2022 **M10473**

NOVA SCOTIA UTILITY AND REVIEW BOARD

IN THE MATTER OF: The Public Utilities Act

IN THE MATTER OF: An Application by EfficiencyOne (E1) to the Nova Scotia Utility and Review Board for Approval of a Supply Agreement for Electricity Efficiency and Conservation Activities between E1 and Nova Scotia Power Inc. (NS Power), the establishment of a final agreement between the parties, and approval of a 2023-2025 Demand Side Management (DSM) Resource Plan

INFORMATION REQUESTS

To: EfficiencyOne ("E1")

From: The Industrial Group

Responses Due: April 29, 2022

Contact Person: Nancy G. Rubin, Q.C./ Dylan MacDonald
Stewart McKelvey
Suite 600-1741 Lower Water Street
P.O. Box 997
Halifax NS B3J 2X2
Telephone: (902) 420-3200 / Fax (902) 420-1417

Issued at Halifax, Nova Scotia, this 14th day of April, 2022.

Request IR-1:

Reference: EfficiencyOne 2023-2025 DSM Resource Plan Filing, Evidence, Page 4, Line 8

> ***The Settlement Plan will ". . . [C]reate favourable market conditions for the increased adoption of energy efficient and system peak demand reduction equipment and upgrades."***

Please explain what "market conditions" are created and how E1 changes market conditions.

Request IR-2:

Reference: EfficiencyOne 2023-2025 DSM Resource Plan Filing, Evidence, Page 10 (Page 19/584 of PDF), Line 11

"The Settlement Plan has an average first year unit cost of $0.39/kWh and a weighted average measure life of 11.3 years, resulting in a lifetime unit cost of $0.035/kWh."

(a) Does this assume there are no costs after the first year? ($0.39 ÷ 11.3 = $0.035)

(b) Do any of the measures incur costs after the first year, such as maintenance? If so, please identify and quantify the costs.

Request IR-3:

Reference: EfficiencyOne 2023-2025 DSM Resource Plan Filing, Evidence, Page 15 (Page 24/584 of PDF), Line 13

"E1's investment in customer incentives continues to be a significant category of spending as expected in a resource acquisition model. E1 has implemented an Incentive Setting Process which was an outcome of the CLEAResult study conducted following the 2016-2018 DSM Plan. The incentive setting methodology is used when adding new measures or changing incentive levels on existing measures to confirm incentive levels fall within an acceptable range."

(a) Does the level of incentives change when NS Power rates change? Please explain.

(b) Has E1 taken into account the effect of the rate increases proposed by NS Power in the current General Rates Application? If so, please explain how. If no, why not?

Request IR-4:

Reference: EfficiencyOne 2023-2025 DSM Resource Plan Filing, Evidence, Page 16(Page 25/584 of PDF), Line 17

Avoided energy and capacity costs have been calculated by NS Power using the 2020 IRP Reference Plan 2.0C. The avoided costs of energy and the avoided costs of capacity are 30% and 41% lower, respectively, than in the 2014 IRP, which were used in the TRC test for the 2020-2022 DSM Plan.

(a) Please explain E1's understanding of why the avoided energy costs in the 2020 IRP are so much lower than in the 2014 IRP.

(b) Please explain E1's understanding of the relationship between avoided costs for evaluating DSM and marginal costs used to set rates such as ELIADC and GRLF.

(c) How sensitive are NS Power's avoided energy costs to natural gas prices?

Request IR-5:

Reference: EfficiencyOne 2023-2025 DSM Resource Plan Filing, Evidence, 3. Settlement DSM Plan; Table 1: 2023-2025 Settlement Plan, Page 11(Page 20/584 of PDF)

(a) Please restate Table 1 to express currency in real dollars versus nominal dollars.

(b) Please present the data for E1's Alternative Scenario in the same format as Table 1 (pg. 11).

Request IR-6:

Reference: EfficiencyOne 2023-2025 DSM Resource Plan Filing, Evidence, 4.2.4 Application of Costs, Page 18 (Page 27/584 of PDF), Line 12

"The Board has established that the Total Resource Cost test be applied at the program level, rather than the measure level, in accordance with industry best practices. Screening at the measure level is the most restrictive application of the cost-effectiveness test and denies the DSM Administrator the opportunity to deliver a portfolio of demand side management services that are accessible on an equitable and non- discriminatory basis and responsive to the current market."

(a) Please provide E1's definition of Program in the context of offerings to the respective "categories".

(b) Please define "categories" as used in the Plan.

(c) Please define "sector" as used in the Plan.

(d) Please define "customer group" and "segments" as used in the Plan.

(e) Historically, E1 had Programs, comprised of components comprised of individual measures. Please provide E1's current categorization.

