, June 16, 2015.

1 also filed responses on May 19, 2015 to information requests issued in this proceeding
2 from the CA, SBA, IG, AEC and EAC.

1 **2.0 DSM IN NOVA SCOTIA**

2
3 NS Power's Evidence demonstrates DSM spending in Nova Scotia is higher than any
4 other jurisdiction in Canada on a per capita basis and among the highest on a per
5 customer basis.³ While there has been much discussion in this proceeding about the
6 reliability of benchmarking, what is undeniable is that E1's model of DSM would make it
7 a price leader in Canada.⁴

8
9 Typically, in a more positive economic climate, being a leader in a particular initiative or
10 industry is viewed in a positive light. Nova Scotia has demonstrated itself to be a leader
11 in the following areas:

- 12
13 • environmental emissions caps;
14 • renewable energy; and,
15 • COMFIT.

16
17 The province's leadership in these areas, however, has also resulted in Nova Scotia
18 having some of the highest electricity rates in the country.

19
20 Just a few years ago, when the province's industrial load was double what it is today,
21 environmental initiatives were viewed by Nova Scotians as being as (if not more)
22 important as affordability. As a result, aggressive government policies were
23 implemented to control emissions from the electricity sector and to allow for the
24 development of significant amounts of renewable energy.

³ Exhibit E-33, NS Power Revised Evidence, June 1, 2015, page 17, Figure 3.1.

⁴ Please refer to Exhibit E-46, EfficiencyOne Rebuttal Evidence, Appendix B, page 12, Table 1 which, as E1's expert Mr. Dunsky confirmed, also demonstrates that of the three Canadian jurisdictions shown, all three have a percentage of DSM sales less than E1.

1 Nevertheless, these policies have and continue to come at a cost to ratepayers and are part
2 of the reason why electricity rates in Nova Scotia are among the highest in Canada. This
3 point was addressed by Mr. Blunden during cross-examination by the Board:
4

5 **MS. CLARKE:** Okay. And I think that Mr. Blunden acknowledged
6 yesterday that in Nova Scotia we have something of a unique model in
7 terms of energy efficiency with EOne now being a utility under the Public
8 Utilities Act.
9

10 Does that make any difference, or are you suggesting that Nova Scotia
11 should spend less just because other jurisdictions are doing the same
12 thing? You can both answer this question serially.
13

14 **MR. BLUNDEN:** Okay. Again, not in isolation. Certainly the
15 benchmarking discussions that have taken place, I think have taken on a
16 life of its own. From my perspective and the company's perspective,
17 benchmarking is just an indicator. You can look at it many different ways.
18

19 What we were trying to do from a benchmarking perspective was just to
20 get a sense as to where do we think we fit in to where the other
21 jurisdictions, in particular in Canada. And it caused us -- it raised, quite
22 frankly, red flags where it looked like our level of spend was materially
23 higher on a cost basis than other jurisdictions. And when I sit back from a
24 company perspective and I think of the aggressive renewable standards we
25 have, the aggressive DSM, the aggressive emission reductions, aggressive
26 COMFIT, you know, the challenge we have is we want to be aggressive in
27 a number of different places, and the end result of that sometimes is ---
28

29 **THE CHAIR:** And then make it all affordable?
30

31 **MR. BLUNDEN:** And make it all affordable, and that's where we find
32 ourselves on many days where you want to be a leader in all these
33 categories, by default you might also be a leader in another category that
34 wasn't necessarily your intent.
35

36 **MS. CLARKE:** A more negative one?
37

38 **MR. BLUNDEN:** A more negative one ---
39

40 **MS. CLARKE:** Yeah.
41

1 **MR. BLUNDEN:** --- which I think both the Board and ourselves hear
2 about on a regular basis.⁵
3

4 Progress in adoption of renewable energy and the corresponding impact on rates is a
5 major reason why Nova Scotians' clear number one priority is affordability. This priority
6 is at such a level of importance that the government of Nova Scotia expressly legislated
7 affordability as a factor to be taken into account by the Board in approving DSM
8 expenditures.⁶
9

10 Although there has been a strong shift in Nova Scotians' priorities towards affordability,
11 the policies introduced a few short years ago are going to continue to put upward pressure
12 on electricity costs in Nova Scotia for the next few years. In the immediate term, the
13 COMFIT program is gaining momentum and is projected to add in excess of 150 MW of
14 small low-impact renewable generation to Nova Scotia Power's network over the next
15 two to three years. This is generation that comes at an average cost to rate payers that is
16 nearly three times more expensive than the cost of the energy it is displacing.
17

18 Given these continuing cost pressures, this is not the time to adopt a DSM program that is
19 significantly above what is required to provide long-term stability. Unlike DSM, which
20 can be accelerated and de-accelerated to meet longer term requirements, there is no
21 ability to ramp up and down the rate of implementation and costs of the other
22 legislatively mandated programs noted above.
23

24 In the face of these challenges to affordability, NS Power has, amongst other things,
25 significantly reduced its workforce and its capital expenditure program. These efforts
26 have been very challenging for NS Power and for those Nova Scotians directly impacted
27 by these significant cost controlling efforts. However, these actions were done with the
28 best interests of all Nova Scotians in mind and were supported by customer

⁵ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 19, 2015, pages 976-977, lines 1-22 and lines 1-18.

⁶ *Public Utilities Act*, R.S.N.S. 1989, c.380, s. 79L(9).

1 representatives. Nova Scotians expect such cost reduction efforts from NS Power and NS
2 Power expects the same from all of its suppliers – including E1.

3
4 Notwithstanding the priority Nova Scotians place on affordability, the legislative changes
5 to reduce HST costs, and the removal of an expensive low income homeowner program
6 from E1's portfolio, E1 presented a DSM plan that (a) had a cost per kWh that was \$0.04
7 to \$0.05 per kWh more than what they were able to actually deliver savings for in 2014;
8 and (b) proposed energy savings that significantly exceeded what is required to avoid
9 capacity additions for the next 17 years. Moreover, E1's rate and bill impact model is
10 incomplete and the evidence before the Board is that a lower level of savings and costs
11 provide a better economic profile for NS Power's customers than the level proposed by
12 E1.

3.0 LEGISLATIVE REQUIREMENTS

Unlike the Company's environmental and renewable generation requirements, the expenditure level of DSM has not been legislatively mandated. There is nothing in the Act that requires the Company to purchase, or rate payers to supplement, a particular level of DSM, let alone one that is at or near the highest level per capita and per customer in Canada.

As the franchise holder, E1 has the right under the Act to supply NS Power with “reasonably available” and “cost-effective” DSM. In approving the DSM programs proposed by the franchise holder, the Board must be satisfied not only that such programs are “cost-effective” and “reasonably available”, but also that they are “affordable” and in the “best interests of NS Power’s customers”. Subsections 79L(8) and (9) of the *Public Utilities Act* (Act) provide as follows:

(8) The **Board shall approve an agreement pursuant to this Section if**, in addition to any other matters considered appropriate by the Board, **it is satisfied that the agreement**, including the proposed electricity efficiency and conservation activities that are the subject of the agreement, **is in the best interests of Nova Scotia Power Incorporated's customers** and satisfies the requirements of Section 79J.

(9) 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.⁷

[emphasis added]

In addition, while NS Power and E1 are both co-applicants under the provisions of the Act, the onus is on E1 – not NS Power – to provide the evidence the Board requires to assess whether the proposed E1 DSM Plan is affordable and in the best interests of NS Power’s customers. Subsection 79L(6) states:

⁷ *Public Utilities Act*, R.S.N.S. 1989, c.380, s.79(L)(8), (9).

1
2 (6) Notwithstanding subsection (5), in the application, **the franchise**
3 **holder is primarily responsible to provide information and evidence to**
4 **the Board to justify the electricity efficiency and conservation**
5 **activities that it proposes to undertake for Nova Scotia Power**
6 **Incorporated**, and Nova Scotia Power Incorporated is entitled to rely
7 upon the expertise of the franchise holder in respect of the delivery of the
8 electricity efficiency and conservation activities.⁸

9 [emphasis added]
10

11 In reviewing the information and evidence filed in this proceeding, it is clear E1 has not
12 produced sufficient evidence for the Board to find that E1's DSM programs are
13 affordable and in the best interests of NS Power's customers. E1 did not provide the
14 Board with any form of DSM plan (or any other information regarding lower costs
15 alternatives) other than the proposed E1 DSM Plan to justify the DSM activities it is
16 proposing to undertake. Indeed, E1 confirmed on cross-examination by NS Power that
17 notwithstanding the Company's requests, E1 did not model a lower cost plan to present to
18 the Board and stakeholders.⁹ Ms. Vincent stated E1 had developed what she
19 characterized as "a \$35 million preliminary scenario".¹⁰ However, such a scenario was
20 not introduced into evidence by E1 and therefore provides no assistance to the Board or
21 other stakeholders in assessing the affordability of the proposed E1 DSM Plan, other than
22 to demonstrate that E1 is able to produce lower cost alternatives.
23

24 E1 made clear from the outset that it did not feel obliged to provide the information and
25 evidence required to assess the issues of affordability, but rather only to provide a plan
26 based on a spend level that E1 was prepared to support. When asked about the \$35
27 million preliminary scenario by the Board Mr. Crandlemire stated:
28

29 **MR. CLARKE:** Mr. Crandlemire, why didn't you present any of that
30 data to the Board or any other stakeholders?

⁸ *Public Utilities Act*, R.S.N.S. 1989, c.380, s.79(L)(6).

⁹ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 15, 2015, pages 117-118, lines 18-22 and lines 1-18.

¹⁰ *Ibid*, page 169, lines 8-10.

