E1 Responses to Nova Scotia Power Incorporated (NS Power) Information Requests
NON-CONFIDENTIAL

Request IR-01:

Reference: Appendix A, Table 49, "Program History," page 85.

Please provide a table which, for each year from 2020 to 2026, includes:

(a) total DSM investment for solar PV projects/measures, by program component;

(b) the percentage of total DSM expenditures within each year that were allocated to solar PV projects/measures;

(c) the number of solar PV systems installed, total installed capacity (MW), and estimated generation (MWh); and

(d) for each program component, please indicate whether the solar PV projects/measures were supplemented with provincial and/or federal funds.

Response IR-01:

Between 2020 and 2025, solar-PV systems incentives were supported with DSM funds specifically in the Custom Incentives program and the Business Energy Rebates - Application Rebates (BER-AR) program. For BER-AR specifically, a Solar-PV prescriptive rebate was piloted between May 2024 and April 2025. Annual results for 2026 are not available, results for 2020–2025 are provided below.

(a) The total DSM incentives provided to solar PV projects/measures, by program component is provided in Table 1, below:

Table 1: DSM Incentives Provided by Program Component

DSM Incentives ($ millions)	2020	2021	2022	2023	2024	2025
BER-AR	N/A	N/A	N/A	N/A	$0.222	$0.711
Custom	$0.049	$0.203	$0.243	$0.310	$0.711	$0.452

(b) The percentage of total DSM expenditures within each year that were allocated to solar PV projects/measures is provided in Table 2, below:

Table 2: Percentage of Total DSM Expenditures by Year Allocated to Solar-PV

% of total DSM Expenditure	2020	2021	2022	2023	2024	2025
Total (BER-AR and Custom)	0.17%	0.56%	0.57%	0.68%	1.08%	0.75%

(c) The number of solar PV systems installed, estimated total installed capacity (MW), and estimated total generation (MWh) is provided in Tables 3, 4, and 5, below:

Table 3: Number of Solar-PV Systems Installed by Year

Number of Solar PV systems	2020	2021	2022	2023	2024	2025
BER-AR	N/A	N/A	N/A	N/A	13	38
Custom	3	15	16	32	24	11

Table 4: Estimated Total Installed Capacity by Year

Estimated Total Installed Capacity (MW)	2020	2021	2022	2023	2024	2025
BER – AR	N/A	N/A	N/A	N/A	0.7	2.4
Custom	0.2	1.0	1.3	1.5	3.5	2.2

Table 5: Estimated Total Generation by Year

Estimated Total Generation (MWh)	2020	2021	2022	2023	2024	2025
BER – AR (Gross Savings at Meter)	N/A	N/A	N/A	N/A	663	2,462
Custom (Gross Savings at Meter)	232.8	1,006.5	1,327.9	1,535.3	3,561.6	2,199.2

(d) E1 did not have any non-DSM funding available to provide additional support to Solar PV projects or measures in BER-AR or Custom from 2020–2025. Solar-PV systems were an eligible measure in the Home Energy Assessment program component during 2023–2025 as a result of co-delivery with the Canada Greener Homes program. DSM funding for the program component was used to support the audit costs, marketing, program administration and other eligible measures but did not directly fund the solar-PV incentive.

Request IR-02:

Reference: 2025 DSM Annual Progress Report, Attachment 3, Table 1.

For solar PV measures/projects with DSM savings, please confirm whether provincial and/or federal funds were included as a cost in the actual PAC calculations for the 2023-2025 period. Please also confirm whether the avoided costs associated with these solar PV measures were included as a benefit in the actual PAC calculations.

(a) If provincial and/or federal funds were applied to solar PV projects/measures with DSM savings and included as a benefit but not included as a cost in the actual PAC calculations for the 2023-2025 period, please provide an updated Table 1 comparing the reported 2023-2025 actual PAC results and revised actual PAC results for each of 2023 to 2025 with the provincial and/or federal funds included as a cost in the PAC calculation.

