EfficiencyOne

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 the 2023-2025 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 2023-2025 Demand Side Management (DSM) Resource Plan.

CLOSING SUBMISSION OF EFFICIENCYONE

M10473

DATE FILED

July 4, 2022

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1. EXECUTIVE SUMMARY

On March 11, 2022, EfficiencyOne ("E1") filed its Application for approval of its 2023-2025 Demand Side Management Resource Plan ("DSM Plan") and Supply Agreement with Nova Scotia Power Incorporated ("NS Power") with the Nova Scotia Utility and Review Board ("NSUARB," "the Board"). The proposed DSM Plan was filed with the support of NS Power as a joint application in accordance with s.79L of the *Public Utilities Act*, R.S.N.S. 1989, c.380, s.1 ["*Public Utilities Act*"]. The proposed 2023-2025 DSM Plan was the result of a year-long, extensive stakeholder engagement process which brought about a high degree of alignment among stakeholders with respect to both the investment and energy savings levels.

Given the level of support the proposed DSM Plan received from both NS Power and Intervenors, E1, with the support of NS Power and other Intervenors, requested this matter proceed by way of paper process. The Board approved this request, reserving the right to hold a hearing upon request or upon its own determination that a hearing must be held.

Information Requests to E1 and NS Power were filed by Intervenors and the NSUARB on April 15, 2022, and Responses to Information Requests were filed on April 29, 2022. Intervenors filed evidence on May 20, 2022. E1 and NS Power filed Rebuttal Evidence on June 10, 2022.

E1 modelled various plan scenarios throughout the planning process, ultimately developing two plans for submission before the NSUARB: a Preferred Plan and an Alternate Scenario. Ongoing engagement up to March 11, 2022, achieved broader consensus among E1, NS Power, and stakeholders, resulting in the maturation of the Preferred Plan into the Settlement Plan.

The collaborative and engaging approach used in the development of the 2023-2025 DSM Plan led to the achievement of a joint filing by E1 and NS Power for the first time since the establishment of the franchise regime.

The proposed DSM Plan was filed with the support of NS Power. In its initial filing letter, NS Power stated,

> "*NS Power is pleased with the outcome of its consultation with E1 regarding their 2023-2025 resource plan … [O]ver the past several months, the Company has worked with E1 and the Demand Side Management Advisory Group to ensure the development of a plan that not only provides substantial electricity efficiency benefits, but also supports the reduction of GHG emissions in the province*."

In developing the 2023-2025 DSM Plan, E1 followed three main objectives:

1. Conduct a transparent and collaborative demand side resource planning process that reflects best practices, demonstrates consideration of stakeholder insight, and encourages agreement among Demand Side Management Advisory Group ("DSMAG") members;
2. Deliver a portfolio of demand side management services that are accessible on an equitable and non-discriminatory basis, are responsive to the current market, and proactively consider potential future market developments; and
3. Deliver cost-effective demand side resources that support the successful implementation of a long-term electricity strategy that is in the best interest of Nova Scotia ratepayers, supports federal and provincial climate change goals, and is affordable.

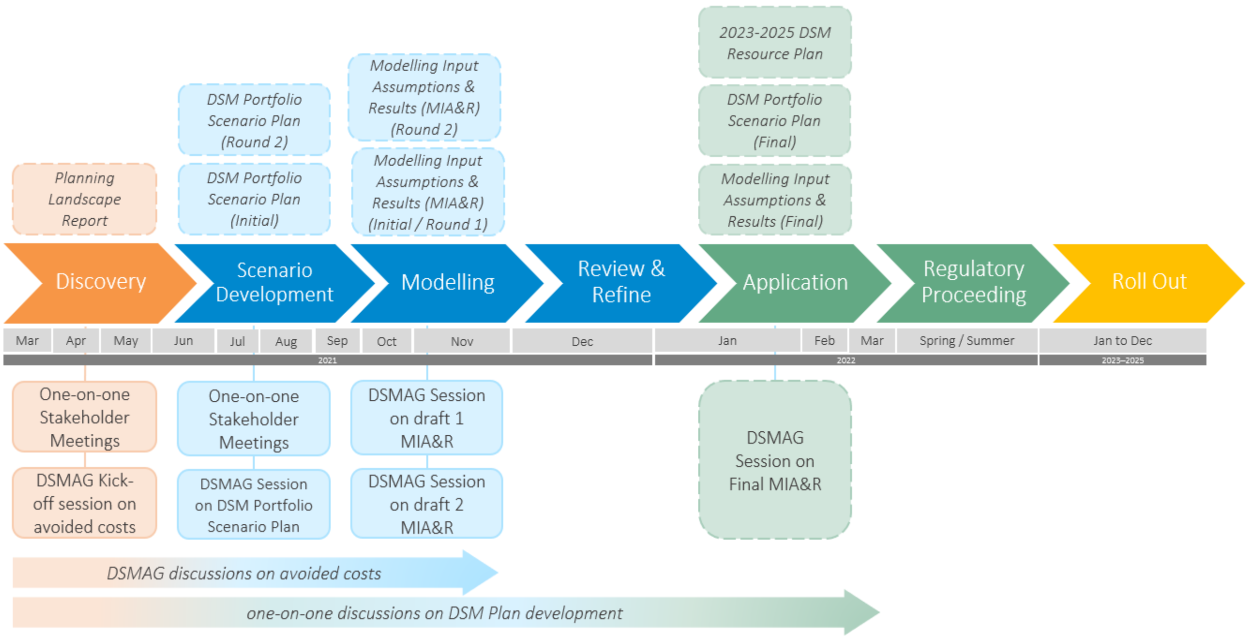
The overarching requirements that the DSM Plan be affordable and in the best interest of customers were the foremost considerations in achieving these objectives.