(f) Please provide a list of Programs and their components, by year, since E1 (and formerly ENS) filed DSM Plans.

Request IR-7:

Reference: EfficiencyOne 2023-2025 DSM Resource Plan Filing, Evidence, 4.2.4 Application of Costs, Page 18(Page 27/584 of PDF), Line 22

"…measures which fail the Total Resource Cost individually are combined into Programs which cumulatively are cost-effective."

(a) Please confirm that the inclusion of individual measures which did not pass the TRC were permitted by the Board if "necessary to provide strategic or long-term benefits"?

(b) Please identify each measure and the respective Program associated with each measure which does not pass the TRC test and provide the justification for its inclusion.

Request IR-8:

For example, two components of the Existing Residential Program, namely the Affordable Single-family Homes and the Mi'kmaw Home Energy Efficient Project, do not pass the TRC test

Given that certain components and measures extended to low-income categories by E1 would not pass the TRC test, has E1 examined whether alternative funding could be used to fund such measures. If so, please list alternative funding sources and explain why were they not chosen.

Request IR-9:

Reference: EfficiencyOne 2023-2025 DSM Resource Plan Filing, Evidence, 4.2.4 Application of Costs, Page 25 (Page 34/584 of PDF), Line 5

The avoided costs of transmission and distribution were provided by NS Power via a separate filing.

(a) What time period did NS Power use in calculating avoided transmission and distribution costs?

(b) Please provide the calculations, including source documents.

Request IR-10:

Reference: EfficiencyOne 2023-2025 DSM Resource Plan Filing, Evidence, 4.2.4 Application of Costs, Page 25 (Page 34/584 of PDF), Line 7

The avoided costs of carbon are calculated by E1 through the application of the federal trajectory pricing to an emissions intensity for Base DSM savings, calculated based on the NS Power system using the 2020 IRP Reference Plan 2.0C results, using a similar method to what NS Power used to calculate avoided energy and capacity costs.

Please provide the details of the calculation.

Request IR-11:

Reference: EfficiencyOne 2023-2025 DSM Resource Plan Filing, Evidence, 4.2.4 Application of Costs, Page 34 (Page 43/584 of PDF), Line 19

"Based on the cost of fuel as reported in NS Power's 2021 financial statements of $0.075/kWh, the cost of DSM at $0.035/kWh is less than the average cost of fuel by $0.039/kWh."

Please provide the calculation of the $0.075 figure.

Request IR-12:

Reference: Evidence Page 35(Page 44/584 of PDF), Table 4

Please provide the calculations of the costs and cost differences.

Request IR-13:

Reference: Evidence Page Evidence Page 35(Page 44/584 of PDF), Table 4

Please provide the calculations of the costs and cost differences.

Request IR-14:

Reference: EfficiencyOne 2023-2025 DSM Resource Plan Filing, Evidence, 4.2.4 Application of Costs, Page 39(Page 48/584 of PDF), Line 10

"[I]n contrast to leading American jurisdictions, in 2020 less than 2% of ratepayers' money was spent on DSM."

Please explain whether this percentage includes money spent by NS Power ratepayers for measures not funded by E1. Provide the source material for the response.

Request IR-15:

Reference: EfficiencyOne 2023-2025 DSM Resource Plan Filing, Evidence, 4.2.4 Application of Costs, Page 53 (Page 62/584 of PDF), Table 10.

(a) Please provide the calculations of the “Cost of Fuel per kWh.”

(b) Is this the same as the marginal cost of energy? If not, how do the two differ?

Request IR-16:

Reference: EfficiencyOne 2023-2025 DSM Resource Plan Filing, Evidence, 9. Underserved Markets and Diverse Communities, Page 55 (Page 64/584 of PDF), Footnote 39

(a) Please confirm E1 chose to use the 2016 Census data, as per footnote 39, which relies on 2015 data, instead of Statistics Canada’s most recent data regarding the percentage of Nova Scotian’s who fall within the category of “low-income” in order to determine the funding level as part of E1's "balanced plan"?

(b) Please confirm that the 2016 Census data for low income Nova Scotians is 17.0% in comparison to the most recent published data of 12.1% for 2019, which tracks a material improvement?

Request IR-17:

Reference: Statistics Canada: https://www150.statcan.gc/ca/n1daily-quotidien/210323/dq210323a-eng.htm

> ***The market basket measure (MBM) was adopted as Canada's Official Poverty Line in June 2019. … The decline in the national poverty rate from 2018 to 2019 represents a continuation of a general downward trend in the poverty rate observed in recent years. Except for an increase in 2015 associated with the oil price shock in that year, the poverty rate has fallen by a statistically significant margin***

(a) Please restate the 2023-2025 Plan, using the most current Statistics Canada data for Low-Income classification, i.e. 12.1%?

