E1 Responses to Consumer Advocate (CA) Undertaking
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Undertaking U-1:

To provide data to show the number and proportion of customers who do not proceed because of pre-weatherization barriers, the nature of those barriers, and the disposition of each case.

Response U-1:

Over the 2023–2025 period, pre-weatherization barriers accounted for approximately 6 percent of total discontinued projects, or 220 projects, in the Affordable Single-family Homes program component. A single customer may face barriers on one upgrade while proceeding with others; for example, a customer may have been able to proceed with attic insulation but not basement insulation due to water infiltration. Of the 6 percent of upgrades that could not be completed, the majority (75 percent) were related to a lack of physical access to the space. Mold, ventilation and humidity issues accounted for 10 percent, asbestos for 7 percent, water infiltration for 6 percent, and unsafe conditions or repairs needed for 2 percent.

Undertaking U-2:

E1 to provide the incentive amounts for the non-profit organizations that participate in the Affordable Multifamily Housing program as a percentage of typical total project costs.

Response U-2:

In the Affordable Multifamily Housing program component, incentives are available for up to 100 percent of eligible costs for shelters or transition houses operated by non-profit or charitable organizations that provide rent-free housing.[1] EfficiencyOne (E1) reviewed the data for these completed project types in the Affordable Multifamily Housing program component over the 2023–2025 period and provides the following insights: [2]

- Excluding the DSM top-up contribution from provincial funding, DSM incentives for these projects averaged approximately 49 percent of total project costs.

In the Affordable Multifamily Housing program, incentives are also available for up to 80 percent of eligible costs for non-profit organizations or charitable organizations that provide affordable rental housing. E1 also reviewed data for non-profit housing organizations and charitable organizations that completed projects over the 2023–2025 period, which included projects completed by co-operatives, multi-unit residential buildings, and rooming houses, and provides the following insights: [3]

- DSM incentives provided an average of 23 percent of total project costs without the DSM top-up incentive contribution funded by the Province.

[1] Affordable Housing & Non-Profit Program | Efficiency Nova Scotia
[2] Projects with primary electric heating.
[3] Ibid.

E1 Responses to Affordable Energy Coalition (AEC) Undertaking
NON-CONFIDENTIAL

Undertaking U-3:

To provide an estimate of the cost for a homeowner-style program only for landlords whose tenants pay 100 percent of their energy bills.

Response U-3:

EfficiencyOne (E1) estimates that approximately $7.5 million in additional investment would be required over 2027–2031 for a homeowner style program[1] for landlords that would increase Affordable Multifamily Housing incentives to 100% of eligible project costs for those participants where tenants are responsible for both electricity and heating costs. This estimate assumes that approximately 112 projects would be completed over the 2027–2031 period through this homeowner style program. These results were produced through a manual calculation performed by E1 outside the model, using the same underlying participation data as the Preferred DSM Plan. While this approach provides a reasonable estimate, it should be understood as an approximation.

[1] The homeowner-style program would have a similar delivery model to E1's Affordable Single-family Homes program component where contracted delivery agents perform free audits and upgrades for eligible participants.

Undertaking U-4:

E1 to provide a Rate and Bill Impact Analysis of the IRP DSM level of demand response, solar PV, and the round two level of energy efficiency savings but instead of the 75/25 allocation, the Rate and Bill Impact Analysis is to reflect the 100% direct allocation, as reflected in the new NS Power Cost of Service Study.

Response U-4:

Table 1 of this IR response provides the Rate and Bill Impact Analysis results of the Integrated Resource Plan (IRP) energy efficiency scenario modelled in Round 2 of the 2027–2031 DSM Plan development, the Preferred Plan demand response scenario and the Preferred Plan solar-PV scenario using the 100 percent direct cost allocation, as reflected in the new NS Power Cost of Service Study.

Table 1: Rate and Bill Impacts by Rate Class as a result of 2027–2031 DSM Activities (IRP Energy Efficiency + Preferred Plan Demand Response + Preferred Plan Solar-PV) (100% Rate Class Cost Allocation)