2. STAKEHOLDER ENGAGEMENT

The proposed 2023-2025 DSM Plan, referred to throughout this regulatory proceeding as the "Settlement Plan," was developed over the course of a comprehensive and transparent stakeholder process engaging all ratepayer classes. Stakeholders were provided with various plan scenarios, model results and assumptions, technical tables, rate and bill impact analyses, and opportunities to provide meaningful input over the course of the plan development process. Stakeholder input and feedback informed the development of the DSM Plan throughout.

E1 began this process through the DSMAG using a series of phases, ultimately resulting in alignment with NS Power on the Settlement Plan, as outlined in Figure 1, below.

Figure 1: DSM Advisory Group Engagement



Attachment 1 provides a detailed outline of the comprehensive engagement process.

3. STAKEHOLDER SUPPORT

The engagement process resulted in a high degree of alignment and stakeholder support of the Settlement Plan. Evidence filed by stakeholders indicates that this process was beneficial in ensuring that all rate class sectors interests were identified and considered by E1 in the plan development process. The Consumer Advocate,[1] Membertou,[2] Synapse Energy Economics,[3] the Municipal Electric Utilities,[4] the Ecology Action Center, the Affordable Energy Coalition, and the Assembly of Nova Scotia Mi'kmaw Chiefs and Kwilmu'kw Maw-klusuaqn Negotiation Office (KMKNO) support the investment level and energy savings proposed in the Settlement Plan.

The Consumer Advocate stated in Evidence that,

[1] M10473, E1 2023-2025 DSM Plan Application, Exhibit E-20, Testimony of Theodore M. Love On Behalf of The Consumer Advocate, page 6, lines 13.
[2] M10473, E1 2023-2025 DSM Plan Application, Exhibit E-22, Evidence of Membertou, page 2.
[3] M10473, E1 2023-2025 DSM Plan Application, Exhibit E-25, Evidence of Alice Napoleon and Kenji Takahashi, Synapse Energy Economics, page 7, line 9.
[4] M10473, E1 2023-2025 DSM Plan Application, Exhibit E-23, Evidence of the MEUs, page 3.

"[t]*he stakeholder process provided an excellent way to understand and provide feedback on the initial framework, base assumptions, multiple rounds of scenario, and ultimately gain consensus on an acceptable scenario*."[5]

The Consumer Advocate recommended adoption of the proposed DSM Plan, "*since it represents a significant step in the right direction for efficiency saving and investment levels* …"[6]

Membertou stated in Evidence,

"[a] DSM Plan between NSPI and EfficiencyOne, with considerable input from stakeholders, that embraces increased investment levels and programming opportunities for the Mi'kmaw communities in Nova Scotia is illustrative of the business community's commitment toward Call to Action #92 and the UNDRIP reconciliation framework."[7]

In their combined Letter of Support, ANSMC and KMKNO stated,

"The ANSMC and KMKNO support the commitment by Efficiency One in the proposed supply agreement and with the amount of DSM allocated for First Nations in the 2023-2025 DSM plan…KMKNO will continue to support the DSMAG to ensure the Mi'kmaq of Nova Scotia participate in discussions about key DSM issues and future DSM plans."[8]

Synapse Energy Economics, consultant on behalf of Counsel to the Board, briefly reviewed the stakeholder engagement process in Evidence and stated,

"*[f] from our perspective, the upfront communications resulted in a moderate plan, and we appreciate E1's efforts to engage stakeholders in advance of the plan filing*."[9]

Municipal Electric Utilities stated in Evidence,

"*[f]inally, with respect to the DSM spending levels proposed in the 2023-2025 Plan, the MEUs support approval of the amounts requested and as initially and specifically forecast for the MEUs by E1* …"[10]