Response IR-02:

(a) EfficiencyOne (E1) confirms that Government funding was not included as a cost in the 2023–2025 actual Program Administrator Cost (PAC) test results. This approach is consistent with the Nova Scotia Energy Board (NSEB)-approved Program Administrator Cost (PAC) framework, under which the PAC test considers only utility-incurred costs - being the costs incurred by E1 as Program Administrator - and does not incorporate third-party government incentives paid directly to program participants. This framework was confirmed by the NSEB in its December 10, 2025 Decision on E1's Application for Approval of a New Benefit-Cost Analysis Test for Evaluating Demand Side Management Plans (Matter M12282), which directs E1 to use the PAC as the primary cost-effectiveness screening tool, assessed at the portfolio level. The avoided costs associated with the reported DSM savings, inclusive of solar-PV measures were included as a benefit in the actual PAC calculations, consistent with E1's other DSM resources such as energy efficiency and demand response.

During the 2023–2025 period, solar-PV measures were included within three DSM program components:

- Business Energy Rebates
- Custom
- Home Energy Assessment

The Business Energy Rebates and Custom program components were fully funded through DSM investment and did not involve any provincial or federal government funding. Solar-PV measures within the Home Energy Assessment program component were supported by the Natural Resources Canada (NRCan) Canada Greener Homes Grant. After signing an agreement with Natural Resources Canada in 2022 to co-deliver the Canada Greener Homes Grant program in Nova Scotia through the Home Energy Assessment program component, E1 began issuing and administering the Canada Greener Homes Grant rebates for customers in March 2023, which included solar-PV system rebates. Critically, the Canada Greener Homes Grant funds were paid by the federal government directly to eligible customers and were not costs incurred by E1 in its role as Program Administrator. As such, these federal grant amounts were not captured in E1's program delivery costs and were therefore appropriately excluded from the cost side of the PAC calculation.

E1 submits that it is not appropriate to revise the PAC test to include government funding as a cost, for the following reasons. First, the PAC framework considers only utility-incurred costs — costs borne by E1 as Program Administrator and funded through DSM ratepayer investment. Government grants paid directly to customers are costs borne by the federal government, not by E1 or NS Power ratepayers, and are therefore outside the scope of the

PAC cost calculation. Secondly, including third-party government incentives as PAC costs would misrepresent the true cost of the DSM program to ratepayers and would distort the cost-effectiveness assessment that the NSEB relies upon to evaluate DSM plans under section 79H(2) of the *Public Utilities Act*.

Request IR-03:

Reference: Evidence, page 34, lines 4-5.

> **E1 notes that any expansion of solar-PV to other customer segments in future DSM Plans would be subject to cost-effectiveness analysis and Energy Board approval.**

If E1 expands solar PV to other customer segments within this DSM Plan period, would this expanded offering be subject to cost-effectiveness analysis and Energy Board approval? If not, please explain why not.

Response IR-03:

EfficiencyOne (E1) confirms it does not currently intend to expand solar-PV to other customer segments within the 2027–2031 DSM Plan period and that if expansion were to be considered in future DSM Plans, it would be subject to Nova Scotia Energy Board approval at that time.

Request IR-04:

(a) Please identify all Strategic Electrification (SE) evaluated during Plan development, including those not ultimately included in the Preferred Plan, and explain why each SE measures or programs failed or passed cost effectiveness screening. In the response, please provide any analysis E1 conducted, including model outputs and technical tables produced, when evaluating SE before determining that it was unable to be included in the Plan.

(b) Did E1 consider SE measures or programs that were designed to:

i) target only off peak or non winter hours;

ii) include mandatory load controls; and/or

iii) avoid winter coincident peak demand entirely.

If not, for each of subparts (i) to (iii), please explain why not.

(c) Were transportation electrification programs or measures considered for inclusion in the 2027-2031 DSM Plan? If so, please describe how. If not, please explain why not.