1
2 **MR. CRANDLEMIRE:** I'm not clear what data you're referring to.
3

4 **MR. CLARKE:** All of the analysis respecting whatever it is you
5 described the \$35 million initial plan or however you describe it.
6

7 **MR. CRANDLEMIRE:** Our obligation was to present a plan to the
8 Board that we could defend, and the plan we have submitted exactly is one
9 that we felt was defensible...¹¹
10

11 E1's decision to provide the Board with only one DSM Plan for consideration is
12 inconsistent with the evidence of the Board's consultant, Mel Whalen. On cross-
13 examination from the Board, Mr. Whalen confirmed his opinion that in making its
14 determination the Board needs to have access to more than what was provided by E1 in
15 this Application.
16

17 **MS. CLARKE:** Okay. And just one other question and I'm -- perhaps I
18 should have asked this of some of the previous panels. But if, as
19 contemplated under the legislation, EOne and Nova Scotia Power had
20 come to the Board with an agreement that detailed the amount of spending
21 and all the rest of it, would the Board need to have various scenarios to
22 assess whether that was the right one? I mean, would you have to look at
23 alternatives or would you just say, "Well, all right, these two parties have
24 agreed to it, so therefore, it must be right"?
25

26 **MR. WHALEN:** It probably could be accepted from the two parties, but
27 with the understanding that the two parties would have looked at some
28 scenarios that would be available to the Board if the Board ---
29

30 **MS. CLARKE:** Okay.
31

32 **MR. WHALEN:** --- wanted to see them.¹²
33

¹¹ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 16, 2015, pages 526-527, lines 13-22 and lines 1-2.

¹² 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 19, 2015, pages 1054-1055, lines 12-22 and lines 1-6.

1 NS Power submits that the failure of E1 to present other scenarios to justify why the E1
2 DSM plan meets the requirements of the Act prevents a full examination of affordability
3 and fails to meet the statutory requirement imposed on E1 to “justify” its proposed plan.

1 **4.0 AFFORDABILITY**

2
3 There has been considerable argument put forward in this proceeding as to what is meant
4 by the requirement of “affordability” under the Act. The IG suggested the requirement
5 under the Act to consider affordability is intended to make short-term affordability a
6 priority. As noted by Mr. Drazen, “Rates in Nova Scotia are already higher than other
7 provinces, so affordability should be the primary consideration”.¹³

8
9 In its Opening Statement the Department of Energy (DOE) stated that its intent in
10 including the requirement of affordability in the Act was to “signal that we cannot solely
11 focus on the long-term view without taking into account short-term affordability” and
12 that “a balance needs to be found between long-term and short-term costs and benefits.”¹⁴
13 Significantly, DOE also stated that they “do not support a level of DSM spending that
14 would result in increases in total rates”, which NS Power submits indicates DOE’s view
15 that the Act places greater emphasis on short-term affordability (i.e. with short-term rate
16 impacts rather than potential reductions over the longer-term).¹⁵

17
18 Indeed, the scheme of the Act is designed to give precedence to considerations of short-
19 term affordability given the level of DSM spending and the issue of affordability of DSM
20 activities must be brought back before the Board and recalibrated every three years.

21
22 Mr. Blunden testified that, based on his experience, NS Power’s customers define
23 affordability in the short-term, within a range of “tomorrow to five years”:

24
25 **MR. GOGAN:** Would you agree with me that considering affordability in
26 the context of a three-year contract period is too short a period?

27
28 **MR. BLUNDEN:** I’d disagree with that.
29

¹³ Exhibit E-40, Evidence of Drazen Consulting Group on Behalf of the Industrial Group, page 3, lines 17-18.

¹⁴ Exhibit E-49, Opening Statement on behalf of the NS Department of Energy, page 5.

¹⁵ Ibid, page 4.

1 **MR. GOGAN:** So what do you consider to be the appropriate time period
2 for consideration of affordability?
3

4 **MR. BLUNDEN:** It certainly varies by class. You know, when we talk
5 to customers, in particular the business customers in the province, the
6 large industrials, I think when they talk about affordability they are
7 certainly talking about the next three to five years; a business planning
8 cycle, if you will.

9 The evidence of the Industrial Group firmly supports that, as well as the
10 evidence filed by the Small Business Advocate where even their clients
11 are saying affordability is this year and next year.
12

13 Residential customers it's -- it's probably in around the same range of
14 three to five years. Most residential customers we talk about, from an
15 affordability, are making plans on their children's education, new cars,
16 home renovations, they're kind in the three to five years as well.
17

18 With the exception of the low-income folks which, again, it's been our
19 experience that affordability for them is to tomorrow, it's next week or
20 next month. In none of our conversations with any of our customers have
21 any of them suggested to us that affordability is 25 years.
22

23 **MR. GOGAN:** So you're saying the range -- did I hear you correctly,
24 your range is three to five years?
25

26 **MR. BLUNDEN:** I'd say tomorrow to five years.¹⁶
27

28 There was no evidence presented in this proceeding that anyone paying the bills in Nova
29 Scotia views affordability in the context of a variable resource such as DSM over a 20 to
30 25 year period. On cross-examination by NS Power, Mr. Crandlemire acknowledged that
31 Nova Scotians are "concerned about their bills in the short-term, say, over the next two or
32 three years"¹⁷ and admitted that E1 has not provided the Board with any evidence that
33 customers are more concerned with rate pressure 25 years from now as opposed to rate
34 pressures in 2016.¹⁸
35

¹⁶ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 18, 2015, page 627-628, lines 3-22 and lines 1-11.

¹⁷ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 16, 2015, page 538, lines 5-6.

¹⁸ Ibid, page 538, lines 12-13.

1 Mr. Faulkner, on behalf of E1, also acknowledged on cross-examination by the IG that it
2 would be appropriate for the Board to consider NS Power rates and overall rate drivers –
3 i.e. short-term affordability considerations – when considering the overall investment
4 level in DSM.¹⁹

5
6 Notwithstanding that near-term affordability is a priority for NS Power’s customers, the
7 Company acknowledges the benefits of DSM, and is of the view there needs to be a
8 balance between the shorter and longer term. As such, NS Power has recommended E1
9 design a plan that would provide annual energy savings of 100 GWh per year, with
10 associated demand savings over the Contract Period. This proposal supports near-term
11 affordability, while avoiding additional capacity requirements for the next 17 years and
12 forecasting a more affordable plan for customers (as compared to E1’s plan) for almost
13 20 years. The evidence presented by NS Power demonstrates that this level of DSM
14 savings could be accomplished for \$22 million per year.

15
16 In addition, NS Power’s proposal must be viewed in the context of the following:

- 17
- 18 • No additional DSM is required by NS Power during the Contract Period for
19 compliance with Nova Scotia’s Renewable Electricity Standards or to meet power
20 system demands. This fact was acknowledged by E1 during cross-examination.²⁰
21
 - 22 • NS Power’s recommendation would provide the capacity and energy savings from
23 the Low DSM Case at the “Half-Low” price and enable NS Power to avoid
24 adding any additional generation capacity until 2032.²¹

¹⁹ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 18, 2015, page 327, lines 13-19.

²⁰ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 16, 2015, pages 115-116, lines 5-22 and lines 1-6.

²¹ Exhibit E-33, NS Power Revised Evidence, June 1, 2015, page 35.

1 **5.0 RATE PRESSURE**

2
3 Electricity rates are a critical consideration in assessing the affordability of DSM
4 expenditures and an issue which the Board must take into account. Indeed, as noted
5 above, the DOE in its comments on the balancing of short-term and long-term
6 affordability made clear they “do not support a level of DSM spending that would result
7 in increases in total rates”.²²

8
9 As stated in NS Power’s Evidence, there is no amount for DSM at the present time in
10 customer rates. All DSM spending approved in this proceeding will be an incremental
11 cost recoverable from customers.²³ This point was addressed by Mr. Blunden on cross-
12 examination. Mr. Blunden clarified that effective January 1, 2015, the DSM rate rider
13 was removed from customer bills and, as a result of the FAM Settlement Agreement, the
14 amount that would have otherwise been in rates for 2015 DSM costs was collected as a
15 fuel charge and used to pay down the FAM deferral which arose as a result of increased
16 fuel costs.²⁴

17
18 NS Power acknowledges that rates are impacted by various cost drivers such as fuel,
19 COMFIT, environmental standards and other elements of the Company’s cost of service.
20 DSM is another cost driver; however, unlike many of the other cost drivers which are
21 either statutorily mandated or required to promote electricity to Nova Scotians, DSM
22 does and should have flexibility. In the case of DSM, there is an ability to ramp down the
23 rate of implementation and avoid short-term rate impacts when needed. Moreover, as
24 noted above, the fact DSM levels will be reviewed every three years under the Act also
25 provides security to customers and interested parties alike that if the situation changes
26 DSM levels could be increased at that time.

²² Exhibit E-49, Opening Statement on Behalf of the NS Department of Energy, page 4.

²³ Exhibit E-33, NS Power Revised Evidence, June 1, 2015, page 14.

²⁴ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 19, 2015, pages 780-781.

1 Although NS Power is confident E1 can deliver a program in the range of \$22 million
2 that would produce the required demand and energy savings to avoid additional capacity
3 requirements out to 2032, it is worthy to note the amount of savings required to avoid
4 capacity additions for the next 10 years is substantially less than the average of 17.7
5 MW/annum demand reduction required to avoid capacity out until 2032. As such, if E1
6 is not able to deliver all of the demand savings during the Contract Period, there is
7 considerable time to reset programming to make up any difference and still be able to
8 avoid capacity additions out to 2032. If there was a requirement to slightly ramp up at
9 that time, it would also be at a time when other major rate pressures have already been
10 absorbed into rates (i.e., COMFIT).

1 **6.0 PARTICIPATION**

2
3 In considering the issue of the affordability of the proposed E1 DSM Plan, it is essential
4 to consider the level of participation and the impacts on non-participants.

