

## **Appendix C – efficiencyPEI Evaluation Framework**



# Evaluation Framework

---

# Contents

- Purpose ..... 1
- Framework ..... 1
  - efficiencyPEI’s Mandate..... 1
- Key Performance Metrics..... 2
- Evaluation Framework Objectives and Principles..... 2
  - Evaluation Objectives..... 2
  - Guiding Principles ..... 3
- Evaluation Priorities, Cycle, Roles and Responsibilities ..... 5
  - Evaluation Priorities ..... 5
  - Evaluation Cycle ..... 5
  - Roles and Responsibilities..... 6
- Types of Evaluations ..... 6
  - Impact Evaluation ..... 6
  - Impact Evaluation Methodologies ..... 7
  - Process Evaluation ..... 8
  - Market Evaluation..... 8
- Cost-Effectiveness..... 9
- Data Collection..... 11

# efficiencyPEI Evaluation Framework

## Purpose

The purpose of this framework is to outline evaluation activities efficiencyPEI (ePEI) will undertake in support of Electricity Efficiency and Conservation Plan (EE&C) implementation. The framework is intended to be used as a tool, not only for the three-year term of the EE&C Plan, but for future evaluation planning as well.

## Framework

### efficiencyPEI's Mandate

efficiencyPEI's mandate is to empower Islanders to make good choices when it comes to energy efficiency by providing consultations, sharing information, and offering rebate programs.

efficiencyPEI acts as the service agency for EE&C responsibilities of Prince Edward Island Energy Corporation (PEIEC), and administers EE&C programs and services. In May of 2019, the Island Regulatory and Appeals Commission (IRAC) approved a three year Electricity Efficiency & Conservation Plan, pursuant to section 16.1 of the *Electric Power Act*, which outlines EE&C programs and electricity savings targets to be achieved by ePEI.

To fulfill the mandate, efficiencyPEI implements the following initiatives:

- Financial incentives in the form of program rebates and energy audit subsidies
- Community engagement through education and awareness activities
- Research and development partnerships
- Industry engagement and support (Network of Excellence)

efficiencyPEI programs fall under two sectors:

- Residential
  - Energy Efficient Equipment
  - Home Insulation Rebates
  - Winter Warming
  - New Home Construction
  - Instant Energy Savings
- Commercial
  - Business Energy Rebates
  - Small Business Energy Solutions
  - Custom Energy Solutions

The EE&C Order requires efficiencyPEI to conduct external evaluations of its activities, including cost-effectiveness, and submit the results to IRAC. The Order also requires the establishment of a Demand Side Management Advisory Group. The group was established, and is titled the Electricity Efficiency & Conservation Advisory Group (EECAG) and consists of 13 representatives across business and industry, community organizations, government, and the public. The EECAG provides advice on ePEI activities,

including evaluation. The EECAG engagement with efficiencyPEI will remain ongoing in future EE&C plan development and activities.

## Key Performance Metrics

efficiencyPEI has identified key performance metrics to be tracked and monitored to ensure program targets are being met. These metrics allow efficiencyPEI to track progress against participation, energy savings targets and cost-effectiveness targets as outlined in the EE&C Plan.

Metric	Unit	Remark
Cost-Effectiveness	Program Administration Cost Test (PAC) Total Resource Cost Test (TRC)	The Government of Prince Edward Islands long term cost of borrowing rate (3.2%) is used as the discount rate
Annual Gross Savings	Electrical energy savings (GWh) Electrical peak demand savings (MW)	At the meter
Annual Net Savings	Electrical energy savings (GWh) Electrical peak demand savings (MW)	The savings targets are net energy savings and net demand savings. Includes free-ridership, spillover, and line losses
Program Participation	Planned Participation (# clients, # units rebated) Actual Participation (# clients, # units rebated)	
Benefits	Planned benefits (\$) Actual benefits (\$) Net benefits (\$)	
Budget	Planned budget (\$) Actual budget (\$)	

## Evaluation Framework Objectives and Principles

### Evaluation Objectives<sup>1</sup>

Evaluation is the process of determining the impacts of energy efficiency and renewable energy initiatives and identifying opportunities for improvement.