(d) Were hybrid heating programs or measures considered for inclusion in the 2027-2031 DSM Plan? If so, please describe how. If not, please explain why not.

(e) Resistive water heating with direct load control is currently offered as an option in Residential Demand Response. Was this option considered for inclusion in the 2027-2031 DSM Plan as an SE measure? If so, please describe how. If not, please explain why not.

Response IR-04:

(a) Please refer to EfficiencyOne's (E1) response to part (a) of SBA IR-05.

(b) Please refer to E1's response to part (a) of SBA IR-05.

- i) Please refer to part (b) of this IR response.
- ii) Please refer to part (b) of this IR response.
- iii) Please refer to part (b) of this IR response.

(c) Please refer to E1's response to part (a) of SBA IR-05.

(d) Please refer to E1's response to part (a) of SBA IR-05.

(e) Please refer to E1's response to part (a) of SBA IR-05.

Request IR-05:

Did E1 conduct a jurisdictional review of peer utilities with electrification mandates or programs to inform the 2027-2031 DSM Plan development, including the development of Strategic Electrification programs or measures as part of this Plan? If so, please provide the materials produced from this work and summarize the findings related to electrification programs or measures. If not, please explain why not.

Response IR-05:

Please refer to EfficiencyOne's response to part (e) of SBA IR-05.

E1 Responses to Nova Scotia Power Incorporated (NS Power) Information Requests
NON-CONFIDENTIAL

Request IR-06:

Does E1 expect that it will be in a position to consider Strategic Electrification (SE) programs or measures during the Plan and, subject to cost-effectiveness analysis and Energy Board approval, introduce SE programs or measures before the end of the Plan term? If not, please explain why not.

Response IR-06:

Please refer to EfficiencyOne’s response to part (g) of SBA IR-05.

Request IR-07:

Reference: Appendix A, Table 45, "Overview," page 80.

(a) Please explain why, in E1's view, maintaining existing enrollment of Residential Demand Response (DR) without growth is preferable to alternative approaches, including targeted enrollment growth or program redesign.

(b) Please identify, and explain, whether pausing enrollment is intended as:

- **A temporary program design approach, pending improvements such as improved performance and/or a reduction in costs; or**

- **A longer-term strategic determination regarding the role of Residential DR within the DSM and DR portfolio.**

(c) Are there any scenarios under which new Residential DR enrollment would be considered during the 2027-2031 Plan? If so, please explain these scenarios and provide specific conditions that may trigger new Residential DR enrollment during the 2027–2031 Plan period. If not, please explain why not.

Response IR-07:

(a) EfficiencyOne (E1) views maintaining existing Residential Demand Response (DR) enrollment as preferable, rather than pursuing additional growth, because the program requires restructuring before it is scaled further. The near-term focus for Residential DR is on improving cost-effectiveness by removing non-participants, improving performance from existing devices, and ensuring enrolled devices provide reliable curtailment. Further growth before addressing these issues could increase costs without a proportional increase in capacity. In addition, BNI DR is expected to provide more cost-effective DR curtailment during the 2027–2031 Plan period, so incremental investment is better directed there.

(b) The pause is intended as a program design approach for the 2027–2031 Plan period, not a conclusion that Residential DR has no long-term role. E1 continues to see Residential DR as part of the portfolio but believes it should be maintained and optimized before further growth is pursued. During the 2027–2031 Plan period, BNI is expected to make up the majority of DR curtailment because it is more cost-effective and available as proposed in the Preferred Plan.

(c) E1 does not currently plan to pursue new Residential DR enrollment during the 2027–2031 Plan period. The focus for Residential DR during this Plan period will be on maintaining the existing enrollment and improving the cost-effectiveness and performance of the existing portfolio, rather than expanding enrollment. The Residential DR program will provide regular updates on program performance during the 2027–2031 Plan period.