5
6 E1 justifies its high level of DSM spending based on the assumption participants would
7 benefit over the three year contract term and non-participants would benefit in the long-
8 term from lower electricity bills. However, E1 acknowledges non-participants will see
9 their bills increase over the three year Contract Period based on the E1 DSM Plan:

10
11 **MR. CLARKE:** You'll agree with me that not all customers are
12 participants.

13
14 **MS. VINCENT:** Our Director of Programs says, "Not yet."

15
16 **MR. CLARKE:** And not all participants are going to participate at the
17 same degree; you agree with that?

18
19 **MS. VINCENT:** Yes.

20
21 **MR. CLARKE:** Some participants will have lots of participation, while
22 others may participate by engaging in one measure.

23
24 **MR. FAULKNER:** That's possible, yes.

25
26 **MR. CLARKE:** As well, DSM does not lower non-participants' bill in
27 the -- bills in the short term, does it?

28
29 **MR. FAULKNER:** It depends on your definition of "short term." I think
30 over the ---

31
32 **MR. CLARKE:** How about three years?

33
34 **MR. FAULKNER:** Over three years, I don't have that analysis in front
35 of me, but I'll take your premise, yes.

36
37 **MR. CLARKE:** In fact, for non-participants, their bills will go up.
38

[emphasis added]

1 Finally, participants do not participate at equal levels. For example, a home renovation
2 participant's benefits are far greater than someone who is merely buying a few
3 discounted lightbulbs. Thus, the "payback" varies hugely even among participants.

1 **7.0 NS POWER’S PROPOSED SPENDING LEVEL**

2
3 E1 has asserted that a reduction in DSM spending levels to \$22 million per year would be
4 too drastic a change to implement and would require it “going almost back to ground
5 zero”.²⁸ While NS Power acknowledges the reduction proposed by the Company is
6 significant, there is no evidence before the Board that such a level of spending would
7 constitute a change that would impact on the stability of DSM activity within Nova
8 Scotia.

9
10 It is important to provide some perspective when considering the sufficiency of NS
11 Power’s proposal:

- 12
13 • NS Power’s recommendation of 100 GWh of energy savings per year is slightly
14 higher than E1’s 2015 plan once the Home Energy Report has been removed (as
15 proposed under the E1 DSM Plan). As noted by Ms. Curtis during cross-
16 examination:

17
18 **MS. CURTIS:** Mr. Gogan, I’d just like to point out that the
19 amount of energy savings obtained by EfficiencyOne in 2015 is
20 targeted at 120 gigawatt hours. A substantial portion of that is
21 associated with the Home Energy Report.

22
23 So when you remove the Home Energy Report from the programs
24 going forward, the level of DSM activity in Nova Scotia is in
25 around the 100 gigawatt hour mark.²⁹
26

27 Also of note is the fact the Home Energy Report is provided by a non-Nova
28 Scotian entity and its removal will not impact DSM capacity in Nova Scotia.

²⁸ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 16, 2015, pages 427-428, lines 22 and lines 1-4.

²⁹ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 18, page 653, lines 9-17.

- 1 • The evidence presented was clear that E1 is capable of producing more energy
2 savings for less cost. NS Power’s analysis demonstrates the energy savings from
3 the Low DSM case can be produced for the cost of the “Half-Low” DSM case.
4 The Consultant for Board Counsel, Mr. Woolf, on behalf of Synapse Energy
5 Economics, recommended E1 provide the energy savings from the Mid DSM case
6 for the cost of the Base DSM case.³⁰ E1 itself has indicated that it is capable of
7 doing more for less by proposing to deliver energy savings based on the Base
8 DSM case for the price of the Low DSM case. As noted by the IG in its Opening
9 Statement:

10
11 EOne has acknowledged it can, and plans to, produce energy
12 savings at a lower cost than modelled in the IRP. If it can achieve
13 base level energy savings at low-level spending, the Industrial
14 Group observes it should be able to achieve low-level energy
15 savings at half-low spending.³¹
16

- 17 • NS Power is effectively proposing a DSM first year unit cost of \$0.22/kWh which
18 is substantially similar to what has recently been achievable in other Canadian
19 jurisdictions. Figure 3.2 (Revised) of NS Power’s Evidence shows the average
20 first year unit cost across six Canadian jurisdictions who supplement DSM
21 programs, excluding New Brunswick, to be \$0.25/kWh.³² Similarly, \$22 million
22 in DSM spending is consistent with the average (per customer) DSM spending in
23 such jurisdictions.³³ It is clear that the average Canadian contributes far less than
24 what E1 is recommending Nova Scotians contribute.

25
26 Of note is that E1’s response was to argue they cannot reproduce those proven
27 cost per kWh savings as they have eliminated a low-cost program and replaced it
28 with higher cost items. However, there is no evidence that E1 attempted to

³⁰ Exhibit E-37, Direct Testimony of Tim Woolf on behalf of Counsel to Nova Scotia Utility and Review Board, page 3.

³¹ Exhibit E-53, Industrial Group Opening Statement, June 11, 2015, page 1.

³² Exhibit E-33, NS Power Revised Evidence, June 1, 2015, Figure 3.2 (Revised), page 18.

³³ Exhibit E-33, NS Power Revised Evidence, June 1, 2015, Figure 3.1, page 17.

1 replace the eliminated low-cost plan with another low-cost plan (such as those
2 utilized in other jurisdictions) nor any evidence that they attempted to reduce
3 costs in other programs to maintain such a level of spending – all despite
4 significant reduction in the market price of one of their largest subsidized
5 measures (LED lights).
6

7 It is also worthy to note that even if E1 maintained its 2014 level of cost per kWh
8 of savings, it could produce 100 GWh of energy savings for approximately \$25 to
9 \$26 million.
10

- 11 • Achieving 100 GWh for \$22 million is essentially asking E1 to provide savings at
12 a cost similar to what it was verifiably able to deliver in 2014. As stated in NS
13 Power’s Evidence, under the E1 DSM Plan, E1 is proposing \$0.29 to \$0.31/kWh,
14 despite it being able to achieve an actual delivered cost of \$0.26/kWh in 2014
15 (\$0.25/kWh with ITCs), a year that included as additional components low
16 income homeowner program costs (which had high unit cost) and full HST
17 costs.³⁴ NS Power acknowledges inflation would cause some cost pressures since
18 2014, but this should be more than offset by removal of HST, efficiencies gained
19 through more experience, and by significant price decreases in items where E1
20 provides overly high levels of subsidies.³⁵
21
- 22 • The E1 proposed incentive budget is approximately \$81.7 million over the
23 Contract Period (approximately 67 percent of its original \$121.5 million
24 budget).³⁶ Mr. Pickles testified he examined the incentive levels proposed by E1
25 and found them to be “unusually high” and expressed concern about the lack of
26 evidence to support such incentives.
27

³⁴ Exhibit E-33, NS Power Revised Evidence, June 1, 2015, page 21.

³⁵ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 18, page 743.

³⁶ Exhibit E-68, E1 Response to Undertaking 7, June 24, 2015, (PDF) page 116.

1 **MR. GOGAN:** When determining the incentive levels, I take it
2 you did no market research to inform yourself as to what the
3 appropriate incentive levels would be and how they might impact
4 participation?
5

6 **MR. PICKLES:** Well, I certainly inspected the incentive levels
7 that were provided in LRAM and found them to be unusually high
8 in many instances. For instance, the incentive level assumed for an
9 LED lamp in the model is \$10 per LED bulb. The actual -- and
10 that's the -- presumably to cover the incremental cost of that bulb
11 over a baseline efficiency bulb.
12

13 The actual incremental -- the actual full retail cost of that bulb is
14 maybe around \$8, and it's been declining rapidly; it's gone down
15 70 percent over the past two years. And the other utilities that I'm
16 familiar with pay anywhere between \$1.25 and \$5, averaging
17 around 3 to \$5 for that particular lamp.
18

19 So in permitting a model to scale back that incentive to a more
20 modest number, I certainly looked at that. That's certainly the case
21 with other technologies in the model. Adjustable speed drives, I
22 think, were modelled at paying \$600 per unit. They vary between
23 85 and maybe 250 is the highest I've seen across the country,
24 averaging around 120.
25

26 And even generally, if you look at the incentives for the custom
27 program, I think we're paying out at about 17 cents a kilowatt
28 hour. I looked at 10 different utilities across the country and only
29 two pay at that level or more. The rest pay significantly less all the
30 way down to three cents a kilowatt hour.
31

32 //
33

34 **MR. GOGAN:** And if I suggest to you that the incentive levels
35 determined to be appropriate in the EOne filing to support its
36 application of being able to achieve 405 gigawatt hours at 62.5
37 megawatt hours of demand savings over the three-year period is
38 informed by very specific market research, you would have no
39 reason to disagree with that; would you, sir?
40

41 **MR. PICKLES:** You know, I would think quite the contrary.
42 There is no evidence in the record, that I'm aware of, that talks to
43 how the incentive levels were designed and justified, and, you
44 know, my reaction to the filing was that they cannot possibly have

1 been informed by that since some of them are so far outside the
2 range of reasonableness.³⁷
3

4 NS Power provides further submissions below with respect to its concerns
5 regarding the incentive levels proposed by E1 in the E1 DSM Plan.
6

- 7 • As demonstrated in Figure 4.1 (Revised) of NS Power's Evidence, the level of
8 DSM savings proposed by NS Power will provide the same avoided capital
9 benefits as the E1 plan out until 2032 – at approximately half the cost.³⁸
10
- 11 • Figure 3.8 from NS Power Evidence demonstrates NS Power's proposal is
12 forecasted to be more cost-effective and therefore better financially for Nova
13 Scotians until 2034.³⁹
14

15 In addition to the above, NS Power notes Mr. Pickles provided expert evidence that the
16 range of cost/savings balance proposed by NS Power is in fact achievable by the
17 franchise holder. Mr. Pickles testified on cross-examination by E1 as follows:
18

19 **MR. GOGAN:** In your opinion, do you consider that a plan delivered in
20 the context of the Nova Scotia market at a unit cost of 22 cents per
21 kilowatt hour is achievable?
22

23 **MR. PICKLES:** Yes.
24

25 **MR. GOGAN:** I take it that's notwithstanding the maturity of the market
26 and those other factors that we discussed earlier in your evidence,
27 including the standard changes which are impacting this jurisdiction in
28 2015, as well as other factors affecting the cost of DSM programming
29 generally, you maintain the 22 cent per kilowatt hour cost portfolio is
30 achievable.
31

32 **MR. PICKLES:** I do, and for several reasons.

