Request IR-1:

Synapse notes, at page 17 of its Report, that the primary focus of E1's DSM Plan is short-term affordability. However, on line 18 on page 17 and in footnote 13 on page 17, Synapse concludes that the level of spending on DSM in the Proposed Plan will increase electricity costs for ratepayers and is not in the best interests of ratepayers even in the short term.

A. Please explain in detail how the level of DSM spending in the Proposed Plan will increase electricity costs for ratepayers.

B. Please explain in detail how DSM provides downward pressure on the Fuel Adjustment Mechanism to the benefit of all ratepayers.

Response IR-1:

A. The Program Administrator Cost (PAC) benefit-cost ratio (BCR) of the portfolio is at or above 2.0 over for each year of the DSM Plan. This means that the avoided cost of electricity is twice the cost of the DSM. E1 could add DSM measures, programs, or resources with lower BCRs than 2.0 to its plan until the BCR of the portfolio is 1.0. As E1 is being conservative in its spending on DSM this year, E1 is leaving cost-effective DSM opportunities out of its DSM Plan. As a result, ratepayers will pay to purchase the portion of electricity that could have been avoided by pursuing more of those cost-effective DSM opportunities. This will result in a higher electricity rate for ratepayers than if E1 had pursued those cost-effective DSM opportunities.

B. DSM reduces overall energy consumption and can flatten peak demand, thereby reducing reliance on inefficient peaker power plants like natural gas combustion turbines. This effect lowers fuel consumption for electric generation and lowers fuel-related charges for all ratepayers.

Request IR-2:

Does E1 acknowledge the apparent contradiction between its focus on short-term affordability and the affect the spending levels in its Proposed Plan will have on electricity costs for ratepayers?

Response IR-2:

Yes, page 40 of E1's evidence states, "DSM, and particularly its energy efficiency programs, is demonstrably lower in price than the fuel option it displaces, making it a logical and affordable first choice investment for ratepayers. Based on the cost of fuel as reported in NS Power's 2025 Management's Discussion & Analysis (MD&A) of \$0.09/kWh, the cost of DSM at \$0.05/kWh is less than the average cost of fuel by \$0.04/kWh. Since 2015, the cost of fuel in \$/kWh has fluctuated each year as compared to the cost of DSM with the lowest being 166 percent in 2024 and increasing to as high as 343 percent in 2022. In no one year has \$/kWh for DSM been higher than the cost of fuel (Table 5). The ability to avoid fuel costs through the use of a more cost-effective DSM alternative is ***always*** in the ratepayers' best interests, ***even in the short-term***. These benefits are then amplified in the long-term."

Request IR-3:

Beginning at page 19 of the report, Synapse reviews the basis of E1's decision not to offer incentives for the implementation of electrification in the proposed plan.

A. What are the implications for the ability of the proposed DSM Plan to reduce energy costs and capacity challenges if Strategic Electrification is not promoted in the plan?

Response IR-3:

A. If Strategic Electrification is not promoted by E1 in the DSM Plan, there could be a missed opportunity for E1 to offset some of the energy and capacity increases by implementing other DSM measures alongside Strategic Electrification. As an example, there are opportunities for the energy and capacity increases to be mitigated with weatherization.

The DSM Plan could promote weatherization for homes implementing Strategic Electrification, in the event funding for Strategic Electrification were to be provided by another source. However, I am not aware of another source of funding for Strategic Electrification at this time.

Request IR-4:

At page 22, lines 17 to 19 of the Report, Synapse observes that E1 did not provide a clear basis for its conclusion that Strategic Electrification did not meet the requirements of the modified PAC test.

A. What information has E1 failed to provide regarding its modeling of this question?

B. On what basis does Synapse conclude that E1 assessed the cost effectiveness of Strategic Electrification at the resource level, rather than as a part of the overall portfolio of DSM measures?

C. Please explain how Synapse reaches the conclusion that the Board's decision in M12282 would allow E1 to promote Strategic Electrification as long as it did not increase electricity costs at the portfolio level.

Response IR-4:

A. In Request IR-02, Synapse asked for E1's Round 1 and Round 2 modeling…including …all associated attachments in Excel including but not limited to supporting data and calculations (intact and unprotected)". E1's response included Excel workbooks with inputs and outputs that were hardcoded. The Excel workbooks did not have calculations and therefore were not complete and intact. E1 did not provide the model used to perform the calculations.

B. Pages 22-23 of my testimony state, "As a result, questions remain regarding which methodology and assumptions E1 used, what the results were, and how E1 interpreted them. It appears that E1 either assessed the BCA of strategic electrification by itself, or E1 looked at the change in the portfolio-level BCA (including energy efficiency, demand response, PV) when strategic electrification is added. However, this assessment was conducted, E1 interpreted the results as failing to meet the directives of NSEB's Decision in Matter M12282." I do not know exactly how E1 assessed the cost-effectiveness of Strategic Electrification, as E1 ***did not provide a clear basis for its conclusion that Strategic Electrification did not meet the requirements of the modified PAC test***. Page 35 of E1's Evidence states, "Because all modeled strategic electrification scenarios failed to reduce electricity costs for customers when evaluated under the Board-approved modified-PAC test, their inclusion as a DSM resource would violate the statutory definition." Based on this statement, I surmise that E1 excluded Strategic Electrification from the DSM Plan based on an examination of the modified-PAC associated with this resource in isolation.

C. The decision in M12282 is not explicit about how to apply the Board's guidance to DSM planning. In order to apply the Board's guidance to DSM Planning, E1 needed to make important decisions about the level of assessment (customer, measure, program, resource or portfolio), the time period over which the impacts are assessed, and the assessment approach (benefit cost analysis or rate, and potentially bill, analysis). These choices involve interpretation of that decision, and the choices are not necessarily simple and straightforward.