Rate Class	Rate Codes	Average Rate Impact (%)	Average Rate Impact (cents/kWh)	Participant Average Bill Impact	Non-Participant Average Bill Impact	Total Class Average Bill Impact
Residential	2, 3, 6, 9, 16 (Domestic)	0.9%	0.15	-15.6%	0.8%	-1.2%
Small General	10	1.4%	0.23	-29.6%	1.3%	-2.6%
General	11	1.4%	0.20	-9.2%	1.4%	-4.1%
Large General	12	0.6%	0.07	-4.6%	0.6%	-4.5%
Small Industrial	21	1.3%	0.19	-25.8%	1.3%	-4.2%
Medium Industrial	22	-0.1%	-0.03	-4.7%	-0.1%	-2.9%
Large Industrial	23, 25, one-part high voltage real time pricing tariff	0.9%	0.08	-5.1%	0.9%	-4.6%
Municipal	24	0.2%	0.03	-0.2%	0.2%	-0.2%

E1 Responses to Ecology Action Centre (EAC) Undertaking
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Undertaking U-5:

To provide assessments done regarding the impact of strategic electrification on low-income customers in Nova Scotia.

Response U-5:

EfficiencyOne (E1) did not complete a specific assessment of the impacts of Strategic Electrification on low-income customers or energy poverty in Nova Scotia as part of the development of the 2027–2031 DSM Plan.

The analysis undertaken for the Strategic Electrification resource was focused on evaluating the resource within the Board-approved modified-PAC cost-effectiveness framework and assessing the achievability of program delivery. This work included the development and review of measure assumptions, costs, savings, participation, and cost-effectiveness results.

While E1 recognizes that energy affordability and energy poverty are important considerations in Nova Scotia, no specific assessment was conducted regarding the impacts of the Strategic Electrification resource on low-income customers or energy poverty for the purposes of the Strategic Electrification analysis included in this filing.

Undertaking U-6:

To provide its documented checklist used to verify the results produced by Guidehouse. proprietary modeling as part of E1's quality assurance on the inputs and outputs.

Response U-6:

EfficiencyOne (E1) maintains an internal quality assurance (QA) process for both model inputs and outputs, which E1 applies to independently verify the modelling performed by Guidehouse (please refer to Attachment 1 of this Undertaking). Prior to modelling, key assumptions, measure data, program design parameters, avoided costs, rates, and other model inputs are reviewed to confirm they have been accurately reflected in the input template provided to Guidehouse. Following modelling, E1 performs a series of reconciliation and validation checks against the Guidehouse outputs to confirm that savings, spending, and cost effectiveness results are consistently reflected across model outputs and reporting tables, that program and measure mappings have been correctly applied, and that technical reporting tables are functioning as intended. Any discrepancies identified during the review process are investigated and resolved with Guidehouse prior to finalization of the results.

Guidehouse applies a formal quality assurance (QA) protocol to validate ProCESS model results used in DSM portfolio planning (please refer to Attachment 2 of this Undertaking). The protocol includes reconciliation of key savings and spending metrics between the input workbook, the ProCESS model, and the output workbook, as well as a series of measure-level diagnostic reviews designed to identify anomalies in cost-effectiveness results, acquisition costs, payback periods, benefit streams, and other model outputs. Issues identified through these reviews are investigated to determine their root cause and are addressed through model updates, workbook

corrections, or review of supporting measure inputs. QA findings are documented in a supporting workbook that records the checks performed, issues identified, and resulting resolutions.

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Memorandum

To: Gina Thompson, Kate McDonald (EfficiencyOne)

Cc: Chris Conrad, Jessie Wallace (EfficiencyOne), Peter Steele-Mosey, Yamini Arab (Guidehouse)

From: Raniel Chan (Guidehouse)

Date: 2026-01-15

Re: ProCESS Model Output Review Protocols

In support of EfficiencyOne (E1)'s 2027 – 2031 DSM Plan filing, we have formalized our standard battery of ProCESS quality control (QC) processes into a protocol, documented below. The intent is to provide E1 with greater transparency regarding Guidehouse's QC review activities and maintain institutional memory to ensure the quality of Guidehouse's ongoing support of E1's DSM program planning.

1 Problem Statement

E1 is naturally interested in the quality of Guidehouse's review, an essential step for identifying quality problems in measure characterization inputs and structural problems in the input and output Excel workbooks.

In response, the team has developed this QC protocol which details the following:

- **The Guidehouse Modeling Team Role.** Our understanding of the role the ProCESS model and its associated input and output workbooks plays in the development of the quantitative elements of E1's DSM Plan.
- **The QC Protocol.** The protocol itself, a description of the QC checks that we will perform to address the known problem-types identified in the standard issues list.
- **Protocol Documentation.** The format that we will use to document the outcomes of protocol application for E1.