³⁷ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 18, 2015, pages 743-745, lines 3-22; lines 1-10; lines 14-22 and lines 1-5.

³⁸ Exhibit E-33, NS Power Revised Evidence, June 1, 2015, Figure 4.1, page 35.

³⁹ Exhibit E-33, NS Power Revised Evidence, June 1, 2015, Figure 3.8, page 33

1
2 The -- you know, Nova Scotia is comparatively not a mature market at all
3 for energy efficiency. The longevity of programs here is comparatively
4 short compared to other jurisdictions, and we mentioned some of the
5 analytics and regression these various benchmarking groups have been
6 doing.

7
8 You can certainly demonstrate that one of the key drivers of cost per
9 kilowatt hour is maturity of the programs, and these are comparatively
10 young programs, certainly.

11
12 Now, to achieve the 22 kilowatt -- or the \$22 a megawatt hour, it does
13 require a focus on more cost-effective measures. It does require the
14 excising of the non-cost-effective measures. It does require some of the
15 other adjustments that I've outlined, but -- and it requires a set of policies
16 that support those -- those activities.

17
18 And -- but with that caveat, yes, it's achievable.⁴⁰
19

20 Finally, E1 has tried to argue that a reduction to a plan with an annual 100 GWh energy
21 savings would trigger a loss of expertise and infrastructure that would in turn result in
22 future costs if E1 were required to later ramp-up its DSM programs. The CA noted in its
23 opening statement that: "It is difficult to confidently evaluate at what point reductions in
24 the operating budget would result in reductions in the operation of DSM that would cause
25 additional costs to ratepayers in the future."⁴¹ Indeed, not only is it difficult to evaluate,
26 but neither E1 nor any other Intervenor in this proceeding has provided any evidence to
27 the Board to demonstrate that NS Power's proposal would result in any requirement to
28 sharply increase DSM levels at any point in the near-term or that such a ramp-up, if
29 required, would result in any additional future costs to customers (or at least costs that
30 would exceed those of carrying excess DSM).

31
32 **MR. CLARKE:** Mr. Crandlemire, EfficiencyOne and many others have
33 trumpeted the fact that DSM is flexible and easily ramped up and ramped
34 down; that that's one of its greatest benefits. Do you agree with that?
35 (SHORT PAUSE)

⁴⁰ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 18, 2015, pages 768-769, lines 5-22 and lines 1-15.

⁴¹ Exhibit 56, Opening Statement of the Consumer Advocate, June 11, 2015, page 4, line 4.

1
2 **MR. CRANDLEMIRE:** That's generally accepted, but certainly there
3 are implications to ramping up and ramping down.
4

5 **MR. CLARKE:** Would you agree with me, Mr. Crandlemire, that
6 EfficiencyOne has not offered any evidence respecting the cost, if any, of
7 pausing or restarting DSM?
8

9 Just to be clear, Mr. Crandlemire, there's been argument but I haven't seen
10 any evidence in terms of costing this issue of ramping up or pausing or
11 restarting DSM.
12

13 (SHORT PAUSE)
14

15 **MR. CRANDLEMIRE:** We haven't put a dollar figure on it, but
16 certainly we've experienced it in our history of Efficiency Nova Scotia
17 already.⁴²

⁴² 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 16, 2015, pages 550-551, lines 11-22, and lines 1-9.

1 **8.0 NS POWER SYSTEM REQUIREMENTS**

2
3 As noted above, the evidence before the Board is that no additional DSM is required by
4 NS Power during the 2016-18 Contract Period for compliance with Nova Scotia's
5 Renewable Electricity Standards or to meet power system demands. Notwithstanding
6 this, NS Power recognizes the benefits of DSM over the long-term and has proposed E1
7 design a plan which would provide annual energy savings of approximately 100 GWh per
8 year over the Contract Period for a cost of approximately \$22 million. The evidence
9 demonstrates that a DSM plan at this level would enable NS Power to avoid adding any
10 additional generation capacity until 2032 and provide cost benefits to customers over the
11 E1 plan until 2034.

12
13 NS Power system requirements, which are based on the 2014 IRP assumptions and set
14 out in Figure 4.1 of NS Power's Evidence,⁴³ have not been refuted by E1 or any of the
15 other Intervenors in this proceeding. In its Rebuttal Evidence, E1 attempted to argue that
16 based on demand savings, NS Power's proposal was not consistent with the Low DSM
17 case and would not avoid capacity additions until 2032.⁴⁴ However, such argument is
18 both incorrect and misleading. It focuses only on NS Power's Alternative Scenario C and
19 ignores Scenario D, which produces a higher level of demand savings over the Contract
20 Period than Scenario C. Indeed, the evidence shows that Scenario D produces
21 comparable demand savings to the proposed E1 DSM Plan.

22
23 **MR. CLARKE:** Right. And the NSP that's on this chart is the Scenario
24 C; it's not the Scenario D, is it?

25
26 **MR. AGUINAGA:** That's correct.

27
28 **MR. CLARKE:** This chart doesn't have anything for Scenario D from
29 Nova Scotia Power; does it?
30

⁴³ Exhibit E-33, NS Power Revised Evidence, June 1, 2015, page 35.

⁴⁴ Exhibit E-46, EfficiencyOne Reply Evidence, pages 8-9.

1 **MR. AGUINAGA:** That's the -- that's for the alternate scenario that
2 Nova Scotia Power put forward, yes.

3
4 **MR. CLARKE:** No, sir, there are four scenarios that were put forward by
5 Nova Scotia Power. This is C, and D isn't on this graph.

6
7 **MR. AGUINAGA:** So yes, it's correct. That's C.

8
9 **MR. CLARKE:** Right. And so if we had Scenario D on this graphed, the
10 demand savings would be 46.3, not 34?

11
12 **MR. AGUINAGA:** That's correct.

13
14 **MR. CLARKE:** Okay. And you've identified that the EOne plan is
15 based on -- and in your evidence is based on the base case; correct?

16
17 **MR. AGUINAGA:** Yes, for energy savings.

18
19 **MR. CLARKE:** Right. And so if you assume, sir, that Scenario D was
20 plotted here and the demand savings for Scenario D is 46.3 megawatts,
21 and you look at the low figure of 72, will you agree with me that that's 64
22 percent? In other words, the Scenario D figure of megawatts is 64 percent
23 of the low case?

24
25 **MR. AGUINAGA:** Yes.

26
27 **MR. CLARKE:** And if you look at EfficiencyOne's figure of 62 and
28 compare that to the base case, 62 versus 92, that's 67 percent of the base
29 case? Do you agree with that?

30
31 **MR. AGUINAGA:** I can accept that.⁴⁵

32
33 Notwithstanding E1's assertions to the contrary, the evidence is clear that there is low
34 risk to NS Power not being able to avoid adding additional capacity until 2032 with 100
35 GWh savings and associated demand savings. Nova Scotians' investment in renewables
36 is also resulting in considerable excess generation -- much of this generation is in the
37 process of being brought on line, but was not accounted for in the IRP. Indeed, the
38 evidence of NS Power revealed that 100 GWh of savings contemplated by the Low DSM
39 case does not account for the COMFIT build-out, which is estimated to provide the

⁴⁵ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 15, 2015, pages 112-114, lines 12-22; lines 1-22; and lines 1-3.

1 system an additional 500 GWh and more than supplements any potential shortfalls in
2 energy or demand savings under any of NS Power's alternative scenarios:
3

4 **MS. STEWART:** Okay. And so with the low case are there NSPI system
5 requirement risks between 2016 and 2018?
6

7 **MR. BLUNDEN*:** Yeah, a plan that delivers 100 gigawatt hours a year,
8 year over year, and 18 megawatts of demand savings would prevent any
9 capital investments for new capacity or for new renewables out to 2032.
10

11 **MS. STEWART:** And are there any compliance -- RES compliance
12 risks?
13

14 **MR. BLUNDEN*:** I should add that that is based on the IRP
15 assumptions.
16

17 **MS. STEWART:** Based on the IRP assumptions.
18

19 And are there any RES compliance risks associated with low-level DSM
20 for the next three years?
21

22 **MR. BLUNDEN*:** No, we believe we have compliance for that period
23 under control.
24

25 I should mention the COMFIT energy that is generated is not in the IRP
26 forecast as per the Renewable Electricity Regulations. And when we were
27 looking at the -- early on we believed that would be 100 megawatt,
28 roughly 300 -- something under 300 gigawatt hour a year program. And
29 now it's looking like it's going to be something -- when it's fully built out
30 over the next year or so, it'll be closer to a 500-gigawatt hour program.
31

32 So those numbers are not in this forecast, so they actually present a pretty
33 substantial margin for compliance. So that's even with that 100 figure that
34 I gave you, so...
35

36 **MS. STEWART:** So I think if I'm hearing you correctly, the actual
37 anticipated COMFIT build-out is about 500 percent more than what was
38 assumed in the -- for the IRP processes; 500 gigawatts over 100
39 gigawatts?
40

41 **MR. SAMPSON:** Sorry, no.
42

43 **MS. STEWART:** Sorry.
44

1 **MR. SAMPSON:** I probably threw you a curve there. I was talking
2 megawatts and gigawatt hours.