E1's interpretation does not align with the long history of DSM planning and the practices that have been established by the Board over this long history. I reach the conclusion that the Board's decision in M12282 would allow E1 to promote Strategic Electrification (as long as it did not increase electricity costs at the portfolio level), based on Nova Scotia's history of 1) evaluating cost-effectiveness of DSM plans at the portfolio level and 2) including components that are not cost-effective if there is good cause. I suggest that it would have been valid for E1 to apply the Board's decision to DSM Planning by including strategic electrification as part of a DSM Plan that met modified-PAC cost-effectiveness requirements at the portfolio level and explaining why there was good cause to include strategic electrification investments if they were not a cost-effective resource using the modified-PAC.

Request IR-5:

At page 25 of the Report, Synapse states that the previously modeled investment in Strategic Electrification of 12.2 million dollars in the DSM Plan would not materially impact the cost effectiveness of the plan measured at the portfolio level.

A. Please explain the basis of that conclusion.

B. How would the investment of 12.2 million dollars in Strategic Electrification affect the ability of the DSM Plan to reduce energy costs and capacity challenges?

Response IR-5:

A. Table 3. Cost-Effectiveness of 2027-2031 DSM Plan Plus SE (Round 2) on Page 26 of my evidence shows a modified-PAC of 2.6 without Strategic Electrification and 2.3 with it. I do not consider a 0.3 reduction from a modified-PAC of 2.6 to a modified-PAC of 2.3 to be a material change.

B. As the cost-effectiveness would be lower with $12.2 million of Strategic Electrification included in the DSM Plan, the DSM Plan would still reduce energy costs but not to the same extent as it would have without the Strategic Electrification investment. Capacity could be a challenge in areas that are constrained, which is why I suggest that E1 target Strategic Electrification in constrained areas on pages 29 and 30 of my evidence.

Request IR-6:

As an alternative to funding Strategic Electrification based on previous modeling exercises, Synapse also reviews Strategic Electrification measures that focus on low and moderate income customers who heat with oil.

A. How would advancing Strategic Electrification for this target group of customers further the objectives of the DSM Plan?

Response IR-6:

Page 2 of Appendix A – Preferred Plan state that "E1's objectives for the 2027–2031 DSM Preferred Plan include:

- deliver cost-effective demand side resources that support the successful implementation of a long-term electricity strategy that is in the best interest of ratepayers, is achievable, and prioritizes affordability;
- deliver a portfolio of demand side management services that are accessible on an equitable basis and non-discriminatory basis, are responsive to the current market, and consider potential future market developments; and
- conduct a transparent and collaborative demand side resource planning process that demonstrates consideration of stakeholder insight and encourages alignment among DSMAG members."

Regarding the first objective, low-income customers are most at risk from an affordability perspective and many low-income customers in Nova Scotia currently heat with oil. According to a 2024 report by the Nova Scotia Energy Poverty Task Force, oil-heated households spend 80 percent more on home energy than electrically heated households (all types). (Savings in energy costs by converting from oil to energy efficient heat pumps would likely be even more than 80 percent.) Focusing on reducing the reliance of low-income customers on oil for home heating is prioritizing affordability.

Regarding the second objective, ongoing uncertainty regarding the war in Iran may create a home heating affordability crisis for customers heating with oil this coming winter. Focusing on reducing the reliance of low-income customers on oil for home heating is responsive to the current market and considers potential future market developments.

Request IR-7:

With reference to Residential Demand Response programs, Synapse notes in the Report that program delivery costs amount to 63% of planned spending.

A. Does E1 provide an explanation for the high proportion of the costs of the Residential Demand Response program that are consumed by program delivery costs and, if so, what is the explanation?

Response IR-7:

A. No. Please refer to my evidence at p. 39, lines 3-3, where I state that "E1 does not address the high delivery costs of the residential demand response program specifically."

Request IR-8:

On pages 37 and 38 of the Report, Synapse notes that an independent evaluation found that E1's proposed level of non-incentive spending in its Residential Demand Response program far exceeded the level for similar programs in other jurisdictions.

A. Does E1 provide an explanation for the high level of non-incentive spending in its Residential Demand Response program when compared to similar programs in other jurisdictions?

B. Has Synapse been able to determine the reason or reasons why the proportion of non-incentive spending in E1's Residential Demand Response program is so high?

Response IR-8:

A. No. Please refer to my evidence, p. 39, lines 3-4, where I state that "E1 does not address the high delivery costs of the residential demand response program specifically," including any comparison of program delivery budget share with other jurisdictions.

B. No. Please refer to my evidence, p. 39, lines 19-21, where I recommend that E1 "conduct a process evaluation of the delivery of the residential demand response program to identify opportunities for gaining efficiencies and achieving cost reductions." I recommend a process evaluation, in part, to understand the high costs of E1's Residential DR Program. Please refer also to E1 response to Synapse IR-90(d), where E1 states that it remains contracted with its existing residential demand-response vendors and does not have plans to transition to new residential vendors.

Request IR-9:

What are the risks for ratepayers arising from the absence of any thresholds that would require mid-cycle adjustments from the Proposed Plan?

Response IR-9:

In the absence of thresholds, I am concerned that E1 would not be inclined to formally file mid-cycle adjustments when actual performance deviates from the plan in material ways, which has impacts for energy affordability. Additionally, a process that does not have thresholds is reliant on E1 to define materiality; that aspect of E1's proposed process lacks transparency. Materiality should be defined upfront by the Board with input from stakeholders.