Request IR-08:

Reference: Appendix A, Attachment 4, Sections 1, 3a, 4a, and 19a–19c.

(a) Please describe the intended role of load shift to Backup Generators (BUGs) in the 2027-2031 DSM Plan.

(b) Please provide the details of a BUGs program, including:

i) details on the type of generator(s) (fuel, size, etc.) to be included in such a program;

ii) whether the program will recruit new or existing generators, or both;

iii) how, and to whom, the program will be marketed; and

iv) how participation will be measured.

(c) Please explain whether emissions, permitting constraints, and fuel availability were accounted for in modeling this option. If so, how were these factors accounted for? If not, please explain why not?

Response IR-08:

(a) Load shift to backup generators ("BUGs") is included as a Business, Non-profit and Institutional (BNI) demand response option in the proposed 2027–2031 DSM Plan's BNI demand response program component. It is intended to provide capacity where a customer has a backup generator that can be dispatched during demand response (DR) events. In E1's 2027-2031 DSM Resource Plan Application, Appendix A, Attachment 4, "C&I Loadshift to BUGs" is modelled separately from other Commercial and Industrial (C&I) curtailment options.

(b) E1 has not developed a standalone BUGs program, it is part of the BNI Demand Response program component, Smart Synergy.

i) E1 does not require specific generator fuel, size, or technical configuration information for participation beyond what is needed to confirm the customer can deliver the committed curtailment and comply with applicable requirements.

ii) E1 expects BUG participation to use existing backup generators only. E1 does not provide incentives for the purchase of a new BUG.

iii) BUGs provide a low-effort entry point for some customers to participate in BNI Demand Response and begin interacting with the grid as an active participant rather than a passive electricity customer. As the program component matures, these customers may also represent future opportunities for cleaner technologies, because the customer will have experience with the program and a demonstrated value stream for demand response participation.

iv) Participation will be measured using the BNI Demand Response Measurement and Verification (M&V) methodology, comparing event-period performance against the applicable customer baseline to determine delivered curtailment.

(c) Emissions, permitting constraints, and fuel availability were not modelled as separate quantified variables for the BUGs option.

Before E1 relies on a backup generator as a BNI Demand Response curtailment resource, the customer is required to confirm that the resource can operate lawfully, reliably, and in accordance with applicable requirements. Where appropriate, E1 may suggest that customers align generator operation during DR events with routine generator exercising or cycling that may already be required for operational readiness or insurance purposes. This can allow the customer to participate in BNI Demand Response program while using an existing activity to provide capacity value to the grid while meeting other operational requirements.

E1 Responses to Nova Scotia Power Incorporated (NS Power) Information Requests
NON-CONFIDENTIAL

Request IR-09:

Evaluated results for Demand Response (DR) available capacity are filed one season behind the completion of the current DR season (e.g. 2024/25 evaluated results were filed in 2025, after the 2025/26 season has been completed).

(a) Would E1 be agreeable to amending the timeline for filing evaluated performance results so that these results are available before the next DR season begins? If applicable, please identify and explain the barriers or constraints to amending the DR evaluation reporting timeline as described.

Response IR-09:

(a) Historically EfficiencyOne (E1) has filed its annual DSM Evaluation reports with Nova Scotia Energy Board (NSEB) (previously the Nova Scotia Utility and Review Board) on March 31 each year, after which they have been subject to the NSEB's Verification process. E1 does not wait until the end of the calendar year to conduct demand response evaluations, rather completes these once the season is completed. Although these are filed with the NSEB at the end of March the following year, E1 is agreeable to ensuring that the demand response evaluation results are available before the next demand response season begins.

Request IR-10:

(a) Please explain if, and how, results from the forthcoming IESO Nova Scotia Integrated Resource Plan (IRP) will be incorporated into the 2027-2031 DSM Plan. If the forthcoming IRP will not be incorporated into this Plan, or if E1 has not considered this, please explain why not.