3
4 **MS. STEWART:** Oh sorry.

5
6 **MR. SAMPSON:** Probably best to just say that what we -- what we have
7 going forward -- COMFIT was never build into the compliance planning
8 for renewables as per the Renewable Electricity Regulations.

9
10 But what I'm telling you now is we do have 500 gigawatt hours that we're
11 anticipating when the build-out is complete and that can be counted
12 towards actuals. We just can't count it in planning.⁴⁶
13

14 NS Power submits this excess of renewable energy supports using the inherent flexibility
15 of DSM and de-accelerating DSM activities, especially given the state of the economy,
16 high energy costs and the fact the Act permits the parties to recalibrate DSM in three
17 years if the situation has changed. However, NS Power has taken a relatively
18 conservative approach by essentially ignoring this additional capacity and recommending
19 a plan that, in accordance with the IRP, would avoid additional capital expenditures for
20 17 years.

⁴⁶ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 19, 2015, pages 857-859, lines 15-22; lines 1-22; and lines 1-19. *NOTE: NS Power believes the testimony in this passage attributed to Mr. Blunden was actually the testimony of Mr. Sampson and was incorrectly designated as testimony of Mr. Blunden.

1 **9.0 INCENTIVES**

2
3 As noted above, the amount of incentive funding in E1's originally proposed \$121.5
4 million DSM expenditure represents approximately 67 percent of its costs.⁴⁷ However,
5 there is no evidence before the Board that would confirm these incentives are aligned
6 with the minimum levels required to incent the desired participant behaviour. The
7 reductions in the DSM expenditure level proposed by NS Power must be viewed in the
8 context of the concerns established during this proceeding with regard to the high and
9 unsubstantiated level of incentives included in the E1 DSM Plan.

10
11 Mr. Pickles testified to his concern that there was no information to demonstrate how
12 E1's incentives were designed and justified, and that some were "far outside the range of
13 reasonableness".⁴⁸

14
15 Mr. Drazen, on behalf of the IG, also expressed concern about the lack of information
16 provided by E1 with respect to its incentives and the risk incentives might be paid that
17 did not need to be paid.

18
19 **MR. DRAZEN:** So that in any event, I think EOne should have provided
20 more information as to how it got the incentive levels because some of the
21 things are just -- well, you know, they appear not to be terribly consistent
22 where you have one measure that has a high TRC level and a high
23 investment and then compared to another measure where the TRC is
24 lower, but EOne's proposed investment is lower.

25
26 **MR. GOGAN:** Right. And my question, though, to you is would you
27 adopt the statement that setting these incentive levels, recognizing your
28 methodology, is part science and part art? Would you agree with that?

29
30 **MR. DRAZEN:** Right, but all we have right now is that it looks like
31 magic because we don't see what lies behind the numbers.⁴⁹

⁴⁷ Exhibit E-68, NS Power Response to Undertaking U-7, June 24, 2015, (PDF) page 116.

⁴⁸ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 18, 2015, pages 744-745, lines 21-22 and lines 1-5.

⁴⁹ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 19, 2015, pages 1024-1025, lines 10-22 and lines 1-3.

1
2 NS Power submits E1's incentives are artificially high as E1 is biased to providing high
3 incentives in order to achieve their energy savings targets. NS Power refers to the
4 comments of the IG in its Opening Statement:
5

6 The problem for EOne is that if they don't incent they can't count the
7 energy savings. So while it might be good for the province, it's not good
8 for the business of EOne. They have an efficiency industry which we're
9 told employs 1,200 in the province to sustain. This is part of their
10 agenda.⁵⁰
11

12 Indeed, the evidence indicates that many DSM programs would provide robust paybacks
13 to customers without incentives being necessary at all. As stated by Mr. Drazen in his
14 Opening Statement:
15

16 Several of the DSM measures that EOne proposes to invest in are very
17 cost-effective for customers to do on their own. When utility finance
18 DSM incentives were first proposed, long before it was considered here in
19 Nova Scotia, one reason was that the rates alone were too low to motivate
20 customers to conserve.
21

22 DSM that was cost-effective in terms of the utilities avoided cost was not
23 cost-effective in terms of rates paid by customers. The situation is now
24 different. NSPI's current rates are higher than the avoided cost for the
25 next several years, and rates are going to increase with Maritime Link and
26 COMFIT costs.
27

28 My main point is that the levels of incentive payments from EOne to
29 customers should take this into account.
30

31 For example, according to EOne's tables, that's IR -- response to NSPI IR-
32 10, an under-counter commercial dishwasher low temp has an incremental
33 cost of \$400 relative to the alternative. It reduces energy usage by 12,730
34 kilowatt hours per year.
35

36 The energy charge in NSPI's general service rate is about 11 cents per
37 kilowatt hour, so the annual saving on the customer's bill is \$1,401. In
38 other words, the customer would recoup the entire cost in 3.5 months.

⁵⁰ Exhibit E-53, Opening Statement of the Industrial Group, June 11, 2015.

1
2 Given that the benefit-to-cost ratio -- given that benefit-to-cost ratio for
3 the customer, why does EOne consider it necessary to provide a \$200
4 incentive to the customer? That incentive becomes a cost that must be
5 borne by all other customers of NSPI, on top of a \$408 administrative
6 cost.

7
8 To show that a particular DSM measure is cost-effective relative to new
9 supply is not enough. EOne should also demonstrate that it is acquiring
10 that conservation at the lowest necessary cost; that is, a \$200 incentive is
11 not appropriate if a \$100 incentive would work.⁵¹
12

13 Acknowledging the concern with respect to the lack of information and evidence
14 provided in its Application regarding the proposed incentives, E1 gave an undertaking
15 (U-4) to provide its assessment of its incentive levels. E1 filed its response to this
16 undertaking after the close of the hearing.⁵² NS Power has reviewed E1's assessment of
17 its incentive levels with its expert, David Pickles, and finds it unresponsive in that it only
18 provides a discussion of E1 incentive setting process, supported by a few anecdotal
19 examples. Moreover, there is no evidence in this proceeding that the process described
20 by E1 existed previously as a formal documented process. Indeed, NS Power notes that
21 this process was not referenced in any of E1's earlier evidence which had indicated that
22 budgets had not yet been set by E1 and would not be set until after Board approval of the
23 budget.⁵³
24

25 Mr. Pickles' assessment of E1's response is attached as Appendix "A".
26

27 As noted by Mr. Pickles, in order for E1 to have been responsive, its assessment should
28 have demonstrated that its incentive amounts and strategies were more appropriate than
29 other potential amounts and strategies, which it did not do. It should have compared
30 alternate incentives to E1's proposed amounts. Further, there was no comprehensive
31 comparison to incentives in non-high cost jurisdictions.

⁵¹ Exhibit E-54, Opening Statement of Mark Drazen on behalf of the Industrial Group, June 11, 2015.

⁵² Exhibit E-68, EfficiencyOne Response to Undertaking 7(c), June 24, 2015, (PDF) page 116.

⁵³ Exhibit E-13, NS Power (EfficiencyOne) Information Response 12(g).

1
2 E1's process makes little or no mention of the cost effectiveness of the measure or of the
3 amount NS Power customers could afford to pay for the incentive. As noted by Mr.
4 Pickles, the "process" described by E1 is flawed in that it focused almost exclusively on
5 information from customers and trade allies (who have a vested interest) regarding "how
6 much of an incentive they need". It does not address the other side of the issue, namely
7 how much ratepayers can afford (both from a cost-effectiveness perspective and a rate
8 affordability perspective) to pay for E1 to provide these incentives. Arguably, as Mr.
9 Pickles states, customers and contractors who benefit from high incentives will often
10 overstate the incentive required. Also, the process contains no discussion of specific
11 quantitative criteria, analyses, or guidelines and when making comparisons to other
12 jurisdictions, it appears the E1 process looks externally only very occasionally, and even
13 then solely to other high cost jurisdictions (E1 cites Rhode Island, Vermont, and
14 Massachusetts).

15
16 NS Power submits that had the process outlined in U-4 been followed by E1, then
17 examples of unreasonably high incentives that were identified by Mr. Pickles during
18 cross-examination (e.g., LED incentives being higher than incremental cost and 2-3 times
19 higher than other administrators, variable frequency drive incentives of \$600 compared to
20 \$30-\$250 paid by other administrators, custom incentives of \$0.17/kWh being the third
21 highest of 10 utilities surveyed) would not have been developed.⁵⁴ No defense of E1's
22 high incentives in these cases was provided in its response to U-4. NS Power also notes
23 that no specific dollar values for individual measures are presented and supported in U-4.

24
25 NS Power recommends the Board significantly reduce E1's proposed incentive budget
26 and require the franchise holder to adopt the protocol developed by Mr. Pickles in the
27 response to U-7 regarding the setting of incentives in future DSM plans.⁵⁵

⁵⁴ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 18, 2015, pages 743-744.

⁵⁵ Exhibit E-68, EfficiencyOne Response to Undertaking 7, June 24, 2015, (PDF) page 116.

1 **10.0 E1’S POSITION**

2
3 E1 raises a number of other arguments in support of its position which are addressed
4 below.

5
6 **10.1 2014 IRP**

7
8 E1 argues for the adoption of the energy savings and expenditure levels based on the
9 findings of the 25 year time horizon in the 2014 IRP. In developing the E1 DSM Plan,
10 E1 stated that it used the 2014 IRP as its “guiding perspective” in terms of arriving at the
11 right level of energy savings and expenditures.⁵⁶

12
13 As stated in NS Power’s Rebuttal Evidence, the use of a 25 year time horizon from the
14 2014 IRP is not appropriate for determining the level of DSM expenditure in the Contract
15 Period for the following reasons⁵⁷:

- 16
17 (a) The energy and capacity requirements of the Contract Period show that no DSM
18 is required.
19
20 (b) Resource additions or changes in the outer period (which is the only period where
21 E1’s proposed plan forecasts a better NPV) are significantly more uncertain than
22 those in the near-term.
23
24 (c) Moderate amounts of DSM in the near-term are more than adequate to defer
25 system requirements for over 15 years.