(b) If the spend on low income components is reduced to 12.1%, and the funds reallocated, please confirm that the result is an improvement in Energy savings at a Plan level.

Request IR-18:

Reference: EfficiencyOne 2023-2025 DSM Resource Plan Filing, Evidence, 4.2.4 Application of Costs, Page 58 (Page 67/584 of PDF), Line 7

E1 proposes to spend $10 million on "DR pilot programming." Further, E1 says that since 2019 it has worked collaboratively "to develop, assess and evaluate DR pilot programs . . . to ascertain feasibility and scalability."

(a) Please provide a detailed breakdown of the $10 million of costs to be incurred.

(b) Have E1 or NS Power researched similar programs of other utilities? If so, which utilities?

(c) What differences are there between the proposed DR offerings in Nova Scotia versus other utilities' DR offerings?

(d) NS Power already has experience with demand control features in the ELIADC and Large Industrial Interruptible rates. Can the experience and with these rates be utilized in the creation and operation of the new Demand Response rates? If no, why not?

(e) What ongoing costs (e.g., operating and maintenance and or bill credits) are expected to be incurred with Demand Response measures?

Request IR-19:

Reference: EfficiencyOne 2023-2025 DSM Resource Plan Filing, Attachment 1: Barriers to Participation & Mitigating Strategies, Page 7(Page 84/584 of PDF)

E1 lists five "pathways" for Residential customers.

(a) Please explain "battery control" and "behavioural DR".

(b) What are the costs—direct and indirect—of the types of equipment that must be installed to enable NS Power to notify customers and to assert the necessary control?

Request IR-20:

Reference: EfficiencyOne 2023-2025 DSM Resource Plan Filing, Attachment 1: Barriers to Participation & Mitigating Strategies, Page 11(Page 88/584 of PDF)

For BNI Demand Response what is the difference between “curtailment” and “direct load control”? Please explain how they would be implemented with specific examples.

Request IR-21:

Reference: EfficiencyOne 2023-2025 DSM Resource Plan Filing, Appendix A 2023-2025 DSM Resource Plan; 3. 2023-2025 SETTLEMENT PLAN, Table 9: 2023-2025 Settlement Plan Investment and Savings, by Program Component, Page 40 (Page 138/584 of PDF)

Please restate Table 9 to express currency in real dollars versus nominal dollars.

Request IR-22:

Reference: EfficiencyOne 2023-2025 DSM Resource Plan Filing, Appendix A 2023-2025 DSM Resource Plan; 3.4 Settlement Plan – Customer Groups & Segments, Page 47 (page 145/584 of PDF)

Figure 12: 2023-2025 Settlement Plan Investment Summary, by Year

(a) Please provide a breakdown of amounts of investment, and the measures proposed for investment within Figure 12 as they relate to each “Customer Group & Segment” for the years set out;

(b) Please provide the amount of investment in Low-Income Participation (as found in Table 9, page 40 of Appendix A 2023-2025 DSM Resource Plan) that contribute to each figure represented within Figure 12.

Request IR-23:

Reference: EfficiencyOne 2023-2025 DSM Resource Plan Filing, Appendix A 2023-2025 DSM Resource Plan; 3.4.1 Diverse & Underserved Communities, Page 50 (Page 148/584 of PDF)

Figure 13: 2023-2025 Low-Income Investment, First-Year Energy Savings & Greenhouse Gas Reductions

(a) Please provide detailed supporting calculations to demonstrate what particular investments the 21% Low-Income Investment seen at Figure 13 is composed of;

(b) Please provide supporting calculations to demonstrate how E1 arrived at the 10% Low-Income Energy Savings (GWh) highlighted at Figure 13;

Request IR-24:

Reference: EfficiencyOne 2023-2025 DSM Resource Plan Filing, Appendix A - 2023-2025 DSM Plan, 7. Enabling Strategies, Page 124 (Page 222/584 of PDF)

"Historically, E1 has invested an average of 10% of its total DSM Portfolio investment in Enabling Strategies."

(a) Please specify each Enabling Strategy and explain the how the cost is allocated for each year of the Plan.

(b) What information is provided to NSPI to allow it to allocate these costs?

(c) Please provide the amount of investment in real dollars for Enabling Strategies for the years 2023-2025.

Request IR-25:

Please provide cost allocation tables, by rate class, for each year in a) E1's Preferred Plan; b) Alternate Scenario; c) Settlement Plan, and d) a Scenario where the Low Income funding is set at 12% of the investment.

Request IR-26:

Reference: EfficiencyOne 2023-2025 DSM Resource Plan Filing, Appendix A, Page 117, Table 55 and Table 56, Page 118 (Page 216/584 of PDF)

Description of Direct Load Control: "Customers receive an annual payment to participate in DR events."