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[5] Exhibit E-20, Testimony of Theodore M. Love, page 6, lines 8-11.
[6] *Ibid*., page 6, line 13.
[7] Exhibit E-22, Evidence of Membertou, page 3.
[8] M10473, E1 2023-2025 DSM Plan Application, Exhibit E-27, Statement of the Assembly of Nova Scotia Mi'kmaw Chiefs (ANSMC) and Kwilmu'kw Maw-klusuaqn Negotiation Office (KMNKO)/Mi'kmaq Rights Initiative, page 2.
[9] Exhibit E-25, Evidence of Alice Napoleon and Kenji Takahashi, page 7, line 9.
[10] Exhibit E-23, Evidence of the MEUs, page 3.

Evidence filed on behalf of the Ecology Action Center, and the Affordable Energy Coalition offers further support of the proposed DSM Plan.

4. A BALANCED PLAN THAT IS AFFORDABLE AND IN THE BEST INTEREST OF RATEPAYERS

E1 was granted the franchise to supply energy efficiency services to NS Power on January 1, 2015, pursuant to Section 79C of the *Public Utilities Act*. E1's history as Nova Scotia's independent DSM Administrator predates the establishment of the franchise regime. In its former structure as Efficiency Nova Scotia Corporation, E1 developed DSM Plans and delivered efficiency services to electricity customers.

As Nova Scotia's DSM Administrator for the past 12 years, E1 has developed a market expertise that is vital to the development of a cost-effective and realistic DSM portfolio. E1 has demonstrated repeated historical success in achieving targeted energy savings[11] within approved investment levels, while balancing the needs of all rate classes.

Pursuant to s.79C(2)(a) of the *Public Utilities Act*, E1 has the exclusive right to supply NS Power with, "… reasonably available, cost-effective electricity efficiency and conservation activities."

Section 79I(1) of the Act requires that NS Power, *"… undertake cost-effective electricity efficiency and conservation activities that are reasonably available in an effort to reduce costs for its customers.*"

Sections 79L(8) and (9) provide that an agreement for the supply of energy efficiency services must be affordable and in the best interests of NS Power's customers.

> *(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.* **[Emphasis added]**
>
> *(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***

[11] In 2020 and 2021, COVID-19 restrictions impacted E1's ability to deliver energy savings as set out in the 2020-2022 DSM Plan.

Incorporated's customers, *along with any other matters considered appropriate by the Board or as may be prescribed.* **[Emphasis added]**

The Settlement Plan represents a comprehensive suite of programs and service offerings which will deliver 412.7 GWh of affordable, incremental net energy savings and 96.7 MW of cumulative system-peak demand savings, with an investment of $173.0 million over the three-year term, as described in Table 1, below.

Table 1: 2023-2025 Settlement Plan Investment and Savings

Year	Investment[a] ($ million)	Lifetime Benefits[b] ($ million)	First-Year Energy Savings (GWh)	Lifetime Energy Savings (GWh)	Weighted Average Measure Life (years)	Peak EE Demand Savings (MW)	Available DR Capacity (MW)
2023	53.1	172.0	120.7	1,502	12.4	26.9	3.0
2024	57.5	179.0	142.6	1,540	10.8	25.6	10.0
2025	62.5	191.9	149.5	1,639	11.0	26.3	17.9
Total	173.0	542.8	412.7	4,681	11.3	78.8	17.9

[a] Investment for DR includes only E1's required investment for the Settlement Plan. It is recognized that in order for demand response (DR) benefits to be realized, NS Power collaboration and investment will also be required. This may include investment for staff resource, event calling by the system operator, and Distributed Energy Resources Management System (DERMS) integration.
[b] Lifetime benefits for energy efficiency (EE) are expressed as the net present value of the avoided costs, including energy, capacity, transmission, distribution, and carbon over the life of the program measures, using utility weighted average cost of capital (WACC). For DR, lifetime benefits are expressed as the avoided costs, including capacity, transmission, and distribution, resulting from operating DR in 2023-2025 (three years of benefits).

The *Standardized Filing Framework* directs that, "*EfficiencyOne will produce DSM Resource Plans that balance multiple aspects of DSM for the benefit of customers …".* [12] Informed by the most recent Integrated Resource Plan ("IRP"), Nova Scotia's changing energy landscape and commitment to greenhouse gas reduction initiatives, together with stakeholder input on behalf of all rate classes, E1 applied the key design principles of the *Standardized Filing Framework* to develop an overall balanced plan that is affordable and in the best interest of Nova Scotians.