(b) Please confirm whether E1 will use the same DSM Potential Study process, approach, and methodology for the IESO Nova Scotia IRP as was used for the 2019 DSM Potential Study? If not, please explain why not and describe the methodology E1 plans to utilize.

Response IR-10:

(a) Please refer to EfficiencyOne's (E1) response to Synapse IR-72.

(b) E1's goal for the 2026 DSM Potential Study is to provide updated DSM potential projections to inform the Nova Scotia Independent Energy System Operator's (NSIESO) 2026 Integrated Resource Plan (IRP). Due to the IRP's condensed timeline, E1 will not follow the same process or methodology used for the 2019 Potential Study. Instead, E1 will work with its consultant to complete the study on an accelerated timeline. The 2019 DSM Potential Study established baseline equipment stocks across all market sectors through surveys. In contrast, the 2026 DSM Potential Study will use more recent market insights and modelling developed through the 2027–2031 DSM Plan process to establish baselines.

E1's DSM Potential Study consultant, will develop long-term projections of energy efficiency (EE) and demand response (DR) from 2027–2051. The approach follows a clear process:

- Integrating load forecasts to update baseline energy use, peak demand, and customer/stock assumptions.
- Defining and calibrating EE measures and DR options using the proposed 2027–2031 DSM Plan inputs, including market applicability (density, saturation, technical suitability) and program characteristics, along with insights from internal program delivery teams and the DSM Plan team.
- Modelling adoption and participation to estimate achievable potential under Base (plan-aligned) and Maximum Achievable (full uptake) scenarios.
- Generating structured outputs of incremental and cumulative savings by sector, program, and measure.

The methodology aligns near-term assumptions with the proposed 2027–2031 DSM Plan and uses calibrated modelling to project long-term adoption and system benefits. Demand Side Management Advisory Group (DSMAG) engagement is in scope for the 2026 DSM Potential Study but has not yet been scheduled.

Request IR-11:

Reference: Evidence, page 65, lines 4-7 and page 66, lines 8-16.

The mid-term check-in proposed below is intended to enhance transparency and stakeholder engagement during plan implementation, but does not constitute a full plan reopening or amendment process, nor does it alter E1's approved performance targets or total spending authority.

//

The mid-term check-in process described above is designed to enhance transparency and stakeholder engagement but does not constitute a plan amendment proceeding or create any obligation for E1 to seek plan amendments. Should circumstances arise during plan implementation that, in E1's reasonable assessment, may necessitate changes to approved investment levels, performance targets, or other material plan elements requiring NSEB approval, E1 will provide advance notice to the DSMAG and file an appropriate application with the NSEB in accordance with the PUA. Such circumstances might include, for example, significant and unforeseen changes in avoided costs, material shifts in market conditions or technology availability, legislative or regulatory changes affecting DSM delivery, or other extraordinary events materially impacting plan feasibility or ratepayer value.

(a) How does E1 define "significant and unforeseen change in avoided costs" and "material shift in market conditions"? Please provide examples.

(b) Has E1 defined specific thresholds (i.e. percent increases/decreases in investment levels or performance targets) which would result in the filing of an appropriate application for NSEB approval? If so, please provide.

(c) What would constitute an extraordinary event or material impact to plan feasibility or ratepayer value?

i) How will Plan feasibility and ratepayer value be evaluated over the course of the Plan period?

Response IR-11:

(a) Please refer to EfficiencyOne's (E1) response to Synapse IR-72.

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

(c) Please refer to part (a) of this response.

i) Please refer to part (a) of this response.

Request IR-12:

Does E1 maintain written policies, procedures, or guidelines governing how measures are evaluated internally for addition to or removal from the DSM portfolio (programs, components, DR options)? If so, please provide these written policies, procedures, and/or guidelines.