26
27 Indeed, in NS Power’s view, while a 25 year IRP is of assistance in the context of long-
28 term generation planning when considering the construction of a power plant or a similar

⁵⁶ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 16, 2015, page 367, lines 6-16.

⁵⁷ Exhibit E-45, NS Power Rebuttal Evidence, June 9, 2015, pages 17-18.

1 asset with a useful life of 25 years or more, it does not optimize DSM levels. A similar
2 view with respect to the use of the IRP for DSM planning purposes was expressed by the
3 IG, which stated in its Opening Statement as follows:
4

5 The IRP is a long-term system planning tool. It is directional, not
6 prescriptive, and it is a modelling exercise. It does not exercise discretion
7 and does not consider affordability, which is a legislated consideration.
8

9 The IRP is most useful when considering long-term capital investments,
10 such as the Maritime Link or tidal power. However, unlike investments in
11 major capital projects, DSM plans inherently allow for flexibility and
12 responsiveness. We're looking at a three-year period out of a 25-year
13 planning horizon, with a significant amount of uncertainty. There will be
14 many chances to review the level of spending.
15

16 Both the level of energy savings and the costs associated with achieving
17 these savings can be increased or decreased from time to time to reflect
18 the ongoing and shifting needs of NSPI and its customers.⁵⁸
19

20 NS Power introduced evidence in the form of a report prepared by Synapse which shows
21 that many jurisdictions in the United States follow IRP planning horizons at 10, 15 or 20
22 year periods.⁵⁹ NS Power submits that adoption of shorter IRP periods in other
23 jurisdictions is largely due to the increasing level of uncertainty the further out in time
24 one tries to predict/forecast.
25

26 **10.2 Requirement to Maintain Industry Capacity**

27

28 E1 has argued the Board should approve the higher level of DSM proposed in the E1
29 DSM Plan, in part, because to reduce the level of DSM to 100 GWh would result in an
30 erosion of the "DSM industry" in Nova Scotia. There has been much argument put
31 forward about the growth of the "DSM industry" under E1 and its predecessor, Efficiency
32 Nova Scotia, and the jobs it provides in Nova Scotia. Ms. Vincent stated on cross-

⁵⁸ Exhibit E-53, Industrial Group Opening Statement, June 11, 2015, page 2.

⁵⁹ Exhibit E-60, *Best Practices in Electric Utility Integrated Resource Planning Examples of State Regulations and Recent Utility Plans* (Synapse), filed by NS Power, June 15, 2015.

1 examination from the Board that industry capacity was one of the factors E1 used in
2 developing the E1 DSM Plan.⁶⁰

3
4 NS Power submits that impacts to the DSM infrastructure in Nova Scotia should not be
5 taken into account by the Board in determining the appropriate level of DSM spending
6 for the Contract Period.

7
8 First, and perhaps most significantly, impact on industry capacity is not a consideration
9 provided for under the Act. The Board is mandated under the Act to consider the best
10 interests of Nova Scotia Power's customers and affordability of the DSM activities
11 proposed by the franchise holder. In short, the direction of the Act is for the Board to
12 consider affordability for all of NS Power's customers, not maintaining DSM spending at
13 a level that benefits a minority of Nova Scotians at the expense of all.

14
15 Second, even if it were a factor to be taken into account, neither E1 nor any of the other
16 Intervenor have provided any actual evidence that reducing the level of DSM from what
17 is currently proposed by E1 (average of 135 GWh per year) to 100 GWh per year would
18 result in a loss of industry capacity. Indeed, such an argument ignores the fact that one of
19 the benefits of DSM is that it can be ramped up or down. When asked about the need for
20 additional DSM in order to preserve industry capacity, NS Power's expert, David Pickles
21 testified as follows:

22
23 **MR. GOGAN:** There's been much evidence, Mr. Pickles, about the need
24 to preserve DSM industry capacity. Do you support that concept, that
25 DSM -- a consistent level of DSM investment is necessary to maintain
26 industry capacity?

27
28 **MR. PICKLES:** I believe that the level of industry capacity should rise
29 and fall with the level of need for the DSM resource itself, much the same
30 way that the level of capacity to build generation should vary with the
31 amount of generation anticipated.

⁶⁰ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 16, 2015, page 460, lines 1-2.

1 I generally disagree with much of EfficiencyOne's evidence about the
2 need to support excessive industry capacity for an extended period of time
3 under the assertion that it's difficult or more costly to ramp-up in the
4 future. That has certainly not been the case of many certainly U.S.
5 jurisdictions that have ramped up from zero savings to savings in excess of
6 1 percent in a matter of 12 or 18 months. There are significant examples
7 of that.

8
9 So, for me, the metric is what's the cost of carrying that excess capacity
10 and for how long versus what will it cost to re-create it in the future,
11 particularly since the future may be less costly as prices of efficiency
12 measures come down and as people adopt more of that technology
13 naturally.

14
15 I think there's strong evidence that carrying those costs is questionable.⁶¹
16

17 NS Power submits that the 100 GWh proposed by the Company should not require a
18 material "ramp down" of the DSM industry over the three year Contract Period. As
19 noted above, the evidence is that once the Home Energy Report is removed from the
20 DSM programs (as is proposed under the E1 DSM Plan for the Contract Period), the
21 actual level of DSM currently taking place in Nova Scotia would be in the range of what
22 the Company is now proposing – 100 GWh per year.⁶²
23

24 It is also important to acknowledge that energy saving activities also take place outside of
25 E1. As noted in NS Power's evidence, there is efficiency work that is being done within
26 the province independent of E1, such as NS Power's program with Clean Nova Scotia
27 which will finance efficiency upgrades for an estimated 6,600 low income homeowners
28 who heat their homes electrically and is paid for by NS Power's shareholders at no cost to
29 customers.⁶³
30

31 NS Power also refers to the evidence of Mark Drazen on this issue:
32

⁶¹ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 16, 2015, pages 651-52, lines, 13-22 and lines 1-17.

⁶² 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 18, 2015, page 653.

⁶³ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 19, 2015, page 969, Lines 9-20.

1 While it is a hypothetical possibility, it is not a reason to incur more cost
2 than necessary now. I have two observations in this respect. First, a
3 smaller program by E1 does not mean that DSM activities will decrease
4 proportionately. According to E1, Efficiency Nova Scotia has helped
5 develop an “efficiency culture” in Nova Scotia. That, plus the decreasing
6 cost of items in the market, should increase activity by NSPI’s customers
7 in improving the efficiency of their homes and businesses. Second, even if
8 there are higher costs in the future, NSPI and its ratepayers have been able
9 to modulate the effect of unexpected cost changes in the past.⁶⁴
10

11 It is important to note any increase in rates arising as a result of increased DSM spending
12 will have a negative impact on all business within the Province and therefore a negative
13 impact on the overall economy of the Province.
14

15 Finally, NS Power submits that if additional rigour is added to the DSM incentive process
16 and incentive levels are right-sized, as recommended by Mr. Pickles and Mr. Drazen,
17 industry capacity should not be harmed to a significant degree as it will represent a
18 market correction in an area where there had been historic overpayment and reduce the
19 disparity between DSM participants and non-participants. With a greater focus on cost-
20 effective measures, E1 should not need to provide its previous high level of incentives.
21

22 **10.3 Consistency of Investment Levels**

23

24 E1 has, in part, justified its proposed level of DSM spending, based on previous
25 investment levels approved by the Board. Ms. Vincent stated on cross-examination:
26

27 One of the other things that we looked at was stability. So the plan level
28 that we’ve proposed is at a stable, consistent level of DSM investment
29 every year since 2010 in terms of the program activity. So rather than --
30 you know, I think I’ve used the term -- probably over-used it in terms of
31 step changes.
32

33 What we wouldn’t want to see is a stable level that’s been achieved over
34 the past four or five years drop significantly and then have to go back up

⁶⁴ Exhibit E-40, Evidence of the Drazen Consulting Group, on behalf of the Industrial Group, June 2, 2015, page 19, lines 7-14.

1 when sort of that stable level of activity -- and I believe in the Province's
2 energy report that one of the things that customers wanted was they
3 preferred -- they wanted stability in their rates, and so we were looking at
4 that stable level of investment.⁶⁵
5

6 In making this assertion, E1 is ignoring the changes to the supply/demand balance in
7 Nova Scotia, resulting in excess generation combined with the reduction in demand
8 among some customer classes. As noted by Mr. Blunden in the Company's opening
9 statement:
10

11 There have been substantial changes to the electricity system in Nova
12 Scotia over the past number of years. On the demand side, overall load
13 has been decreased materially due to the loss of major industrial customers
14 and aggressive energy efficiency programs. On the supply side, we have
15 new wind farms that have been added to the system, and there has been a
16 significant build-out of COMFIT projects, and energy will begin flowing
17 into Nova Scotia from Labrador in 2017 via the Maritime Link.⁶⁶
18

19 A similar observation was made by Mr. Drazen who commented on the changes in the
20 large industrial load:
21

22 And third; the large industrial load in Nova Scotia has been steadily
23 shrinking. In 2003 was 1,477 gigawatt hours. For 2015 the estimate was
24 700 gigawatt hours.⁶⁷
25

26 NS Power submits that affordability rather than continuity of spending levels is much
27 more important to its customers. E1 has argued that both participants and non-
28 participants alike will benefit from this level of DSM spending over the long-term.
29 However, as noted above, the evidence of NS Power and Mr. Drazen, has demonstrated
30 that it could be anywhere from seven to 20 years before non-participants will see any
31 payback for what they will be required to pay in rates now. The evidence also supports
32 that NS Power's proposed DSM level would provide greater benefit to customers as a

⁶⁵ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 18, 2015, pages 474-475, lines 16-22 and lines 1-7.