[12] M07543, EfficiencyOne Application for Approval of 2016-2018 DSM Resource Plan Matter Referred for DSM Advisory Group Collaboration, Revised Consensus Agreement Appendix 1 Standardized Filing Framework, filed July 22,2016, page 10.

E1's balanced portfolio design aligns with the aspects of the "Balanced Plan Approach" outlined in the Standardized Filing Framework. E1 has applied these aspects in its Settlement Plan, with the following outcomes and initiatives:

- The Settlement Plan achieves a balance of short- and long-term energy and capacity avoidance, through DSM investments which provide value to ratepayers immediately and over the long-term.
- E1 has taken into consideration cost-efficiencies and a full accounting of value to minimize the cost of delivering saved energy in the near-term and to maximize the value of savings delivered. As noted by Synapse, the Settlement Plan is highly cost-effective at both the portfolio- and program-level.[13]
- The Settlement Plan invests in energy and peak demand savings initiatives, as well as demand response, and balances the two priorities of avoiding energy and capacity investments. As noted by Synapse, "*[t]argeting demand growth with DSM and demand response* … *is appropriate in light of peak load growth trends*."[14]
- Throughout the Plan period, E1 will continue to highlight non-energy benefits in its marketing and outreach efforts.
- The Settlement Plan includes programs and strategies that seek to address a broad range of opportunities across all sectors. The Settlement Plan continues to diversify E1's measure mix and engage in a diverse range of markets with a focus on reducing barriers to reach a wide, diverse range of customers. Furthermore, the Settlement Plan includes diverse strategies that focus on both market-driven and discretionary programs.
- The Settlement Plan furthers the preservation of E1's business relationships and market presence and maintains E1's existing portfolio of programs inclusive of Business Development Managers, Onsite Energy Managers, and E1's Preferred Partner Network.
- In order to increase the accessibility of programs by all market sectors and rate classes, the Settlement Plan builds on E1's existing portfolio of equitable programming, increasing access to energy efficiency programs and services as a result.[15] Investment in low-income and underserved markets represents 21% of the investment proposed by the Settlement Plan, which has received

[13] Exhibit E-25, Evidence of Alice Napoleon and Kenji Takahashi, page 4, lines 4-9.
[14] *Ibid*., page 19, lines 5-6,
[15]Exhibit E-1, 2023-2025 DSM Resource Plan Application, Evidence, Attachment 1. Attachment 1: Barriers to Participation & Mitigating Strategies provides a breakdown of identified Residential and BNI barriers to participation in DSM Programming and E1's strategies used to address these barriers in the Settlement Plan.

support from the Consumer Advocate,[16] Membertou,[17] the Ecology Action Centre,[18] the Affordable Energy Coalition,[19] and KMKNO.[20]

E1 maintains that the Settlement Plan is affordable and in the best interests of ratepayers for the following reasons:

- The Settlement Plan balances short- and long-term affordability. DSM is the lowest cost fuel source immediately available to NS Power. The cost of DSM is less than NS Power's current cost of fuel and, is thus, in ratepayers' best interests in the short-term. In the long-term, the Settlement Plan will provide a cumulative $543 million in lifetime benefits in the form of avoided costs to ratepayers.
- The $173 million investment will be fully paid back, meaning that the cumulative value of avoided costs will surpass the investment amount, in fewer than five years.
- The Settlement Plan is cost-effective. Every program in the Settlement Plan achieves a benefit cost ratio of at least 1.0 in the Total Resource Cost test, and thus meets the minimum requirement established by the Board. Overall, the Settlement Plan has a benefit cost ratio of 2.0.
- Over the three-year plan period, the level of investment proposed in the Settlement Plan aligns with the 2020 IRP Reference Plan.
- The Settlement Plan will have a minimal impact on customer rates.
- The Settlement Plan significantly expands funding for underserved and diverse markets.

In support of the affordability of the Settlement Plan, the Consumer Advocate noted that:

> "*… small rate impacts are more than made up for by customer savings, and average bill impacts for residential customers at negative 1% averaged across both participants and non-participants. In addition, the increased scope and spending of the Settlement Plan allows E1 to reach more customers and lower bills for a broader range of customers*."[21]

[16] Exhibit E-20, Testimony of Theodore M. Love, page 7, lines 11-14.
[17] Exhibit E-22, Evidence of Membertou, page 2.
[18] M10473, E1 2023-2025 DSM Plan Application, Exhibit E-26, Evidence of the Ecology Action Centre, page 3.
[19] M10473, E1 2023-2025 DSM Plan Application, Exhibit E-19, Evidence of the Affordable Energy Coalition, page 2.
[20] M10473, E1 2023-2025 DSM Plan Application, Exhibit E-27, Statement of the Assembly of Nova Scotia Mi'kmaw Chiefs and Kwilmu'kw Maw-klusuaqn Negotiation Office (KMNKO)/Mi'kmaq Rights Initiative, page 2.
[21] Exhibit E-20, Testimony of Theodore M. Love, page 9, lines 4-8.