Evaluation is meant to achieve the following key objectives:<sup>2</sup>

- › To estimate the impacts of a program and determine whether the program (or a portfolio of programs) has met its goals.
- › To provide information and analyses to identify ways to improve current and future programs.

<sup>1</sup> 2018-2020 efficiencyPEI Evaluation Plan. Econoler, October 2019.

<sup>2</sup> Energy Efficiency Program Impact Evaluation Guide, SEE Action, December 2012, [https://www4.eere.energy.gov/seeaction/system/files/documents/emv\\_ee\\_program\\_impact\\_guide\\_0.pdf](https://www4.eere.energy.gov/seeaction/system/files/documents/emv_ee_program_impact_guide_0.pdf)

- › To support energy demand forecasting and resource planning by understanding the effects of energy efficiency in comparison to other supply-side resources.

## Guiding Principles

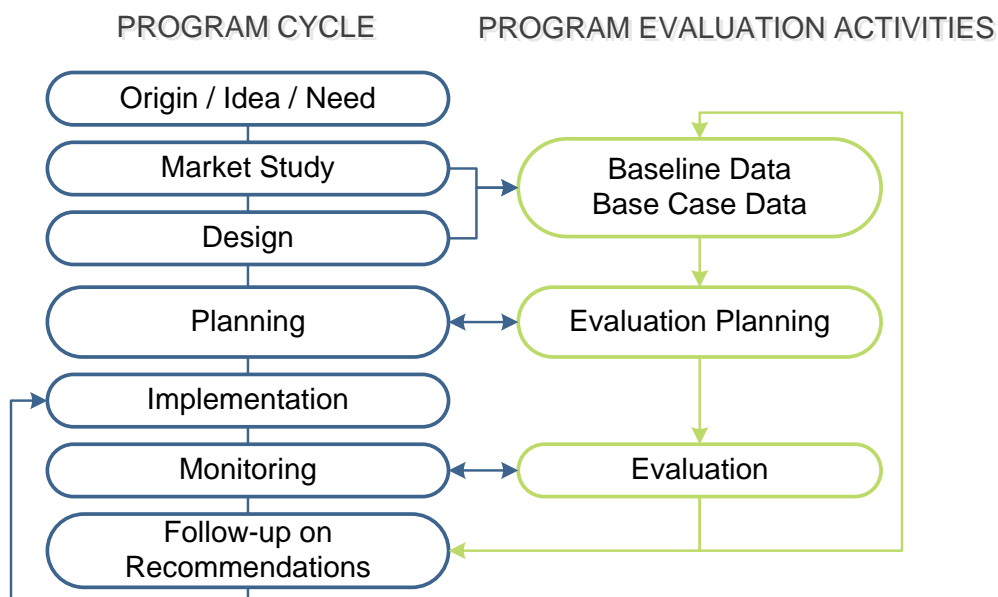
Evaluation should be carried out according to the following five guiding principles of evaluation:

- 1 Results-focused: Evaluation should be an integral part of the continual process of program design, implementation and management. Over time, the evaluation results should be used to improve program offerings and delivery.
- 2 Independent: Evaluation should provide independent, non-biased results.
- 3 Transparent: Key assumptions, methodologies and calculations used in the evaluation should be clearly and thoroughly documented to ensure the transparency of the results and findings.
- 4 Appropriately rigorous: The evaluation activities should apply an appropriate level of rigour based on best practices and evaluation priorities.
- 5 Efficient: The evaluation activities should be carefully planned and prioritized to maximize the value for money.

Each of these principles is discussed in greater detail below.

### Principle 1: Evaluation results should be used to improve program offerings and delivery

As illustrated in Figure 1 below, the evaluation results and recommendations should be used to modify program implementation in a cycle of continuous improvement. Also, evaluation planning ensures that any evaluation feedback affecting program planning is collected and processed.



**Figure 1: The Program Planning Cycle**

## **Principle 2: Evaluation should provide independent, non-biased results**

The evaluator should be non-biased and not have any stake or personal interest linked to the evaluation outcomes.

