

EfficiencyOne

IN THE MATTER OF: The Public Utilities Act

- and -

IN THE MATTER OF:
EfficiencyOne 2025 Q2 Demand Side Management Report

M12438

EfficiencyOne Responses to Information Requests (RIRs)

E1 (NSEB) RIRs 01-03

FILED
November 25, 2025



E1 Responses to Nova Scotia Energy Board (NSEB) Information Requests
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Request IR-01:

The Board notes EfficiencyOne's (EOne) explanation that performance in the Residential Behaviour Program was impacted by the cyber incident at Nova Scotia Power, which affected the delivery of program communications and participant engagement activities during the 2024/2025 season.

(a) Given this disruption, does EOne expect to meet the 7 GWh energy savings target in its updated forecast for the 2025 DSM Plan period?

(b) The Board further notes that program costs for the Existing Residential portfolio have remained the same, despite a reduction in forecast energy savings. Please explain the factors contributing to this outcome. In particular, the Board requests details on:

- i) Why costs did not decrease proportionally with the reduction in energy savings;
- ii) Whether fixed delivery, administrative, or contractual costs limit cost flexibility during the period; and
- iii) How EOne is ensuring cost-effectiveness and value for ratepayers given the lower level of energy savings achieved in the 2024/2025 season.

Response IR-01:

(a) Yes, EfficiencyOne (E1) expects to achieve 7.0 GWh of first-year energy savings for the Residential Behaviour program component in 2025.

(b) The Existing Residential program has seven program components. The forecasted decrease in energy savings from the Residential Behaviour program component is the main reason

E1 Responses to Nova Scotia Energy Board (NSEB) Information Requests
NON-CONFIDENTIAL

1 why overall Existing Residential energy savings are forecast to decrease. Due to
2 circumstances outside of E1's control and without any fault, negligence, or breach by E1,
3 the program component was paused indefinitely in May 2025 due to NS Power's
4 cybersecurity incident and the resulting unavailability of NS Power Advanced Metering
5 Infrastructure (AMI) customer data required for program delivery. As a direct result of this
6 third-party incident beyond E1's control, no reports have been issued, and the online portal
7 has been unavailable to participants, which means no energy savings are being generated
8 through this program component. It is through the online portal and reports that customers
9 recognize the value of the Residential Behaviour program, therefore until the AMI data is
10 restored and E1's program can be restarted, there is currently no value directly provided
11 to customers. Variable costs related to the printing and mailing of customer reports are
12 currently not being incurred. E1 continues to assess all costs of the program component,
13 including delivery agent costs, and is working to reduce these wherever possible.

14
15 Existing Residential costs have not dropped proportionally to the energy savings decrease
16 because Residential Behaviour is a low unit cost program component that represents half
17 of Existing Residential's 2025 Plan as Approved energy savings total but only nine per cent
18 of its 2025 Plan as Approved investment total. E1 is forecasting that the overall energy
19 savings performance target for the 2023-2025 DSM Plan period will be met, with other
20 program components expected to close the energy savings gap created by the Residential
21 Behaviour program component pause in 2025, subject to normal program operating
22 conditions and the absence of further force majeure events.

- 23
24 i) Please refer to part (b).
25 ii) Please refer to part (b).
26 iii) Please refer to part (b).
27

E1 Responses to Nova Scotia Energy Board (NSEB) Information Requests
NON-CONFIDENTIAL

Request IR-02:

Please explain the factors contributing to the decrease in energy savings and the corresponding increase in program costs observed within the Small Business Energy Solutions program.

Response IR-02:

Following an extended period of low participation in Small Business Energy Solutions in 2023 due to a range of factors including supply chain issues, contractors prioritizing large projects over smaller projects, high inflation rates, and small businesses being required to repay loans through the Canada Emergency Business Account program, EfficiencyOne (E1) made several changes to the program component in Q2 2024 to increase participation and improve program effectiveness. The changes included increasing the eligibility cap for businesses from 350,000 kWh of electrical energy consumption annually to 600,000 kWh, extending the pre-approval window from 120 days to 180 days, and increasing unitary incentives across the measure catalogue (lighting and heating incentives increased from \$0.40/kWh to \$0.55/kWh, and incentives for most other measures increased from \$0.25/kWh to \$0.55/kWh). Increased incentives for non-lighting and heating measures were implemented as part of a strategic shift in focus to those measure categories (agriculture, commercial kitchens, laundry, pumping and water heating), as opportunities in heating and lighting measures become more saturated over time. This strategic shift, while necessary for long-term program sustainability, contributed to higher per-unit costs as these measures typically require more complex installations and higher incentive rates to drive participation.