(a) What is E1's current thinking as to how the credits will be set and the likely level?

(b) Would the credit be the same for Residential and BNI customers? If not, what is the reason for any difference?

Request IR-27:

Reference: Customers receive an annual payment to participate in DR events Appendix A, Page 118, Table 56 (Page 216/584 of PDF)

Re Program Component Pathways: BNI Customers will receive "additional energy payment ($/kWh) based on actual energy reduced during DR events."

(a) How will these additional payments be calculated? Please give examples based on actual costs.

(b) Will such payments also be made to Residential customers? If no, why not.?

(c) How will NS Power recover the amounts paid?

Request IR-28:

Reference: Evidence Appendix A, Page 121(Page 219/584 of PDF), Table 57, footnote e and Page 123 (Page 221/584 of PDF), Table 59

(a) Please provide the calculations and source material for the 10—Year Levelized Unit Cost of $229.59/kW/year. (Table 57)

(b) What is the relationship, if any, between this levelized cost and the payments to DR customers?

(c) Please provide the calculations and source material for the 10—Year Levelized Unit Cost of $214.68/kW/year. (Table 59)

Request IR-29:

Reference: Evidence Appendix A, Attachment 2L Avoided Costs Brief, Page 3, Table 2 (Page 260/584 of PDF)

What is E1's understanding of the reason(s) that avoided energy cost decreases from 2023 ($92/MWh) to 2024 ($65/MWh)?

Request IR-30:

Reference: Evidence Appendix A, Attachment 4

(a) Please provide a copy of the workbook with formulas intact.

(b) For every measure that has a TRC ratio of 3.00 or higher, please explain in detail how E1 determined the incentive to pay to customers.

(c) Has E1 calculated the direct electric bill saving to the customer of each measure? If not, why not?

(d) Has E1 calculated the direct non-electric bill saving to the customer of each measure? If not, why not?

Request IR-31:

Reference: Evidence Appendix A, Attachment 4

(a) Please identify any measures for which the incentive payment has changed from the time of the previous plan filing and this one and state the basis for the change.

(b) Do the incentives change in any way in the Preferred Plan, Alternate Scenario or Settlement Plan? Please explain.

Request IR-32:

In M10431 NSPI filed an Application for approval of Certain Revisions to its Rates, Charges and Regulations (filed January 27, 2022). Proposed Rate percentage increases for 2022-2024 are found as follows, and assume $40 million in DSM spending for 2022:

	2022	2023	2024
Domestic Service Tariff			
Fuel	0.0%	0.0%	0.0%
Non-Fuel	3.3%	3.3%	3.2%
Total	**3.3%**	**3.3%**	**3.3%**
Small General Tariff			
Fuel	0.4%	0.3%	0.3%
Non-Fuel	3.3%	3.4%	3.4%
Total	**3.7%**	**3.7%**	**3.8%**
General Tariff			
Fuel	1.7%	1.7%	1.7%
Non-Fuel	2.4%	2.4%	2.4%
Total	**4.0%**	**4.0%**	**4.0%**
Large General Tariff			
Fuel	1.8%	1.8%	1.8%
Non-Fuel	3.4%	3.4%	3.5%
Total	**5.2%**	**5.2%**	**5.3%**
Small Industrial Tariff			
Fuel	0.6%	0.6%	0.5%
Non-Fuel	4.5%	4.7%	4.9%
Total	**5.1%**	**5.3%**	**5.4%**
Medium Industrial Tariff			
Fuel	1.6%	1.5%	1.5%
Non-Fuel	4.0%	4.1%	4.2%
Total	**5.6%**	**5.7%**	**5.7%**
Large Industrial Tariff			
Fuel	3.2%	3.3%	3.4%
Non-Fuel	0.1%	0.1%	0.1%
Total	**3.4%**	**3.4%**	**3.5%**
Other Classes			
Fuel	-0.4%	-0.4%	-0.3%
Non-Fuel	0.5%	0.6%	0.8%
Total	**0.1%**	**0.3%**	**0.4%**
Total FAM Classes			
Fuel	0.7%	0.8%	0.8%

1

2

(a) What are the cost implications of the proposed increase in DSM costs, DSM allocation and recovery? Please explain and provide supporting workpapers.

(b) If NSPI's proposed increases are accepted as proposed, what are the implications for E1's proposed 2023-2025 DSM Plan? If there are implications, please provide revised Preferred Plan and Alternate Scenario in tabulated format.

(c) Has E1 considered enhanced Program offerings to industrial categories given they face the highest fuel-related percentage increases in the period 2022-2024? If so how?

Request IR-33:

(a) With respect to the proposed 2023-2025 DSM Plan, please provide a list of the Programs, and identify the measure changes by Program as compared to the last Plan Application.

(b) Please explain the rationale for changes in measures.