2 The Guidehouse Modeling Team Role

Guidehouse's primary role in providing modeling support to the E1 DSM Plan is to apply the inputs developed by E1 to the Guidehouse ProCESS model in order to calculate cost effectiveness outputs at the portfolio, program, program component, sector and measure level. A key component of this workflow is ensuring that output results are consistent with input expectations, and, where they are not, working with E1 staff to identify the root cause and to remedy it.

The input workbook provided to Guidehouse by E1 contains measure level inputs and global inputs.

- The **measure level inputs** include both measure characterizations (e.g. measure level savings, measure life, NTG Ratios, full measure costs) and program design inputs (e.g. participation, incentive costs).
- The **global inputs** include other inputs needed for calculating cost effectiveness such as: avoided costs, retail rates, load shapes, externalities, cost of carbon, discount rate, inflation rate, etc.

The ProCESS model does not change the measure level savings or spending inputs within the model.

The ProCESS model performs the functions necessary to calculate present values for lifetime savings and costs. The model combines the cost and benefit streams that flow from the measure level and global inputs to output values for a set of cost-effectiveness tests. The model also aggregates the benefits and costs, to calculate portfolio, program, program component, sector and measure level cost effectiveness, total benefits and costs, first year and lifetime energy savings, admin and incentive spending, and levelized costs.

The input workbook is used by the Guidehouse team as a QC check to compare with the aggregated measure level inputs that are imported into the model.

The output workbook also contains a set of aggregated outputs from the model which are also used to QC the total annual costs and first year energy savings by comparing these outputs with the values in input workbook noted above.

These summary tables, and those within the Analytica ProCESS model are used to ensure the consistency of key values (first-year savings, spending) between the input workbook and the ProCESS model, between the ProCESS model and the output workbook, and between the input workbook and the output workbook.

3 The QC Protocol

The QC protocol includes three sets of checks. These include a comparison of the input workbook with the ProCESS model, a comparison of the input workbook with output workbook, and checks of intermediate tables within the ProCESS model.

Table 1 below outlines the standard issues identified with the three QC Checks.

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Table 1. Cross Check of Problems and How the QA Checks Address These Problems

No.	Problem	QA Check 1	QA Check 2	QA Check 3
1	Measure Name List is Not Unique	X		
2	Model Logic Errors due to Input Workbook Changes	X		
3	Errors in the Measure Worksheet Values	X	X	
4	Portfolio Summary Metrics Formula Issue	X	X	
5	Aggregated Totals in the Model do not Match Input Workbook	X		
6	Total in Output Workbook does not Match Input Workbook		X	
7	The Measure Level TRC Contains an Outlier Value			X
8	The Acquisition Costs Contains an Outlier Value			X
9	A Measure Has High Savings or Incentives			X
10	Non-Electricity Benefit Streams are Not Correct			X
11	Mismatch in Unit Basis for Measure Inputs			X

The purpose of each check is to identify inconsistencies that may indicate an issue with inputs or processes.

The underlying cause of each issue identified by these checks must be investigated by tracing the formulas in Excel or Analytica back to the source of the issue.

Once the underlying cause of each issue is identified it is addressed by the modeler making appropriate changes to the model or workbooks, or alerting E1 staff regarding input updates required. Any measure characterization issues flagged for E1 will be provided to E1 as a list, per the documentation format described in Section below.

Below are the detailed steps for performing the 3 QA Checks:

1. **Alignment Between the Input Workbook and the ProCESS Model**
    a. Check the first-year savings in cells M30:Q30 in the tab "Portfolio Summary Metrics" of the input workbook and compare it with the model table "Report_Prog_Savings".
    b. Check the spending in cells E30:I30 in the tab "Portfolio Summary Metrics" of the input workbook, and compare it with the model table "Prog_Spend_by_Type".
    c. For the documentation, copy the values from the input workbook (M30:Q30 and E30:I30), and the two tables from the model (Report_Prog_Savings and Prog_Spend_by_Type), and perform a QC check to show that the values match. Note: that for SE, the kWh savings will be energy increases, and an additional manual check for Round 1 is needed to verify the gas savings in the input workbook and the ProCESS model.
2. **Alignment Between the Input and Output Workbooks**
    a. Check the first-year savings in cells M30:Q30 in the tab "Portfolio Summary Metrics" of the input workbook, and compare it with cells L37, AG37, BB37, BW37, and CR37 in the tab "Report Tables 1" of the output workbook.
    b. Check the spending in cells E30:I30 in the tab "Portfolio Summary Metrics" of the input workbook, and compare it with cells B37, AB37, AW37, BR37, and CM37 in the tab "Report Tables 1" of the output workbook.