## **Principle 3: Key assumptions, methodologies and reports should be transparently documented**

Although evaluations typically involve using confidential information and presenting aggregate data, the evaluation results and calculations should be clearly presented and documented so that any questions about them can be easily and reliably answered. Transparent evaluation reporting should:

- › Describe the approaches and methodologies used and their intended outcomes;
- › Present the results using a structure that enables the reader to easily match the approaches and methodologies used with the analyses done and the results obtained;
- › Identify key variables and assumptions used to calculate the savings values;
- › Mention any uncertainty about the results, confidence levels and margins of error.

## **Principle 4: The evaluation activities should apply an appropriate level of rigour**

Evaluation should be conducted with levels of rigour consistent with professional standards and best practices such as the California and Uniform Methods Project (UMP) protocols. Also, the evaluation of a specific program or initiative should be conducted with an appropriate level of effort based on a balance of several factors, such as savings targets and the level of uncertainty regarding savings calculations.

## **Principle 5: Evaluation activities should be carefully planned to maximize the value for money**

An adequate budget and enough resources should be provided and used to ensure that an evaluation's scope and objectives are properly covered as planned. Nevertheless, to maximize the value for money, evaluation planning and implementation should aim to achieve the highest cost-effectiveness, where possible, by doing the following:

- › Optimizing the use of resources based on the evaluation priorities established to obtain the most value for the budget;
- › Looking for relevant secondary research literature, data and findings, where appropriate and possible;
- › Grouping evaluation activities to optimize the use of resources;
- › Making the best use of the data-collection activities to simultaneously achieve multiple research objectives.

## Evaluation Priorities, Cycle, Roles and Responsibilities

### Evaluation Priorities

Due to the relatively small scale of program activities and participants, it is important that efficiencyPEI prioritize evaluation resources to complete evaluation activities in a cost-effective way. The following are ways in which efficiencyPEI prioritizes these resources:

- Program savings: Programs that achieve high levels of savings should receive more evaluation resources to ensure accurate representation of tracked savings.
- New Programs/Initiatives: New programs and initiatives should be evaluated to allow for process feedback in a timely way, and ensure savings targets can be met.
- Evaluation Scheduling: Ensuring evaluation schedules are created in a way that allows for timely and useful data, while maximizing evaluation resources.

### Evaluation Cycle

efficiencyPEI will create an evaluation schedule that ensures all programs are appropriately evaluated over the term of the EE&C Plan. The evaluation cycle contains key documentation, including the following:

The Evaluation Framework – This document outlines evaluation activities efficiencyPEI (ePEI) will undertake in support of Electricity Efficiency and Conservation Plan (EE&C) implementation.

The Portfolio Evaluation Plan – This plan outlines key evaluation activities that will take place over the term of the Evaluation Plan.

Evaluation Reports – Reports that describe the evaluation methodologies, savings results, cost-effectiveness and recommendations. To be filed with IRAC as per the Order.

Quarterly Reports – This report outlines qualitative program updates and program participation. To be filed with IRAC as per the Order.

Annual Reports – This report outlines qualitative program updates, cost-effectiveness, tracked savings, benefits, budgets, participants, funding, and key assumptions. To be filed with IRAC as per the Order.

Tri-Annual Reports – This report summarizes key results for the overall portfolio, program, and sector. It highlights program successes, cost-effectiveness, savings, benefits, budget, participants, funding, and key assumptions. To be filed with IRAC as per the Order.

Document	Schedule	Reviewed by EECAG
The Evaluation Framework	Living document that will be updated as needed	Yes
The Portfolio Evaluation Plan	To be prepared at the same time as the EE&C Plan, update as needed	Yes
Evaluation Reports	At the end of the evaluation process	Yes
Quarterly Reports	Quarterly each year	Yes
Annual Reports	At the end of each fiscal year	Yes
Tri-Annual Reports	Every three years	Yes



## Roles and Responsibilities

efficiencyPEI, through a competitive Request for Proposal process, will hire an external third party evaluator to undertake evaluation activities. This evaluator will be responsible for the planning and coordination of all evaluation activities with efficiencyPEI and is responsible for preparing evaluation reports.

efficiencyPEI is responsible for administering electricity efficiency and conservation programming as outlined in the EE&C Plan. This includes managing evaluation activities, data collection processes, coordinating with IRAC, and the EECAG.