⁶⁶ Exhibit E-55, NS Power Opening Statement, June 11, 2015, page 1.

⁶⁷ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 19, 2015, page 1007, lines 8-11.

1 whole until 2034.⁶⁸ This evidence was not challenged by E1 during its cross-examination
2 of either NS Power or Mr. Drazen.

3
4 It is important to note E1 has also attempted to justify the lack of information it has
5 provided to the Board on the basis of past practices. On questioning from the Board
6 about the information gaps in its Application, Ms. Vincent stated as follows:

7
8 **MS. VINCENT:** So we don't believe there are those information gaps.
9 The plan that we put forward is comparable to the level of detail and
10 information provided for prior years for which Board approval has been
11 granted for prior years of DSM Plans.⁶⁹
12

13 E1's reliance on past practices, however, fails to account for the legislative changes to the
14 DSM system in Nova Scotia. First, the Act now creates a new franchise system and
15 deems the franchise holder to be a public utility for the purposes of carrying out its
16 activities. As such, the information requirements imposed on the franchise holder must
17 be viewed in a broader context than E1 and its predecessors. The information
18 requirements under the Act would apply equally to a replacement or successor franchise
19 holder that has no past history with Board in this area. Second, and more significantly,
20 the Act now provides that the Board can only approve a DSM plan if it is satisfied, based
21 on the information and evidence provided by the franchise holder, that the plan is
22 affordable and in the best interests of customers.

23
24 Finally, NS Power notes E1 has shown a genuine unwillingness to consider an annual
25 expenditure amount which is less than its current level. In NS Power's view, this tactic
26 ignores the basis upon which DSM should or should not be utilized and simply adds a
27 high cost of DSM with nowhere to go but to increase in future. As noted in Mr. Drazen's
28 evidence:
29

⁶⁸ Exhibit E-33, NS Power Revised Evidence, June 1, 2015, Figure 3.8, page 33.

⁶⁹ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 18, 2015, page 470, lines 4-8.

1 The Board's decisions regarding the 2016-2018 program will most likely
2 set—or at least strongly influence—the proposals for the subsequent six
3 years. Part of E1's argument for its proposed level of expenditures is that
4 cutting back on programs will have costs (e.g., severance) and lose
5 program momentum. In short, once it starts at a certain level it is hard to
6 decrease it. At the level of spending proposed by E1 for 2016-2018, NSPI
7 ratepayers will probably be asked to pay about \$400 million for DSM over
8 the franchise period. This will have a significant effect on NSPI's rates.⁷⁰
9

10 **10.4 Fuel Costs**
11

12 E1 also argued that the level of DSM expenditure recommended by E1 in the E1 DSM
13 Plan was justified because the cost of DSM was reportedly more economic than fuel. On
14 cross-examination by the Board, Mr. Dunskey stated as follows:
15

16 **MR. DUNSKY:** Sure.
17

18 It's interesting. I mean, I guess a couple of thoughts to that. The first is;
19 my understanding is that just fuel costs alone in Nova Scotia are running
20 about 4.6 cents a kilowatt hour. You're talking here about DSM that's
21 going to cost about 3 cents a kilowatt hour.
22

23 So right off the bat, even during that -- you know, that period of time
24 when no new capacity is needed you're still looking at something that is a
25 50 percent return on investment. So that looks pretty good, from my
26 perspective, in terms of focusing on DSM.⁷¹
27

28 As stated in the Company's Evidence, NS Power does not dispute that over the longer
29 term there is the potential for DSM to be economic compared to fuel costs.⁷² However,
30 NS Power submits the arguments advanced by E1 on this issue are misleading and
31 inaccurate in many respects.
32

⁷⁰ Exhibit E-40, Evidence of Drazen Consulting Group on Behalf of the Industrial Group, page 4, lines 7-14.

⁷¹ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 18, 2015, pages 490-491, lines 21-22 and lines 1-9.

⁷² 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 18, 2015, page 635.

1 DSM spending is not immediately offset by reduced fuel costs within the year the funds
2 are spent on DSM activities. The funds are spent but the savings to customers in reduced
3 fuels costs are only realized much farther out and then only if the energy savings are
4 permanent. The issue from an affordability perspective then becomes whether customers
5 are willing to add to upward pressure on rates by making a contribution to DSM spending
6 beyond what is required for the needs of the power system or compliance purposes for
7 the potential to achieve a long-term benefit. As stated by Mr. Blunden on cross-
8 examination by E1:

9
10 **MR. GOGAN:** Right. So for every dollar of investment by DSM there is
11 a corresponding energy savings?

12
13 **MR. BLUNDEN:** If you live long enough, yes. The challenge is, and I
14 think we addressed in our Opening Statement, is the savings you get from
15 fuel are over a very long period of time. The reality is in 2016 and 2017,
16 where customers are most concerned about affordability, we will spend, if
17 the application's accepted, \$38.5 million on DSM to save 6 to \$8 million
18 on fuel. So it'll be an incremental cost to customers in that year of
19 approximately \$30 million.

20
21 **MR. GOGAN:** That's in Year 1?

22
23 **MR. BLUNDEN:** And we'll do it again in Year 2 and in Year 3, that's
24 correct.⁷³
25

26 Indeed, as noted above, using a partial revenue requirement analysis, Figure 3.8 from NS
27 Power's Evidence demonstrates that customers under the E1 DSM Plan do not become
28 better-off financially relative to NS Power's proposal until 2034.⁷⁴ In other words, it will
29 take approximately 19 years before customers will start to realize the benefit of the fuel
30 savings and then only if the energy savings are achieved as forecasted. As stated by Mr.
31 Blunden:

32
33 **MR. GOGAN:** M'hm. So 150 percent return on an investment is a
34 significant return; is it not, Mr. Blunden?

⁷³ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 18, 2015, page 634, lines 2-16.

⁷⁴ Exhibit E-33, NS Power Revised Evidence, June 1, 2015, Figure 3.8, page 33.

1
2 **MR. BLUNDEN:** It would be if it's realized but it's not a guaranteed
3 return by any stretch because you're talking about savings and, you know,
4 a certain set of assumptions have to actually be realized that are often
5 decades out. And as we know that, just the change in the electrical system
6 in Nova Scotia the past few years, what the future will hold will be very
7 different from what it looks like today.⁷⁵
8

9 Moreover, as noted above, the evidence is clear that while a low number of participants
10 may receive direct benefit, it could be up to 20 years before non-participants receive any
11 financial benefit, if at all.

⁷⁵ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 18, 2015, pages 636-637, lines 13-22 and line 1.

1 **11.0 SETTLEMENT AGREEMENTS**

3 **11.1 Non-Financial Settlement**

5 NS Power, E1, IG, CA, SBA, AEC and EAC entered into a Consensus Settlement
6 Agreement dated as of June 16, 2015 (Non-Financial Settlement Agreement).⁷⁶ The
7 Non-Financial Settlement Agreement provides a resolution, or a means of resolution, to a
8 number of the non-financial matters at issue among the parties. In particular, it addresses
9 the establishment of a standardized filing for future applications, the withdrawal of E1's
10 request for a reserve fund, performance targets and thresholds, reporting and evaluation
11 requirements and the development of cost allocation and cost recovery models as well as
12 a final rate and bill impact analysis. Many of these issues such as the standardized filing,
13 cost allocation and cost recovery models, evaluation and reporting requirements and the
14 rate and bill impact analysis will be referred to the DSM Advisory Group for discussion
15 and consideration. If a consensus cannot be achieved on a matter, it will be referred back
16 to the Board. NS Power supports this approach and recommends the Non-Financial
17 Settlement Agreement be approved by the Board.

19 **11.2 Financial Settlement**

21 E1, CA, SBA, AEC and EAC entered into a Terms of Consensus dated as of June 16,
22 2015 (Financial Settlement Agreement).⁷⁷ NS Power does not support either the DSM
23 spending level or the energy and demand savings targets agreed to by those parties in the
24 Financial Settlement Agreement for the reasons set out in this Closing Submission and
25 elsewhere in NS Power's Evidence. In addition, NS Power does not agree with the Board
26 approving the DSM programs as proposed in the E1 DSM Plan and has recommended the
27 Board direct E1 to redevelop its DSM plan to provide energy savings of 100 GWh per
28 year over the 2016-2018 Contract Period at a spending level of approximately \$22

⁷⁶ Exhibit E-62, Consensus Settlement Agreement – E1, NS Power, CA, SBA, IG, AEC & EAC, June 16, 2015.

⁷⁷ Exhibit E-61, Terms of Consensus by E1, CA, SBA, AEC and EAC, June 16, 2015.

1 million. As such, NS Power recommends the Financial Settlement Agreement not be
2 approved by the Board.

3
4 While NS Power does not support the Financial Settlement Agreement, the Company, as
5 confirmed by Mr. Blunden in his testimony, does not take issue with a couple of the non-
6 financial related matters addressed in the Financial Settlement Agreement that were not
7 included in the Non-Financial Settlement Agreement.⁷⁸ Specifically, NS Power has no
8 objection to the issue of the potential development of a DSM Expenditure Justification
9 Criteria being referred to the DSM Advisory Group for discussion. Similarly, while NS
10 Power still recommends the Board not approve E1's request to change the cost-
11 effectiveness testing methodology from TRC to PAC for future DSM plans, the Company
12 is supportive of the matter being referred to the DSM Advisory Group for discussion and
13 consideration as set out in Section 7 of the Financial Settlement Agreement.