Synapse further noted that E1's Settlement Plan is highly cost-effective at both the portfolio and program levels.[22]

The Small Business Advocate, in its Evidence, acknowledged that program participation is key for all customer classes in reducing the impact of the cost of energy efficiency. In particular, the Small Business Advocate stated:

> "*Small Business Class participants, averaged with those in the same rate class that also participate in programs over the next three years, will have 4-6% average bill reductions over the next 17 years. Those that have not participated in past programs and never participate in future program plans will see bill increase similar to the rate impacts discussed above. It is important that the participation rate of small businesses continue to climb in order for the majority of small business customers to realize bill savings.*"[23]

E1 is committed to pursuing increased participation among Small Business class customers.

5. INVESTMENT LEVEL AND ENERGY SAVINGS

The proposed investment for the three-year period of the Settlement Plan is $173 million, for both energy efficiency and demand response programs. The Settlement Plan represents an increase in demand side management investment of $63 million from the 2020-2022 DSM Plan. E1 determined this level of investment in consultation with stakeholders and NS Power. No Intervenor has opposed the Settlement Plan investment level.

The proposed increased level of investment set out in the Settlement Plan is expressly supported by the Consumer Advocate, the Ecology Action Centre[24] and Membertou First Nation.[25] As stated by the Consumer Advocate's expert:

[22] Exhibit E-25, Evidence of Alice Napoleon and Kenji Takahashi, page 4, lines 24-27.
[23] Exhibit E-24, M10473, E1 2023-2025 DSM Plan Application, Direct Testimony of John G. Athas On Behalf of the Small Business Advocate, page12-13, lines 15–5.
[24] Exhibit E-26, Evidence of the Ecology Action Centre, page 3.
[25] Exhibit E-22, Evidence of Membertou, page 2.

"I recommend that the Board adopt the Settlement Plan since it represents a significant step in the right direction for efficiency saving and investment levels that have lagged those considered optimal for Nova Scotia under the IRP process."[26]

The increased investment level proposed in the Settlement Plan will produce increased energy savings for Nova Scotians. The Settlement Plan will deliver approximately 412.7 GWh of incremental net energy savings and 96.7 MW of cumulative system-peak demand savings, as well as 4,681 GWh of cumulative net lifetime energy savings. These targeted energy savings levels were not opposed by stakeholders.

The proposed DSM Plan is reflective of Nova Scotia's changing energy landscape and the recent global, federal, and provincial legislative initiatives to combat climate change and reduce greenhouse gas emissions and will contribute to achieving legislated climate change goals. E1 estimates that the Settlement Plan will produce incremental CO_2e reductions of 326 kilotonnes during the 2023-2025 Plan period and lifetime CO_2e reductions of 1,742 kilotonnes. Synapse,[27] the Ecology Action Centre,[28] and the Affordable Energy Coalition[29] have all acknowledged the contribution that this increased investment in DSM will make towards achieving climate change goals.

The Settlement Plan investment level of $173 million represents an increase from the investment level of the previous DSM Plan, with corresponding increases in energy savings and lifetime benefits to ratepayers. E1 respectfully submits that the Settlement Plan investment levels and energy savings targets are affordable and will deliver cost-effective DSM in Nova Scotia.

6. UNDERSERVED MARKETS AND DIVERSE COMMUNITIES

A key focus of the 2023-2025 DSM Plan was directed at alleviating longstanding DSM inequities and barriers for low-income, diverse, and underserved groups. As a guiding principle of the 2023-2025 DSM Plan, E1 aims to remove longstanding barriers and deliver programming on a non-discriminatory basis – a principle which aligns with E1's role in supplying, "*reasonably available, cost effective electricity efficiency and conservation activities*" under s.79C(2)(a) of the *Public Utilities Act*. With this in mind, E1 remains

[26] Exhibit E-20, Testimony of Theodore M. Love, page 6, lines 13-15.
[27] Exhibit E-25, Evidence of Alice Napoleon and Kenji Takahashi, page 4, line 20-23.
[28] Exhibit E-26, Evidence of the Ecology Action Centre, page 4.
[29] Exhibit E-19, Evidence of the Affordable Energy Coalition, page 2.

committed to developing and delivering programs that are equitable, inclusive, and accessible, and its proposed investment growth of approximately 177% in this program area is indicative of this commitment to doing so. Stakeholder input throughout the plan development process was largely supportive of E1's enhanced commitment in this area, and Evidence and letters of comment filed under this regulatory process have been supportive of the funding level proposed.