(a) In the absence of any written documentation, please describe the internal process for adding or removing measures from the DSM portfolio, including:

i) what triggers the internal review of a measure;

ii) an explanation of the criteria required for measures to be added, removed, or continued within the DSM portfolio; and

iii) a description of the internal approval process for adding/removing a measure.

Response IR-12:

(a) EfficiencyOne's (E1) measure addition process is initiated through identification of new opportunities from internal, stakeholder, or evaluation sources. Each proposed measure is assessed through a standardized template capturing technical assumptions, market rationale, and program applicability. Measures are evaluated against established criteria, including compliance with the incentive-setting methodology, alignment with DSM plan budgets and targets, and appropriate baseline assumptions. Following technical and program review, measures are approved based on documented analysis and incorporated into the DSM portfolio, with ongoing monitoring informing continuous improvement.

E1 does not apply a prescriptive process for existing DSM measures that are updated or removed from the DSM portfolio. Instead, existing DSM measures are typically identified for review based on annual program evaluation results and other measure-level performance tracking conducted by E1. This review may be triggered by declining participation trends, changes to baseline assumptions, or shifts in market conditions affecting program costs or savings assumptions. Where a DSM measure is approved for removal, communications regarding the change to key stakeholders and customers are documented and managed on a case-by-case basis.

Request IR-13:

Reference: Evidence, page 25, lines 25-26.

Please provide the materials produced as a result of the jurisdictional scan conducted by APEX.

Response IR-13:

Please refer to EfficiencyOne's response to NSEB IR-08, Attachment 1.

Request IR-14:

Reference: Appendix A, Attachment 3, "PAC Review" tab, column H, rows 9 and 10.

This measure has been included to support past program participants with equipment maintenance and help protect E1 investments in heat pumps made through the Affordable Single-family program component. This measure is an important addition to our energy affordability and equity package for homeowners on lower incomes.

(a) Please identify any Canadian or US Technical Reference Manual (TRM) that includes heat pump cleaning as an energy efficiency measure with savings associated and summarize these savings values from other jurisdictions. If none are identified, please indicate the precedent E1 used to establish energy savings for this measure-type.

(b) How often are participants eligible to receive fully-funded heat pump cleanings over the EUL of the heat pump measure?

(c) What specific services are intended to be included in the heat pump cleaning measure/equipment maintenance service?

(d) Please provide a detailed measure characterization worksheet for the heat pump cleaning measure with all formulas and assumptions clearly intact.

Response IR-14:

(a) Please see below for a summary of the Technical Reference Manuals EfficiencyOne (E1) reviewed where heat pump cleaning is included as an energy efficiency measure. E1 based its measure characterization on Wisconsin, which uses more conservative estimates.

Jurisdiction	Measure Name	First Year Energy Savings (kWh)	Peak Demand Savings (kW)	Effective Useful Life (years)
California	Condenser Coil Cleaning, Residential	160.0	0.07	3
Rhode Island	CoolSmart HP Digital Check	341.9	0.124	5
Wisconsin	Residential Air Conditioning Tune Up – Coil Cleaning and Filter Replacement	78.8	0.1492	2

(b) E1 is currently planning to offer heat pump cleanings to eligible participants every two to three years, with up to three cleanings offered over the effective useful life (EUL) of the measure, which is set at two years per cleaning interval consistent with Wisconsin TRM precedent. This scheduling is designed to protect the energy savings attributed to heat pump installations under the Affordable Single-family Homes program component and to maintain equipment performance over the life of the DSM investment. The three cleanings over the EUL is consistent with E1's goal of maximizing the savings from prior heat pump installations funded by E1. E1 is simultaneously developing a heat pump cleaning strategy for provincially funded projects to ensure equitable service delivery to participants regardless of home heating type, consistent with the equity objectives of E1's DSM Plan.

(c) E1 intends to offer basic heat pump air filter and coil cleaning and have technicians inspect systems for damage or other apparent issues that could affect performance or warranties.