The changes implemented in Q2 2024 were successful, generating strong interest in the program and a significant increase in applications in the second half of 2024 and year-to-date in 2025 while also increasing the unit cost (\$/kWh), of Small Business Energy Solutions. At the same time,

E1 Responses to Nova Scotia Energy Board (NSEB) Information Requests
NON-CONFIDENTIAL

several E1 programs, including Small Business Energy Solutions, have had to temporarily scale back participation over the course of 2025, as E1 manages its program spending in order to adhere to the \$173 million investment level for the 2023-2025 DSM Plan period. This scaling back of participation, combined with the maintained higher incentive rates, directly contributed to the decrease in energy savings while program costs remained elevated.

E1's latest forecast, reported in the Q3 2025 DSM Report filed November 25, 2025, shows Small Business Energy Solutions expects to achieve 9.4 GWh in energy savings with an expenditure of \$7.1 million, representing a 25% decrease in energy savings and an increase of 4% in spending from 2025 Plan as Approved numbers of 12.6 GWh in energy savings and an expenditure of \$6.8 million.

In summary, the factors contributing to decreased energy savings and increased program costs are: (1) the necessary scaling back of participation in 2025 to manage overall DSM Plan spending within the approved \$173 million budget, which reduced the volume of projects and resulting energy savings; (2) the maintenance of higher incentive rates implemented in Q2 2024 (\$0.55/kWh versus previous rates of \$0.40/kWh and \$0.25/kWh), which increased per-project costs; and (3) the strategic shift from lighting and heating measures to more complex, higher-cost measures in agriculture, commercial kitchens, laundry, pumping and water heating categories. The decrease in energy savings does not have a matching decrease in spending primarily because the unitary incentives increased in Q2 2024 and have remained in place.

E1 Responses to Nova Scotia Energy Board (NSEB) Information Requests
NON-CONFIDENTIAL

Request IR-03:

The Board notes that participation levels in the Demand Response programs have been lower than expected and that the overall Demand Response capacity target will not be met for the 2024/2025 season.

(a) Please explain in detail the key drivers and insights contributing to these outcomes and describe how these learnings have informed the development of the next DSM Plan.

(b) Please explain the key factors contributing to the low participation levels in the Demand Response programs.

(c) Please explain why forecasted program investment remains near planned levels despite reduced participation and capacity performance in the Demand Response programs.

Response IR-03:

(a) Participation and available capacity results in the Demand Response program were lower in the 2024/2025 season (December 1, 2024 to February 28, 2025) than in the 2025 Plan as Approved, in both the Residential Demand Response and BNI Demand Response program components.

Residential Demand Response results

The 2023-2025 DSM Plan modelled six Residential Demand Response pathways and four of those pathways have been implemented by EfficiencyOne (E1) over the course of the three-year plan – direct load control smart thermostats, direct load control domestic hot water controllers, battery control, and EV chargers. Of the pathways implemented by E1, direct

E1 Responses to Nova Scotia Energy Board (NSEB) Information Requests
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1 load control smart thermostats and EV chargers have exceeded the participation levels set
2 out in the 2025 Plan as Approved. Participation for domestic hot water direct load
3 controllers was lower than set out in the 2025 Plan as Approved, as the impact of the
4 removal of all controllers installed prior to Q2 2023 due to quality issues identified by E1's
5 third-party equipment supplier, continued to be felt in 2024 and 2025. The installation of
6 the new controllers, which began in Q3 2024, was slower than expected due primarily to
7 service provider staffing changes, and significantly impacted both participation and
8 achieved available capacity. Battery control uptake was lower in 2025 than expected in the
9 Plan, but represented a small portion of the overall 2025 Plan as Approved participation.

10
11 When comparing the current tracked participation results of 4,006 for the 2024/2025
12 season to the 2025 Plan as Approved, it's important to note that one of the pathways
13 modelled in the 2023-2025 DSM Plan that was not pursued by E1 – behavioural demand
14 response – represented more than 70 per cent (28,353) of the 39,096 participants in the
15 2025 Plan as Approved for Residential Demand Response, but only 15% of the available
16 capacity expected. At the outset of the three-year plan, E1 made the decision to focus on
17 the pathways with the most available capacity potential. The other pathway that was
18 modelled in the 2023-2025 DSM Plan but not pursued by E1 was dynamic pricing with
19 enabling technologies, which had very low participation and available capacity
20 expectations in the 2025 Plan as Approved.