The following is a list of documents ePEI will provide to the evaluator for EE&C evaluation purposes:

- Program databases
  - Energy Efficient Equipment, Home Insulation, and Business Energy Rebates are currently housed in one central online database that is exported to Excel for analysis.
  - New Home Construction is in an online database that can be exported to Excel.
  - Winter Warming is an Excel database.
  - Instant Savings is an Excel database provided by the Service Organization
  - Small Business Energy Solutions and Custom Energy Solutions are in an Excel database.
- Program manuals or guidelines
- Program application forms and documentation

efficiencyPEI will also provide the evaluator with rate information, avoided costs, and line loss factors as provided by Maritime Electric.

## Types of Evaluations<sup>3</sup>

A program evaluation involves carrying out various assessments, studies and activities to determine a program's effects. There are three broad categories of evaluations: the impact evaluation, the process evaluation, and the market evaluation. The cost-effectiveness analysis is an extension of the evaluation because such an analysis relies on the evaluation results.

This section provides a more detailed description of these three types of evaluation and the cost-effectiveness analysis.

### Impact Evaluation

The objective of an impact evaluation is to reliably establish the energy savings, peak demand savings and non-energy benefits that result from a program.

A program's savings results are reported in both gross savings and net savings. The following definitions are taken from the UMP.<sup>4</sup>

---

<sup>3</sup> 2018-2020 efficiencyPEI Evaluation Plan. Econoler, October 2019.

<sup>4</sup> Violette, Daniel M. and Rathbun, Pamela. (2017). *Chapter 21: Estimating Net Savings – Common Practices: Methods for Determining Energy-Efficiency Savings for Specific Measures*. Golden, CO; National Renewable Energy Laboratory. NREL/SR-7A40-68578. <http://www.nrel.gov/docs/fy17osti/68578.pdf>

**Gross savings:** The difference in energy consumption with the energy-efficiency measures promoted by the program in place versus what consumption would have been without those measures in place.

**Net savings:** The difference in energy consumption with the program in place versus what consumption would have been without the program in place.

In other words, the gross savings are calculated without considering program influence, whereas the net savings are the portion of the gross savings realized due to program influence.

To establish the net savings of a program, effects such as **free-ridership**, **spillover** and **market effects** are taken into consideration, where applicable and appropriate.

Free-ridership is the percentage of the gross savings attributable to those participants who would have implemented the same or similar energy efficiency measures with no change in timing in the absence of the program.

Spillover is the percentage of the gross savings attributable to those participants who, encouraged by their previous participation in a program, implement additional energy efficiency measures without receiving any additional incentive from the program. Spillover can be measured among participants and non-participants.

Market effects represent the impacts of a program on the market (such as increased product availability and awareness of energy efficiency) that extend beyond changing the program participants' behaviours. These include spillover among non-participants.

These effects are used to determine a net-to-gross ratio. Free-ridership is a negative effect while spillover and market effects are positive effects.

Interactive effects are applied to both gross and net energy savings to consider the implemented energy-efficiency measures' impact on other energy-consuming systems used in the same building.

A program's savings are primarily reported in terms of **first-year savings**.

**Lifetime energy savings** are calculated by taking into consideration both a measure's life and any increase in the baseline energy consumption over this measure's life. The **effective useful life** is obtained by dividing the lifetime energy savings value by the first-year energy savings value.

**Peak demand savings** are the savings associated with the reduction of power consumption over the peak demand period identified by the program administrator.

### Impact Evaluation Methodologies

There are two types of impact assessments that can be completed during an evaluation process:

**Full impact evaluation:** A full impact evaluation involves reviewing the following four key elements: (1) the baseline definition, (2) the savings calculation methodology, (3) the values of the parameters used to calculate the savings and (4) the net-to-gross ratio. The specific activities to be carried out to conduct this review for each program are to be defined by the Evaluator selected by efficiencyPEI. These activities may include surveys, desk reviews, site visits, measurement and verification, literature reviews, etc. A full impact evaluation yields **evaluated savings results**.

**Savings verification:** The Evaluator conducts the savings verification to determine (1) that a program's savings have been correctly and consistently compiled and calculated by applying all the necessary parameters and (2) that the savings calculation parameters recommended by a previous impact evaluation, or, if the program has not yet been evaluated, the documented savings methodology have been properly applied. A savings verification provides **verified savings results**.