(d) Please see pages 740-741 of the Wisconsin Focus on Energy 2024 Technical Reference Manual for measure characterization details. E1 used the annual energy savings, peak demand savings, and effective useful life values from this resource.

A net-to-gross (NTGR) ratio of 1.0 was assumed for this measure. This is consistent with the methodology applied to all other measures evaluated under the Affordable Single-family Homes and Mi’kmaw Home Energy Efficiency Project program components, as set out in E1's DSM Plan. Given that this measure is exclusively targeted at low-income and equity seeking participants who have previously received heat pump equipment through E1's program and who are unlikely to access this service independently, a NTGR of 1.0 is considered appropriate. Measure costs were estimated based on pricing E1 obtained from heat pump contractors as part of a 2025 Request for Standing Offer procurement for heat pump installation and maintenance services under the Affordable Single-family Housing program component. Please refer to E1’s response to NSEB IR-04 for additional information.

Request IR-15:

Reference: Appendix A, Attachment 5.

Please describe the governance structure for the Innovation Framework, including:

(a) external reporting commitments regarding outcomes, lessons learned, and continuation/discontinuation decisions; and

(b) the role, if any, of the Energy Board and/or DSMAG in reviewing, approving, or modifying innovation activities during the Plan period.

Response IR-15:

The internal governance structure for the Innovation Framework is set out in section 2 of Appendix A, Attachment 5 of EfficiencyOne's (E1) 2027–2031 DSM Resource Plan Application.

(a) With respect to external reporting, E1 reports quarterly and annually on the progress of its DSM activities to the Nova Scotia Energy Board (NSEB). For the 2027–2031 DSM plan period, reporting on all Enabling Strategies, including Development and Research innovation outcomes, lessons learned, and decisions regarding the continuation or discontinuation of planned innovation projects will be reported on in these progress reports.

(b) As described in part (a) of this response, innovation activities will be reported on in quarterly and Annual Progress Reports that are filed with the NSEB. E1 understands that through this current process, the NSEB has broad regulatory powers to initiate regulatory activities or proceedings to consider aspects of the quarterly and Annual Progress Report including the innovation activities. E1 does not suggest in any way that the Innovation Framework, Process, and Plan for 2027–2031 as proposed in the 2027–2031 Preferred DSM Plan impacts the NSEB’s authority nor is E1 suggesting a new regulatory process is required to consider the innovation activities throughout Plan implementation. E1 recognizes the NSEB’s authority and ability to initiate regulatory processes for reports, applications, and/or submissions as made by E1.

Request IR-16:

Please describe the underlying Market Transformation initiatives in the Plan. In the response, please:

(a) Identify the specific market gaps that each Market Transformation activity is intended to address and the mechanisms by which E1 intervention is expected to result in durable market changes (e.g. price reductions, increased availability, customer familiarity, supply chain development).

(b) Identify the Market Transformation exit strategy and explain how the risk of Market Transformation initiatives becoming ongoing, indefinite resource acquisition programs is managed.

(c) Explain the interaction between the Innovation Framework and Market Transformation.

Response IR-16:

(a) Market Transformation activities for the Heat Pump Water Heater (HPWH) pilot are conducted according to the Logic Model that was developed in collaboration with Resource Innovations (RI), the Market Transformation subject matter expert retained by E1. The Logic Model was in turn informed by market research conducted by RI to identify the barriers and opportunities specific to the Nova Scotia water heating market. This research, as well as subsequent direct engagements with supply chain participants, showed significant market gaps for Heat Pump Water Heaters in availability, installer technical skills, high incremental cost, as well as awareness and education among both supply chain participants and consumers.