Under the 2023-2025 DSM Plan, E1 will leverage legacy programs and strategies which have proven successful to-date and introduce, or re-introduce, programs that focus on low-income and traditionally underserved markets. The 2023-2025 Plan supports the continuation of the Mi'kmaw Home Energy Efficiency Project program component, enhanced partnership and programming opportunities within Mi'kmaw and diverse communities, the re-introduction of an enhanced Affordable Single-family Homes program component, the continuation of the Affordable Multi-family Housing & Non-Profit Organizations program component, and the introduction of related behavioral and educational programming.

E1's proposed approach for underserved markets and diverse communities has been strongly supported by both NS Power and the Consumer Advocate. In its Rebuttal Evidence, NS Power commended the increase in investment toward traditionally underserved groups:

> "*E1's proposed plan represents an increase in DSM spending in the province, and the largest portion of that will help support programs for low-income Nova Scotians and First Nations in the province. These sectors have traditionally been under-served and, as such, NS Power remains pleased with the increase in this area set out in the Settlement Agreement*."[30]

In support of increased investment allocated towards low-income ratepayers, the Consumer Advocate stated,

> "*The projected spending level of $35.8 million, 21% of total investment, for low-income customers is much higher than the previous average of 8% for the 2015 to 2020. This increased goal is a very important step in making the plan more equitable and helping address broader issues in Nova Scotia*."[31]

[30] M10473, E1 2023-2025 DSM Plan Application, Exhibit N-28, Rebuttal Evidence of NS Power, filed on June 10, 2022, page 2.
[31] Exhibit E-20, Testimony of Theodore M. Love, page 7, lines 11-14.

Further support for increased investment in underserved markets has been expressed by the Consumer Advocate [32] Affordable Energy Coalition,[33] the Assembly of Nova Scotia Mi'kmaw Chiefs,[34] Membertou First Nation,[35] and the Ecology Action Centre.[36]

In Evidence, Synapse[37] and the Consumer Advocate[38] suggested the establishment of either performance targets or metrics in relation to low-income energy savings. E1 agrees with the Consumer Advocate and Synapse that a performance target related to programs specifically directed at diverse and underserved communities is appropriate. As stated in its Rebuttal Evidence, E1 proposes that the performance target apply only to programs specifically targeted at these sectors, which include Affordable Single-family Homes, Affordable Multi-family Homes & Non-Profit Organizations, and Mi'kmaw Home Energy Efficiency Project program components, in the amount of 15.8 GWh.[39] E1 further proposed that incidental savings attributable to low-income in other programs be maintained as a performance indicator. [40]

7. DEMAND RESPONSE

It is anticipated that demand response will become a key resource in Nova Scotia over the long-run, thereby empowering the utility to shift load when needed most. As a new portfolio item, E1 purposefully engaged the expertise of Guidehouse for support in its development of its Demand Response Roadmap and related modelling. The introduction of a dedicated Demand Response (DR) program, in collaboration with NS Power, builds on the successes of existing pilot programs involving both entities as well as E1's ongoing participation in the E1/NS Power Joint Demand Response Working Group.

Although the Industrial Group voiced concerns in relation to E1's role in demand response,[41] as the independent DSM Administrator with statutory empowerment under s.79A(b)(iii) of the *Public Utilities Act*, E1 will rightly play a vital role as a valued partner in the development of demand response programming

[32] Exhibit E-20, Testimony of Theodore M. Love, page 7, lines 11-14.
[33] Exhibit E-19, Evidence of the Affordable Energy Coalition, page 2.
[34] Exhibit E-27, Statement of the Assembly of Nova Scotia Mi'kmaw Chiefs and Kwilmu'kw Maw-klusuaqn Negotiation Office (KMNKO)/Mi'kmaq Rights Initiative, page 2.
[35] Exhibit E-22, Evidence of Membertou, page 2.
[36] Exhibit E-26, Evidence of the Ecology Action Centre, page 3-4.
[37] Exhibit E-25, Evidence of Alice Napoleon and Kenji Takahashi, page 6, lines 14-17.
[38] Exhibit E-20, Evidence of Theodore M. Love, page 13, lines 3-8
[39] M10473, E1 2023-2025 DSM Plan Application, Exhibit N-29, Rebuttal Evidence of E1, page 5, lines 23-30.
[40] *Ibid*.
[41] M10473, E1 2023-2025 DSM Plan Application, Exhibit E-21, Evidence of Drazen Consulting Group, Inc., page 12, lines 2–6.

going forward and has already provided meaningful contributions toward existing pilots. While rate design by the utility is an important element of demand response implementation and operation, demand response is broader and must encompass a host of additional response and control considerations.[42]

Under the 2023-2025 DSM Plan, a total investment of $10.0 million over the three-year period has been proposed and will see the implementation of new incentive and behavioral based initiatives to provide 17.9 MW of available DR capacity. With its Demand Response program, E1 is intentionally transitioning beyond the reduced scale of piloting as part of its implementation approach.