### Process Evaluation

A process evaluation assesses a program's effectiveness in achieving its objectives and whether its implementation is proceeding as planned. Therefore, such an evaluation assesses the performance of the program activities and internal and external processes, and identifies those areas of the program that have not achieved the desired outcomes and should thus be improved. A process evaluation also usually looks at a program's ability to reach the right customers, participation levels and satisfaction among the participants and partners.

Typical process evaluation activities include:

- A program documentation review that involves reviewing documents such as the program logic model and theory, the program forms, guides and manuals, the marketing materials, and the data tracking to understand the program processes and components, inform data-collection activities and identify improvement opportunities.
- A jurisdictional scan or a benchmarking study to collect information about similar ongoing successful programs, the lessons learned from other utilities, best practices, etc.
- On-site assessments of the program delivery processes: for example, conducting mystery shopper visits to evaluate an in-store instant rebates program or ride-along visits to evaluate delivery agents' on-site work for a home energy assessment program.

### Market Evaluation

A market evaluation assesses a program's influence on a market or sector by examining the market evolution of energy efficiency products. More specifically, market evaluations involve assessing and monitoring market transformation indicators, such as product market shares and prices, program participant and non-participant behaviours, trade ally capacity and knowledge of energy efficiency, and barriers to product implementation and uptake, to understand the impacts of the program on the market.

A market evaluation can also be carried out before a program is launched to understand the market before any program actions are taken and to inform the program design. The market evaluation data can also be used to contribute to the impact evaluation efforts, for example, by providing data about the baseline.

Market evaluation activities include:

- Participant surveys and interviews with program partners to assess the program's influence on decisions and market barriers and gather feedback on how to increase the program's impact on the market.

- General population surveys and trade ally in-depth interviews or focus groups to collect information about energy efficiency behaviours, market trends and trade ally capacity.
- A potential study or penetration study to collect data about technology uptake and implementation.
- Secondary research data to gather information about product sales, shipments and market shares.
- Technology diffusion curves that illustrate product market adoption phases.

## Cost-Effectiveness

A cost-effectiveness analysis examines the relationship between the value created by a portfolio's benefits (or a project's, a measure's, a program's, or a bundle's) and the costs incurred to achieve those benefits. The analysis findings can help determine whether to retain, revise or eliminate program elements and provide feedback on whether energy efficiency is an effective investment compared with the energy supply options. The various tests involved in a cost-effectiveness analysis may help answer the following questions:

Is the initiative effective overall?

Are some costs or incentives too high or too low?

What is the effect on energy rates?

What adjustments need to be made to improve the cost-benefit ratio?

Cost-effectiveness calculations should follow best practices, such as those described in the EPA's cost-effectiveness guide<sup>5</sup> and the National Standard Practice Manual<sup>6</sup>.

The Program Administrator Cost (PAC) test is the ratio of the program administrator benefits of the initiative in terms of the value of energy and demand saved divided by the net program costs (the incentive and non-incentive costs) of the portfolio. The Total Resource Cost (TRC) test is the ratio of the value of energy and demand plus non-energy benefits divided by the total costs of the initiative, including the incremental product cost and the program administrator non-incentive costs. Costs and benefits should be calculated over the evaluated effective useful life of the measures. Typically, the TRC and PAC tests are the tests most commonly used by program administrators to assess program cost-effectiveness. The following table summarizes the components of the TRC and PAC tests.

---

<sup>5</sup> "Understanding Cost-Effectiveness of Energy Efficiency Programs: Best Practices, Technical Methods and Emerging Issues for Policy Makers", 2008. <https://www.epa.gov/sites/production/files/2015-08/documents/cost-effectiveness.pdf>

<sup>6</sup> "National Standard Practice Manual for Assessing Cost-Effectiveness of Energy Efficiency Resources". National Efficiency Screening Project. Spring, 2017. [https://nationalefficiencyscreening.org/wp-content/uploads/2017/05/NSPM\\_May-2017\\_final.pdf](https://nationalefficiencyscreening.org/wp-content/uploads/2017/05/NSPM_May-2017_final.pdf)

**Table 1: Components of the TRC and PAC Tests**

	<b>TRC</b>	<b>PAC</b>
Avoided Costs	X	X
Non-energy Benefits	X	
Non-incentive Costs	X	X
Incentive Costs		X
Customer Costs	X	

The avoided costs should be the marginal value of the net savings, taking into account the timing and duration of the savings. Best practice requires accounting for the costs of generation, transmission and distribution resources in estimating the avoided energy costs.