Among consumers, there is a lack of awareness that HPWHs are an option for water heating in Nova Scotia. Among installers, distributors and retailers, there is a high level of awareness that HPWHs exist, but very little in-depth technical knowledge about benefits and proper installation techniques. There are also commonly held misconceptions (myths) about the technology and its drawbacks. This has resulted in a lack of comfort and confidence with recommending HPWHs among installers, distributors and retailers, instead falling back to standard electric tanks that they are comfortable with. Distributors typically only stock units when there is sufficient demonstrated demand for the product. As a result, low demand compounds the challenges affecting adoption by further limiting local availability. The strategies employed through MT are intended to disrupt this feedback loop.

Beginning in November 2024, E1 initiated market interventions according to the Logic Model to begin addressing these challenges. To date, these interventions include:

- Engaging Original Equipment Manufacturers (OEMs) with established distribution channels in Nova Scotia, to deploy additional resources in the province. For example, sending technical trainers to Nova Scotia, ensuring there is inventory in the province, providing manufacturer rebates, etc.
- Engaging OEMs that have lacking or weak distribution channels in Nova Scotia to advocate for initiating or expanding their presence in this market, increasing choice for consumers.
- Facilitating installer training sessions with multiple leading manufacturers to raise awareness, address misconceptions and provide proper installation techniques to increase comfort and confidence recommending and installing HPWHs.
- Public awareness campaigns via social media and other channels to raise awareness and education, increasing comfort and confidence in HPWHs. Campaigns have been completed for both supply chain partners and consumers.

- Engaging distributors and retailers to make them aware of the E1 interventions and encourage them to preemptively increase availability.

The MT team is also continuously gathering market intelligence on the Nova Scotia water heating market from supply chain partners and consumers, and providing this information to resource acquisition programs. For example, E1 learned that existing resource acquisition programs did not include a HPWH incentive for the most common water heater replacement scenario, where a water heater is replaced on an emergency, failure basis and the homeowner purchases the replacement through their contractor. The result was that most water heaters were being replaced without any available incentive to encourage the adoption of HPWHs. In response, the Instant Savings program component was enhanced to address these gaps.

These interventions will lead to durable market changes by:

- increasing how often retailers, distributors and installers recommend HPWHs;
- increasing the conversion rate when a HPWH is recommended;
- improving the quality of HPWH installations to ensure positive experiences;
- increasing availability so that HPWHs and critical components are available when installers and technicians need them;
- increasing the number of HPWH brands consumers can choose from;
- increasing consumer familiarity with HPWHs and their benefits; and
- reducing installed cost over the long term as competition and scale increase.

(b) MT and Resource Acquisition (RA) programs are managed separately within E1. However, the MT team does collaborate with RA programs to leverage resources and enhance the value of each program. MT initiatives primarily focus on addressing all barriers to measure adoption throughout the supply chain, particularly non-financial ones that cannot be addressed through an RA program. MT initiatives do not include issuing incentives directly to end users as happens in RA programs. Therefore, there is no risk of an MT initiative becoming an ongoing, indefinite RA program.

By design, MT programs are longer-term in nature than RA programs, with investment in market interventions at its heaviest early in the program. As barriers are removed and the market picks up momentum towards the energy efficient measure, E1 investment is scaled back and phased out. Once that measure has become the standard option, it is no longer incentivized through RA programs, however, energy savings can continue to be claimed through the MT program for a finite period of time. The timing of this phase out (exit) of program investment and energy savings will be determined based on the results of the formal evaluation process, including assessment of market adoption rates, supply chain maturity, and other key performance indicators established for the pilot.

(c) E1's Innovation framework and process encompass the Market Transformation (MT) focus, including delivery of the HPWH MT pilot and ongoing development of E1's MT framework. As MT is an emerging approach to program delivery, investments and activities within the DSM plan application were detailed separately. Lessons learned from the HPWH pilot and MT framework may also inform other innovation activities, including but not limited to the approach for customer outreach for a pilot, and evaluating supply chain maturity and market demand as defined in the 2027–2031 DSM Plan Application, Appendix A, Attachment 5, Table 4: Evaluation Metrics for readiness of new DSM measures (page 11/PDF page 226).