c. For the documentation, copy the values from the input workbook (M30:Q30 and E30:I30), and the output workbook (L37, AG37, BB37, BW37, and CR37. B37, AB37, AW37, BR37, and CM37), and perform a QC check to show that the values match.
d. To check that all the measures from the input sheet have populated the output sheet.
    i. First, run a unique lookup (using =unique()) on column A of the 'Measures' tab of the applicable input sheet.
    ii. Next, do a unique lookup (using =unique()) on column D of the 'Measure' tab of the output sheet. Note, this is the 'Measures' tab, not the '5 Measures' tab.
    iii. Finally, use the xlookup() function to check that the measures on the input sheet are also on the output sheet.

3. Model QC Checks

a. Measure Level PAC.
    i. Copy the 2027 slice of the table "Measure_B_C_Ratio3" from the model to Excel and flag any measures that have a PAC of equal to or less than 0, or more than 30. For SE, check RIM instead of PAC.
    ii. Check the inputs such as the incremental costs, unit basis, and units for water savings. Flag measures for E1 that may have issues.
    iii. Check the setting for the SE Toggle on the "SE Toggle Check" tab of the output workbook. It should be "On" for the SE scenario, and "Off" for all other scenarios
b. Acquisition cost ($/kWh).
    i. Copy the kWh slice of the table "First_Yr_Meas_Acquis" from the model to Excel and flag any measures (under NS TRC) that have an acquisition cost of less or equal to than 0, or more than $1/kWh.
    ii. For the flagged measures, check the incentives, savings, and unit basis. Flag any measures for E1 that may have issues.
c. Payback Period (years).
    i. Copy the 2027, NS TRC slice of the table "Meas_Simp_Payback" from the model to Excel and flag any measures that have negative payback or a payback period over 60 years. This check is for both with and without incentives.
    ii. For the flagged measures, check the incremental measure cost, savings, and incentives. Flag any measures for E1 that may have issues.
d. Measures with high savings.
    i. Copy the 2027 slice of the table "Report_Meas_Savings" from the model to Excel, flag any measures that make up more than 10% of kWh savings.
    ii. Copy the 2027 slice of the table "First_Yr_Meas_Incent" from the model to Excel, flag any measures that make up more than 10% of incentives.
    iii. Check the measure characterizations for these measures and flag any measures for E1 that may have issues.
e. Non-electricity benefit streams.
    i. Copy the water savings for 2027 slice from the table "PV_Net_Externalities" from the model to Excel, and check that there the water savings are nonzero for the correct measures.
    ii. Copy the 2027 slice from the table "Level_Avoided_Cost" from the model to Excel, and check that measures with gas savings, wood biomass savings, and home heating oil savings are nonzero for the correct measures.
    iii. Check the measure characterizations if needed to investigate further, and flag measures for E1 that may have issues.
f. Check Measures

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i. First, run a unique lookup (using =unique()) on column A of the 'Measures' tab of the applicable input sheet.
ii. Next, do a unique lookup (using =unique()) on column D of the 'Measure' tab of the output sheet. Note, this is the 'Measures' tab, not the '5 Measures' tab.
iii. Finally, use the xlookup() function to check that the measures on the input sheet are also on the output sheet.
iv. This checks that all the measures from the input sheet have populated the output sheet.

g. Model checks for the Round 1 model changes

Note that after Round 1 modelling, these checks will not be necessary assuming there are no further structural modelling changes.

i. **Cost Effectiveness**: Copy the 2027 and NS TRC slice of the table "Pv_meas_costs_benef" from the model to Excel and do spot checks for a variety of measures that cover all of the of input streams. This will allow for the input streams and cost effectiveness calculations to be verified that they are being correctly calculated. Any issues will be flagged. The selection of measures will be based on the following criteria:
    1. Measures will be selected based on high and low TRC, PAC, and NS Test Broad values. The key cost streams driving these high and low values will be determined.
    2. If not yet covered by the check above, measures will be also selected so that they cover a variety of different input streams which allow Guidehouse to QC the different inputs going into the various cost tests.
    3. Direct Install measures will also be selected for review so that Guidehouse can check the different cost streams and verify on the changes to the DI costs as incentives rather than as an admin cost.
ii. **GJ**: To ensure that the input sheet and model are pulling the correct conversion factors, Guidehouse will check the outputs for first year GJ against the inputs for energy savings and the GJ conversion factors from the input workbook for a few measures so that all impact types are covered. This will be documented in the Excel workbook, with calculations to demonstrate they are calculated correctly.
iii. **Payback**: Check at least 3 measures (types include: DI measure, incented RET and ROB measures) and show components of the payback with and without incentives to verify they are calculated correctly.