As for non-energy benefits, all quantifiable non-energy benefits (e.g., water savings) should be included. Those non-energy benefits that are difficult to quantify (e.g., improved comfort and health of the income-qualified participants) may be included by applying an adder.<sup>7</sup>

The non-incentive costs include all the costs related to a program's design, implementation, marketing, evaluation and administration, including any overhead costs.

Customer costs are the incremental capital and operations and maintenance costs incurred by a participant in a program. Whether the incremental cost or the full installed cost of a product is applied as the customer cost should be established based on the definition of the baseline (e.g., early replacement). Therefore, this baseline must be consistent between the energy savings calculations and the customer cost calculations.

The methodologies for determining the costs and benefits applied in the tests should be consistent between the costs and the benefits and estimated for the entire lifetime of energy savings by applying an appropriate effective measure life value.

In addition to the portfolio-level analysis, for information purposes, the evaluation results should also support the cost-effectiveness analysis at the program level.

---

<sup>7</sup> Recent research conducted by Econoler found that among the six Canadian utilities covered by that research, four accounted for non-energy benefits by applying an adder ranging from 12.5% to 15%.

## Data Collection

Current data collection methods are limited by the database systems in place. efficiencyPEI currently has an online database created by IT Shared Services in 2008, which is used for Energy Efficient Equipment, Home Insulation, and Business Energy Rebates. Due to changes in technology and ITSS resources, the system cannot be changed or updated. The remaining programs use Excel databases for data collection and program participation tracking.

The Evaluator is recommending improvements for data tracking processes. As part of the Process Evaluation, the Evaluator reviewed current program databases and data tracking sheets.

The following table outlines current data collection practices by program. This will be updated as collection processes change as a result of evaluation suggestions and database changes.

Program	Targets/Savings		Data	
Name	Unit of Measurement	Savings Targets	Data Source	Data Currently Collected
New Home Construction	# of participants with electrically heated homes	Yearly Targets - Net Savings (GWh), Peak Demand Savings (MW)	Application Form Energy Audit Data from Service Organization  Online database, exported to Excel Spreadsheet	PID, Initial NRCan number, Final NRCan number, Participant Name, Address, Phone Number, Email, Project Status, Rebate Amount, Processing Dates, Modelled to Code ERS in GJ, As Built ERS, ERS Improvement, Primary Heating Fuel, Secondary Heating Fuel
Winter Warming	# of participants with electrically heated homes	Yearly Targets - Net Savings (GWh), Peak Demand Savings (MW)	Application Form Tradesperson Worksheet  Data entered into ePEI Excel Spreadsheet	PID, Participant Name, Address, Phone Number, Email, Project Status, Assigned Tradesperson, Project Key Dates, Product Type, Total Number of Units Installed
Energy Efficient Equipment	# units installed in electrically heated homes	Yearly Targets - Net Savings (GWh), Peak Demand Savings (MW)	Application Form  Data entered into ePEI Database, and ePEI Excel Spreadsheet	PID, Participant Name, Address, Phone Number, Email, Project Status, Income Level, Key Dates (approval & payment), Rebate Amount, Original ERS, Post-Implementation ERS, Primary Heating Fuel, Primary Heating System, Upgrade Type, Upgrade Quantity