14
15 Section 6 of the Financial Settlement Agreement provides that E1 will undertake a Small
16 Business Energy Study for the SBA. As stated by Mr. Blunden, NS Power is supportive
17 of E1 doing an appropriate amount of research and studies to find out the best level of
18 DSM in Nova Scotia⁷⁹; however, NS Power submits that neither NS Power nor the Board
19 have enough information or evidence with respect to the costs or the details of such a
20 study to endorse it.

21
22 Section 10(a) of the Financial Settlement Agreement provides that NS Power should be
23 encouraged to have the results of its Clean Nova Scotia program submitted to the Board
24 and stakeholders. NS Power understands the results of evaluations of energy savings
25 from the Clean NS Program will be available to E1 from Clean Nova Scotia. As stated
26 by Mr. Blunden in his testimony, although the program is not a regulated cost (as it is

⁷⁸ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 18, 2015, pages 819-821.

⁷⁹ Ibid, page 821.

1 funded entirely by NS Power's shareholders), the Company has no objections with E1
2 and Clean Nova Scotia sharing those evaluations results.⁸⁰

⁸⁰ 2016-2018 Demand Side Management Resource Plan (M06733), Transcript, June 18, 2015, pages 818-819.

12.0 CONCLUSION

E1 has failed to discharge the burden placed on it under the Act. E1 has not provided the evidence necessary to justify the DSM programs and level of expenditure put forward in the E1 DSM Plan as being affordable for and in the best interests of NS Power customers.

The level of energy savings and costs proposed by E1 are not required either for regulatory compliance or system demand. In addition, approximately 67 percent of E1's budget relates to incentives that, in accordance with the evidence of David Pickles and Mark Drazen, are out of proportion to what should be provided. Indeed, Mr. Pickles testified that some of the incentives in the E1 DSM Plan were "far outside the range of reasonableness" and Mr. Drazen testified to the risk that some of the incentives did not need to be paid.

Electricity rates in Nova Scotia are among the highest in Canada and the level of expenditure proposed by E1 will only add to rate pressure, even at the slightly reduced amount proposed by the Financial Settlement Agreement among E1 and some of the other stakeholders.

Given the level of excess generation and the continuing near-term pressures on electricity rates, NS Power submits it would be in the best interests of customers from an affordability perspective for Nova Scotia to take advantage of the flexibility of DSM and de-accelerate the level of DSM spending over the Contract Period.

Specifically, NS Power recommends the Board direct E1 to develop a DSM plan that would deliver 100 GWh per year in energy savings over the Contract Period at a cost of \$22 million per year. This level of expenditure supports near-term affordability, while avoiding additional capacity requirements until 2032. It is also forecasted as being more affordable for customers compared to the E1 DSM Plan until 2034. Although a substantial reduction, there is no evidence that adopting this level of spend would result in any type of requirement to sharply increase DSM levels at any point in the future or

1 that it would lead to an erosion of industry capacity (which is not a consideration under
2 the Act). In any event, the Act requires the matter to be reviewed every three years and,
3 if the situation changes adjustments, can be made at that time.

4
5 NS Power respectfully requests the Board:

- 6
- 7 1. Approve the Non-Financial Settlement Agreement filed in this proceeding as
8 Exhibit E-62.
 - 9
 - 10 2. Not approve the Financial Settlement Agreement filed in this proceeding as
11 Exhibit E-61.
 - 12
 - 13 3. Not approve the 2016-2018 DSM Plan filed by E1.
 - 14
 - 15 4. Direct E1 to design a DSM Plan for the Contract Period with input from NS
16 Power that would provide annual energy savings of 100 GWh per year (Revised
17 2016-2018 DSM Plan) at approximately \$22 million of investment and resubmit
18 such plan to the Board for approval.
 - 19
 - 20 5. Direct E1 and NS Power to finalize the Form of Agreement based on the Revised
21 2016-2018 DSM Plan prior to resubmission to the Board for Approval.
 - 22
 - 23 6. Not approve E1's request to change the cost-effectiveness testing methodology
24 from TRC to PAC for subsequent DSM plans.

25
26 NS Power further reserves the right in its Rebuttal to Closing Submissions to respond to
27 matters raised in the Closing Submissions of E1 and the other Intervenor, including any
28 new items for which such parties have not yet put a position before the Board.

29
30 All of which is respectfully submitted.



MEMORANDUM

To: Nova Scotia Power

From: David Pickles

Date: July 6, 2015

Re: Review of EOne Undertaking U-4

This memorandum presents the findings of a review of EOne's Undertaking U-4 in M06733 - EfficiencyOne – Application 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 – E-ENSC- R – 15.

This review finds that:

- There is no evidence provided that the process described in U-4 existed and was rigorously and comprehensively applied to the development of the incentive budget proposed in this proceeding.
- There is evidence (including unreasonably high incentives for certain measures) that the proposed incentives could not possibly have been developed had the described process been applied rigorously.
- No support of any specific measure incentive level is provided in U-4 (or in the filing), and none of the high incentives identified during the hearing were justified.
- The market research cited as being used in the process is narrowly focused on a subset of the measures included in the filing, and is in some cases outdated and in others too broad to be useful in setting incentives levels or did not address incentive levels at all.
- The process uses as benchmarks experience only from high cost states and overemphasizes feedback from customers and trade allies with a vested interest in maximizing incentives.
- Even if the process had been applied rigorously, the process is flawed in that it does not place sufficient emphasis on the payback, cost-effectiveness, and affordability of the incentives to Nova Scotia Power customers.

These findings are discussed below.

E1 Undertaking U-4 provides a response to the undertaking to "provide EfficiencyOne's assessment of its incentive levels." However, it is unresponsive in that it provides primarily a discussion of E1's incentive setting process, supported by a few market research or program evaluation examples. It is not clear how, or if, the results of the evaluations or market research were used to set individual incentive levels

in this proceeding. Further, it is not clear that the process as described existed previously as a formal documented and adhered to process. Indeed, neither the filing nor previous IR responses referenced this process. E1's response to NSP IR-12(g)(iv) is provided below.

IR: 12(g)(iv) Please identify/provide for each program:

The incentive to be paid for that measure, along with the rationale, and supporting analysis with respect to the chosen incentive level;

Response:

Please refer to EfficiencyOne's response to NSPI IR-10 Attachment 1, filed electronically, for measure-level incentives modelled in the EL-RAM, which are provided in column BK. The modelled incentive dollars provided reflect actual 2014 incentives; actual incentives may vary each year as new research and evaluation results are completed.

Note that the ELRAM model provided no rationale or supporting analysis and did not refer to any E1 processes, it simply provided the dollar amount selected by E1.

Had the process described in U-4 existed and been followed, it should have been referenced in the response to IR-12(g)(iv), and the clearly inappropriate incentives identified in ELRAM and discussed during the hearing at Page 743, line 3 through Page 747 line 2 of the transcript (e.g., LED incentives being higher than incremental cost and 2-3 times higher than other administrators, variable frequency drive incentives of \$600 compared to \$30-\$250 paid by other administrators, custom incentives of \$0.17/kWh being the third highest of 10 utilities surveyed) could not have developed by E1. It should also be noted that there are many other measures in ELRAM which appear to have excessive incentive levels. No justification of E1's high incentive in these cases was provided, and no specific dollar values for individual measures are supported in U-4 or elsewhere in the filing.

In order for U-4 to have been responsive, its assessment should have demonstrated that E1's incentive amounts and strategies were more appropriate than other potential amounts and strategies. It did not do so. Such an assessment should have compared alternate incentive levels to E1's proposed amounts and proven that the proposed amounts are "best" – including consideration of potential lower participation rate scenarios.

Of particular note is that E1's process made little or no mention of the cost effectiveness of the measure from the Total Resource Cost perspective, and of the amount NSPI customers could afford to pay for the incentive. The E1 process is inherently flawed in that it is focused almost exclusively on information from customers and trade allies regarding "how much of an incentive they need". It misses the other side of the equation – "how much can NSPI afford to pay (both from a cost-effectiveness perspective and a rate affordability perspective)". Experience reveals that customers and trade allies who benefit from high incentives will often overstate the incentive required. Also, the process appears to be primarily "judgment" based, with no discussion of specific quantitative criteria, analyses, or guidelines for establishing prudent incentive levels. Further, when making comparisons to other jurisdictions, it appears the E1 process looks externally only occasionally, and even then primarily to other high cost states (E1 cites Rhode Island, Vermont, and Massachusetts) – making the benchmarking results a self-fulfilling prophecy.

Finally, the research cited by E1 as supporting its process does not always appear to be sufficiently comprehensive (i.e., it covers only a small subset of the measures to be included in the programs, and does not provide the detail needed to set incentives), is sometimes outdated, and is sometimes inconsequential to the incentive setting process.

For example, Attachments 1 and 2 to U-4 cite research only on the Fuel Substitution and Green Heat program from 2010 and 2012 respectively. Attachment 3 provides LED research from 2012 (note that LED prices and market adoption have changes dramatically since 2012). Attachment 4 is a free-ridership survey. Attachment 5 is “business profiling research” where the “overall objective of the research was to determine which industries have the greatest potential and would benefit most from ongoing consultations with ENS in terms of creating greater energy efficiencies and saving” and which does not provide any analysis of incentive levels. Attachment 6 from 2014 does provide useful pricing research including updates to the 2012 LED research in Attachment 3, but is narrowly focused on products supported by the Instant Savings (in-store rebates) component of the Residential Efficient Products program, Attachment 7 focuses narrowly on the Appliance Retirement Program, and Attachment 8 provides high-level residential customer feedback regarding a generic investment of \$5,000 at two incentive levels, as well as their interest in financing. Of particular concern is the lack of detailed research regarding non-residential incentive levels which comprise \$41.8 million of the proposed E1 budget.

As a group, these materials do not provide the information necessary to properly support a timely and rigorous incentive setting process, and are not evidence that the proposed E1 incentive levels are appropriate.