In Evidence, submitted on behalf of the NSUARB, Synapse observed that demand response, "*offers a variety of benefits to the electric system … consumers, and … the environment*," with the 2023-2025 DSM Plan serving as a suitable framework for its implementation.[43] However, Synapse did voice concerns relating to the current uncertainty associated with the residential DR behavioral pathway's ability to achieve winter peak load reductions and the planned initial scale of this offer.[44,45] Synapse also noted concerns over the data used to inform the electric vehicle (EV) charging control pathway.[46]

While there is uncertainty surrounding demand response, like many new opportunities, risks are mitigated by the fact that E1 will evaluate and revisit its demand response results annually and make corresponding adjustments, as required. Further mitigation is assured by E1's decisions to institute a phased development and implementation approach for its DR program, and any program thereunder. Ultimately, E1's proposed approach to demand response harnesses the benefits of piloting without subjecting the process to the limitations typical of pilots' extended implementation periods and reduced scope. As for the EV charging control pathway, and Synapse's recommendation to the latest load forecast data, E1 agreed with Synapse that the most recent data available should be employed for EV modelling purposes and clarified that the EV charging control enrollment assumptions were sourced from NS Power's 2021 Load Forecast.[47]

[42] Exhibit N-29, Rebuttal Evidence of E1, filed on June 10, 2022, pages 9–10.
[43] Exhibit E-25, Evidence of Alice Napoleon and Kenji Takahashi, page 5, lines 10–12.
[44] *Ibid*., page 5, lines 13-14.
[45] *Ibid*., page 6, lines 7–11.
[46] *Ibid*., page5, lines 12– 18; page 6, lines 12–13.
[47] M10473, E1 2023-2025 DSM Plan Application, Exhibit N-29, Rebuttal Evidence of E1, filed on June 10, 2022, page 7, lines 22-27.

8. E1 COMMITMENTS

Some issues raised in Intervenor Evidence could be more appropriately addressed within the DSMAG setting. Moreover, the DSMAG Terms of Reference are supportive of broad discussions among its members. E1 is committed to reviewing these items in the context of future DSMAG meetings both in relation to the implementation of the 2023-2025 Plan as well as the development of the 2026-2028 Plan.

In particular, E1 has committed to addressing the following issues:

- Review of cost-effectiveness testing methodologies to determine the optimal DSM cost-effectiveness testing methodology for Nova Scotia; and
- With respect to avoided costs economic testing, a review of whether it is appropriate to test the cost of DSM in comparison to lower cost non-carbon generation sources available to NS Power.

In addition to matters dealt with by the DSMAG, E1 remains committed to collaborating with NS Power, including the sharing of knowledge and technical resources, with respect to the delivery of their respective behavioural-based and Customer Energy Management (CEM) programs. E1 has proposed to provide updates to the NSUARB in its quarterly reports leading up to the establishment and operation of E1 behavioural programs and NS Power's CEM.

In Evidence, the Municipal Electric Utilities (MEUs) highlighted their position and offered several recommendations that are unique to their circumstances as wholesale market ratepayers. In future DSM Plans, E1 is receptive to working with the MEUs in the wholesale market in an effort to consider individual cost-benefit information, including MEU specific avoided costs. E1 remains committed to working with MEUs to develop and implement programming and opportunities that make sense for a given MEU, if resource availability and financial flexibility allow.

E1 acknowledges the issues raised by the Small Business Advocate (SBA) with respect to the allocation of the investment among rate classes. The NSUARB-approved mid-course adjustment process presently allows flexibility for investment funds to be directed among programs based on performance and market conditions. In the course of each DSM planning cycle, E1 undertakes a full review of the key design principles to be used in the DSM Plan development with the DSMAG, which includes a consideration of the existing design principles referenced in the Balanced Plan Approach, including program delivery costs. This existing E1 process provides an opportunity for all DSMAG members to propose additional, or alternate, areas of focus in the DSM planning process.

9. CONCLUSION

E1 wishes to thank all stakeholders for their participation in the planning process. The comprehensive engagement brought about a high degree of alignment on the proposed DSM Plan among stakeholders and resulted in the first ever jointly submitted DSM Plan by E1 and NS Power.

The input of the stakeholders was critical to the development of both the energy savings and investment levels established in the Settlement Plan. It further facilitated development of key programming opportunities such as the re-introduction of a low-income whole-home program component as well as dedicated attention to diverse and underserved communities.