Home Insulation	# of participants with electrically heated homes	Yearly Targets - Net Savings (GWh), Peak Demand Savings (MW)	Application Form HOT2000 home energy assessment data  Data entered into ePEI Database, and ePEI Excel Spreadsheet	PID, Participant Name, Address, Phone Number, Email, Project Status, Income Level, Key Dates (approval & payment), Rebate Amount, Equipment Type, Equipment Category, Gross Electrical Unitary Energy Savings, Net Electrical Unitary Energy Savings
Instant Savings	# of units sold	Yearly Targets - Net Savings (GWh), Peak Demand Savings (MW)	Data collection completed by Summerhill, provides Excel Spreadsheet	Product Type, Lamp Type, SKU, Retail Price, Rebate Amount, Number of Units Sold, Wattage, Manufacturer, Model Number, Product Technical Info, Retailer, Store Identifier, Total Number of Units per Product Category, Gross Electrical Unitary Savings
Business Energy Rebates	# of products rebated	Yearly Targets - Net Savings (GWh), Peak Demand Savings (MW)	Application Form ePEI Database  Data entered into ePEI Database, and ePEI Excel Spreadsheet	Participant Name, Address, Phone Number, Email, Project Status, Key Dates (approval & payment), Rebate Amount, Measure Type, Measure Description, Measure Quantity, Total Number of Units per Measure Category, Gross Electrical Unitary Savings, Net Electrical Unitary Savings, Gross Electrical Unitary Peak Demand Savings, Net Electrical Unitary Peak Demand Savings

Small Business Energy Solutions	# of participants	Yearly Targets - Net Savings (GWh), Peak Demand Savings (MW)	Commercial Energy Audits provided by Service Organizations  Report provided by Service Organization  Data entered into Custom Program excel database	Tracking #, Fiscal Year, Program Name, Company Name, Annual kWh, Annual kWh, Annual Fuel, Facility Name, Facility Contact, Facility Address, Facility Town, Facility Postal Code, Facility Email, Facility Primary Phone, Facility Type, Rate Code, Heating Fuel Type, Measure Category, Measure Description, Project Status, Project Created Date, Claim Date(s), Elec. Savings (kWh), Demand Savings (kW), Project Completion (%), Completed Elec. Savings at Meter, Accrued Total Project Incentive (\$), Customer Contact Name, Customer Primary Phone, Customer Email, Customer Address, Customer City, Customer Postal Code
Custom Energy Solutions	# of participants	Yearly Targets - Net Savings (GWh), Peak Demand Savings (MW)	Commercial Energy Audits provided by Service Organizations  Data entered into Custom Program excel database	Tracking #, Fiscal Year, Program Name, Company Name, Annual kWh, Annual kWh, Annual Fuel, Facility Name, Facility Contact, Facility Address, Facility Town, Facility Postal Code, Facility Email, Facility Primary Phone, Facility Type, Rate Code, Heating Fuel Type, Measure Category, Measure Description, Project Status, Project Created Date, Claim Date(s), Elec. Savings (kWh), Demand Savings (kW), Project Completion (%), Completed Elec. Savings



				at Meter, Accrued Total Project Incentive (\$), Customer Contact Name, Customer Primary Phone, Customer Email, Customer Address, Customer City, Customer Postal Code
--	--	--	--	--

# Portfolio Evaluation Plan

Evaluation Schedule – 3-year term

Program	2018/19			2019/20			2020/21		
	Process	Market	Impact	Process	Market	Impact	Process	Market	Impact
Energy Efficient Equipment			V	X		F			V
Home Insulation			V	X		F			V
Winter Warming			V	X		F			V
Instant Savings			V	X		F			V
New Home Construction			V	X		F			V
Business Energy Rebates			V	X		F			V
Small Business Energy Solutions			**	X		**			F
Custom Energy Solutions			**	X		**			F

\*F=Full impact valuation

V=Savings Verification

\*\*=Program not launched

X=Completed

## Proposed Evaluation Activities

2019/20 - Electricity Only 10 Year Potential Study

- Dunsy Energy Consulting was hired to complete a 10-year electricity only potential study. This study will be used to inform the next EE&C Plan.

2020/21 - Billing/Savings Analysis for Energy Efficient Equipment Program

- Compare the electrical energy consumption of EEER participants before and after the installation of their MSHPs to establish the electrical energy savings associated with MSHPs.

2020/21 - Billing/Savings Analysis for Home Insulation and New Home Construction Program

- Establish the overestimation ratios (ORs) used to adjust the consumption values resulting from the HOT2000 simulations with HIR participants electricity billing data. The ORs are obtained by comparing participants' consumption modelled in HOT2000 with their actual consumption obtained from their billing data.

2020/21 - Spillover – Instant Savings Program

- Establish the spillover level of the Instant Savings program in the form of market effects.
- 

2020/21 - Spillover – New Home Construction Program

- Establish the spillover level of the New Home Construction program in the form of market effects.