h. Model checks for Round 2 model changes

Note that after Round 2 modelling, these checks will not be necessary assuming there are no further structural modelling changes.

i. **Program Mapping**: Copy "Total_Alloc_to_Prog" from the model to Excel, and do a check that every cell is equal to 100%. This check ensures that the program name is correctly mapped to each program component. Copy "Non_allocated_program_admin_at_the_progr" from the model to Excel, and flag if any cells are not zero. Also check the input workbook, tab "Component Admin", column L and to the right, that the formulas do not include a ROUND() function.

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4 Protocol Documentation

Protocol documentation outputs will be two files: a memo summary of the QC process and findings, and a workbook tracking the QC outcomes. Guidehouse will provide a QC summary for each of the input workbooks.

1. **Summary**: confirms what checks we were able to review, a list of measures to investigate further, with context on how issues were identified and addressed with E1 staff.
2. **Detailed QC workbook**: the workbook will contain the following 3 components over 11 tabs.
    a. *Alignment Between the Input Workbook and the ProCESS Model*: tables with the portfolio first year savings and costs, and with a QC check confirming they are the same.
    b. *Alignment Between the Input and Output Workbooks*: tables with the portfolio first year savings and costs, and with a QC check confirming they are the same.
    c. *Model QC Checks*: The 9 measure level tables that were reviewed above with our notes regarding the outliers, indicating if any measures require E1 to further review the sources.

Undertaking U-7:

To confirm the results of the Residential subtotal and portfolio total Net to Gross Ratio results as submitted in Exhibit E-3, Table 5.

Response U-7:

The following response has been provided by Econoler.

In Table 5 of the Overall Executive Summary (OES), the Evaluator reported sector-level and portfolio-level Net-to-Gross Ratios (NTGRs) for the Residential sector, the Business, Non-Profit and Institution (BNI) sector, and the overall portfolio. These NTGRs were calculated by dividing the evaluated annual net savings by the corresponding evaluated annual gross savings for each sector and for the overall portfolio.

The calculations are as follows:

- Residential Subtotal NTGR: 46.819 GWh ÷ 52.010 GWh= 0.90
- BNI Subtotal NTGR: 82.624 GWh ÷ 95.094 GWh = 0.87
- Portfolio Total NTGR: 129.444 GWh ÷147.110 GWh = 0.88

In preparing this response, Econoler identified two errors in Table 5 of the OES. Specifically:

- The Residential Subtotal NTGR was reported as 1.01 instead of 0.90.
- The Portfolio Total NTGR was reported as 0.91 instead of 0.88.

The BNI subtotal NTGR was correctly reported and was not affected.

These two errors were limited to the NTGR values presented in Table 5 of the OES. They did not affect the reported gross or net savings values, any other tables, findings, or analyses presented in the OES, or any other evaluation deliverables filed as part of the 2025 evaluation. The corrected values are reflected in the revised Table 5 provided below.

Table 5: Comparison of 2025 Evaluated and Tracked Electrical Energy Savings at the Generator [a]

DSM Program	Program Component	Tracked Results		Evaluated Results				Difference in Net Savings (GWh)	Net Realization Rate
		Annual Gross Savings (GWh)	Annual Net Savings (GWh)	Annual Gross Savings (GWh)	NTGR [b]	Annual Net Savings (GWh)	Lifetime Net Electrical Energy Savings (GWh)		
Residential									
Residential Efficient Product Rebates	Appliance Retirement	0.205	0.115	0.205	0.56	0.115	0.461	-	100%
	Instant Savings	16.337	15.981	14.817	0.77	11.430	106.508	-4.551	72%
Existing Residential	Affordable Multifamily Housing	1.378	1.378	1.378	1.00	1.378	23.345	-	100%
	Affordable Single-family Homes	6.059	6.059	6.135	1.00	6.135	118.611	0.076	101%
	Efficient Product Installation	7.405	7.338	7.405	0.99	7.300	53.898	-0.038	99%
	Green Heat	1.414	0.749	1.414	0.53	0.749	13.488	-	100%
	Home Energy Assessment	14.769	13.820	14.769	0.94	13.820	342.195	-	100%
	Mi'kmaw Home Energy Efficiency Project	0.337	0.337	0.337	1.00	0.337	6.905	-	100%
	Residential Behaviour [c]			5.555		5.555	5.555		
Residential Subtotal		**47.904**	**45.777**	**52.016**	**0.90**	**46.819**	**670.966**	**-4.513**	**90%** [d]
BNI									
Efficient Products Rebates	Business Energy Rebates	44.659	38.065	45.081	0.89	40.244	294.786	2.179	106%
Custom Incentives	Custom	36.627	28.244	36.207	0.84	30.487	437.723	2.243	108%
	Strategic Energy Management	4.228	4.228	4.031	1.00	4.031	20.515	-0.197	95%
Direct Installation	Small Business Energy Solutions	9.805	7.886	9.774	0.80	7.862	52.874	-0.025	100%
BNI Subtotal		**95.319**	**78.424**	**95.094**	**0.87**	**82.624**	**805.898**	**4.201**	**105%**
Portfolio Total		**143.223**	**124.201**	**147.110**	**0.88**	**129.444**	**1,476.864**	**-0.312**	**100%** [d]