21
22 **BNI Demand Response results**

23 The 2023-2025 DSM Plan modelled five BNI Demand Response pathways and E1 focused
24 on implementing one – the Commercial & Industrial Curtailment (Aggregator) – over the
25 past three years, as it represented the vast majority of the available capacity potential.

E1 Responses to Nova Scotia Energy Board (NSEB) Information Requests
NON-CONFIDENTIAL

1 When comparing the current tracked participation results of 143 facilities¹ for the
2 2024/2025 season to the 2025 Plan as Approved, the Commercial & Industrial Curtailment
3 (Aggregator) pathway has exceeded its participation expectations of 80 facilities, as laid out
4 in the Plan. Achieved available capacity was lower than expected due to factors including:
5 (i) an unfavourable mix of morning and evening events determined by NS Power's system
6 needs, (ii) a higher-than-expected number of participant opt-outs exercised at participants'
7 discretion, and (iii) several participants being challenged by the limited advance notice (16
8 hours) from NS Power for demand response events, preventing participation at anticipated
9 levels.

10
11 The four BNI Demand Response pathways that were modelled in the 2023-2025 DSM Plan
12 but have not yet been implemented by E1 – direct load control smart thermostats, direct
13 load domestic hot water controllers, battery control, and dynamic pricing with enabling
14 technologies – represented a small percentage of the expected available capacity for 2025,
15 but 92% of the expected participation.

16
17 **Development of the 2027-2031 DSM Plan**

18 The results and learnings from E1's first three years of operating a Demand Response
19 program have informed where E1 plans to focus its attention during the five-year 2027-
20 2031 DSM Plan. The pathways where E1 has seen the highest potential for growth – direct
21 load control smart thermostats and direct load domestic hot water controllers on the
22 Residential Demand Response side; and the Commercial and Industrial Curtailment
23 (Aggregator) pathway on the BNI Demand Response side – are expected to form the
24 foundation of the Demand Response program in the 2027-2031 DSM Plan.

¹ In the Q2 2025 DSM Report (M12438), the number of participating meters (175) in BNI Demand Response was incorrectly provided in the participation table (Table 3, page 8). The number of participating facilities (143) is reported in the Q3 2025 DSM Report, per E1's BNI Demand Response participation definition.

E1 Responses to Nova Scotia Energy Board (NSEB) Information Requests
NON-CONFIDENTIAL

1 Pathways not pursued by E1 during the 2023-2025 DSM Plan, such as behavioural demand
2 response and dynamic pricing with enabling technologies, are not currently being modelled
3 for the 2027-2031 DSM Plan.

4
5 (b) Please refer to part (a) of this IR response.

6
7 (c) Forecasted program investment remains near planned levels despite reduced participation
8 and capacity performance in the Demand Response season, largely due to the cost
9 structures of both program components (Residential Demand Response and BNI Demand
10 Response) and the foundational activities required in the early years of program delivery.

11
12 For BNI Demand Response, the program strategy focused on broad customer enrollment
13 to build awareness and establish a participation base. Although enrollment was strong,
14 several operational challenges limited measurable performance, including delays in
15 Advanced Metering Infrastructure (AMI) data, and limited real-time data visibility, which
16 made it difficult to validate response or support participants during events. Despite these
17 challenges, delivery activities such as customer recruitment, technical coordination, system
18 configuration, and event planning proceeded as scheduled. Key improvements have now
19 been implemented, including a more targeted recruitment strategy focused on higher-
20 value participants, a new technology partner with near real-time feedback capability, and
21 enhanced support for customers before, during, and after events.

22
23 For Residential Demand Response, spending did not decrease in proportion to the decrease
24 in available capacity due to the program's incentive and delivery model. Incentives are paid
25 based on enrollment and participation in events rather than measured capacity delivered.
26 Battery storage devices are the exception as they receive performance-based incentives.

E1 Responses to Nova Scotia Energy Board (NSEB) Information Requests
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1 The largest share of Residential Demand Response costs is tied to delivery fees, which
2 include a fixed monthly delivery partner contract and a variable per-device cost for
3 integration into the Distributed Energy Resource Management System (DERMS) platform.
4 Costs scale with enrolled devices rather than event performance. As a result, expenditures
5 remained close to planned levels even when actual delivered capacity per device was lower
6 than anticipated which resulted in lower capacity results.

7
8 Overall, investment in both program components reflected the early stage focus on
9 enrollment, customer enablement, and platform development. These foundational
10 activities, along with lessons learned from previous seasons, have informed program
11 refinements that are expected to improve participation rates, visibility, and measurable
12 capacity performance in the upcoming delivery year.