E1 respectfully requests that the NSUARB order as follows:

1. Establish the investment levels, energy savings and demand savings targets over the three-year term in accordance with the Settlement Plan;
2. Establish 17.9 MW as a Performance Indicator for Demand Response;
3. Establish an additional Performance Target related to the 15.8 GWH of energy savings for specific program components dedicated to diverse and underserved communities; and
4. Approval of the Supply Agreement between E1 and NS Power.

All of which is respectfully submitted.

Closing Submission of EfficiencyOne
Attachment 1

Table 1: DSMAG Stakeholder Engagement Timelines
in the 2023-2025 Settlement Plan Development

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Table 1: DSMAG Stakeholder Engagement Timelines in the 2023-2025 Settlement Plan Development

First Quarter of 2021	
Kick-off meetings with stakeholders, including: • NS Power • Consumer Advocate	March 24 to April 16
• Small Business Advocate • Industrial Group • Nova Scotia Department of Natural Resources & Renewable (DNRR)	March 24 to April 16
Second Quarter of 2021	
Stakeholder Engagement Plan circulated to the DSMAG	June 11
Planning Landscape Report circulated to the DSMAG for comment	June 17
Third Quarter of 2021	
Planning Landscape Report comment period closed; written comments submitted by: • CA (Green Energy Economics Group) • SBA • NS Power	July 2
Draft DSM Portfolio Scenarios Plan circulated to the DSMAG for comment	August 13
DSMAG Session: Draft DSM Portfolio Scenarios Plan	August 19
Draft DSM Portfolio Scenarios Plan comment period closed; written comments submitted by: • Synapse Energy Economics (Synapse) • NS Power • CA • Affordable Energy Coalition	September 2
One-on-one meetings with stakeholders, including: • NS Power • CA • SBA • Synapse	September 23 & 24
Updated DSM Portfolio Scenarios & Initial Model Results Package circulated to the DSMAG for comment; package comprised of: • Updated DSM Portfolio Scenarios Plan • Initial Model Input Assumptions & Results • Attachment A: Stakeholder Feedback Matrix	September 29
Fourth Quarter of 2021	
DSMAG Session: Updated DSM Portfolio Scenarios & Initial Model Results	October 5

Updated DSM Portfolio Scenarios & Initial Model Results Package comment period closed; written comments submitted by: • Synapse • CA • IG, informally (i.e. via email)	October 18
One-on-one meetings with stakeholders, including: • NS Power • CA • SBA	November 23
Updated DSM Portfolio Scenarios & Round 2 Model Results Package circulated to the DSMAG for comment; package comprised of: • Updated DSM Portfolio Scenarios Plan • Round 2 Model Input Assumptions & Results • Attachment A: Stakeholder Feedback Matrix • Attachment B: Avoided Costs Brief • Attachment C: Estimation of DSM Low-Income Impacts for the 2023-2025 DSM Resource Plan • Attachment D: Keeping the Lights On: Navigating the Changing Landscape of Retail Lighting • Attachment E: Scenario 1B (Mid-DSM) Round 2 Technical Tables • Attachment F: Scenario 1.5B (Base-Plus DSM) Round 2 Technical Tables • Attachment G: Scenario 2B (Base-DSM) Round 2 Technical Tables • Attachment H: Scenario 4B (Low-DSM) Round 2 Technical Tables • Attachment I: Demand Response (DR-B) Round 2 Model Inputs • Attachment J: Demand Response (DR-B) Round 2 Model Results • Attachment K: Rate and Bill Impact Analysis (RBIA) Scenario Summary	November 25
DSMAG Session: Updated DSM Portfolio Scenarios & Round 2 Model Results	November 29
Updated DSM Portfolio Scenarios & Initial Model Results Package comment period closed; written comments submitted by: • NS Power • CA (Green Energy Economics Group) • Synapse • Municipal Electric Utilities via Al Dominie • AEC	December 31
First Quarter of 2022	
One-on-one meetings with stakeholders, including: • NS Power • CA	January 17 to February 4
First Quarter of 2022	
• SBA	January 17 to February 4

• Synapse • AEC • Ecology Action Centre	
DSM Portfolio Scenarios & Round 3 Model Results Package circulated to the DSMAG; package comprised of: • DSM Portfolio Scenarios Plan • Round 3 (Preferred Plan & Alternate Scenario) Model Input Assumptions & Results • Attachment A: Stakeholder Feedback Matrix • Attachment B: Preferred Plan Technical Tables • Attachment C: Alternate Scenario Technical Tables	February 14
DSMAG Session: Presentation of E1's Preferred Plan and Alternate Scenario	February 17
Discussions with NS Power to consider alignment on the Settlement Plan. Engaged rate class advocates as part of the discussions.	February 17 to March 4