[a] Numbers may not add up due to rounding.
[b] Subtotal NTGR values represent average values for the Residential and BNI portfolios. The portfolio total NTGR value represents an average value for all programs.
[c] There were no tracked savings for Residential Behaviour, and net savings were used in place of gross savings (gross=net) to avoid undercounting gross savings.
[d] Residential Behaviour results were excluded from the evaluated net savings used to calculate the realization rate as there were no tracked savings.

E1 Responses to Nova Scotia Energy Board (NSEB) Undertaking
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Undertaking U-8:

To provide energy efficiency measure PAC scores to include program administration costs assigned to the individual measure level in Appendix A Attachment 3 and if any of the measures do not meet the PAC test, to provide justification for the inclusion of these measures in the Preferred Plan.

Response U-8:

EfficiencyOne (E1) has provided the energy efficiency measure level Program Administrator Cost test (PAC) scores, with program administration costs assigned at the individual measure level, in Attachment 1 to this Undertaking. As noted in E1's 2027–2031 DSM Plan Application, seven energy efficiency measures included in the Preferred Plan do not, on an individual basis, pass the PAC in any year of the 2027–2031 DSM Plan. As shown in Attachment 1 to this Undertaking, when program administration costs are allocated at the measure level, eleven energy efficiency measures in the Preferred Plan do not, on an individual basis, pass the PAC in any year of the 2027–2031 DSM Plan.

Program administration costs are allocated among measures in proportion to each measure's contribution to the total benefits achieved by the relevant program component.

E1 Responses to Nova Scotia Energy Board (NSEB) Undertaking
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Undertaking U-9:

To provide a revised response to IG IR-11, Attachment 2.

Response U-9:

Please refer to Attachment 1 of this response which provides a revised Attachment 2 to EfficiencyOne's response to IG IR-11.

Undertaking U-10:

To provide an update to the PAC scores to include program administration costs related to Smart Thermostats in response to Solar Nova Scotia IR-1, Table 1 of Exhibit E-15.

Response U-10:

Table 1 of this Undertaking provides an estimate of the Efficient Product Installation (EPI) Program Administrator Cost (PAC) results with smart thermostats removed, including an estimated removal of administrative costs associated with those measures. These results were not generated by the Guidehouse ProCESS model; rather, they were produced through a manual calculation performed by EfficiencyOne (E1) outside the model, using the same underlying participation data as the Preferred DSM Plan, but excluding smart thermostats and their associated administrative costs. While this approach provides a reasonable estimate, it should be understood as an approximation.

Table 1: Estimated PAC Results for Efficient Product Installation with Smart Thermostats removed

	2027	2028	2029	2030	2031	2027-2031
Efficient Product Installation without smart thermostats	0.9	1.0	1.0	1.1	1.1	1.0

Undertaking U-11:

To confirm the bill impacts referenced in the Consumer Advocate's Excel spreadsheet (Exhibit E-21 ii).

Response U-11:

EfficiencyOne (E1) confirms that the non-participant bill impacts used in the Consumer Advocate's Excel spreadsheet (Exhibit E-21 ii) match the source documents as referenced by the Consumer Advocate. Additionally, E1 confirms that the calculations performed by the Consumer Advocate to obtain the change in non-participant bill impacts between E1's Preferred Plan and the Round 2 Integrated Resource Plan level of energy efficiency savings, are using the correct cells to perform the calculation for each rate class.