

Program Name: Save on Energy High Performance New Construction

1. Program Description

The High Performance New Construction Program encourages designers and builders to incorporate energy-efficient Measures to reduce electricity consumption in newly constructed or renovated Facilities.

The Participants in the High Performance New Construction Program are owners of new (in construction) or major renovation projects of commercial, institutional and multi-family residential buildings.

This High Performance New Construction Program is offered under, and is subject to the terms of, the Energy Conservation Agreement.

All capitalized terms not defined in these High Performance New Construction Program Rules have the definitions given to them in the Energy Conservation Agreement between the LDC and the IESO.

These High Performance New Construction Program Rules will take effect on September 1, 2017.

2. Program Offer / Participant Incentives

2.1 Standard (Provincially Consistent) Incentives

As detailed below, several types of Participant Incentives are offered, subject to the eligibility requirements set out in Section 3:

- (a) Prescriptive Incentive for agribusiness Measures;
- (b) Engineered Incentive;
- (c) Custom Incentive;
- (d) Design Decision-Maker Incentive; and
- (e) Modeling Incentive.

In all cases, the Participant Incentive may not exceed the Estimated Participant Incentive by more than 50%.

2.1.1 Prescriptive Incentive for Agribusiness Measures

The Prescriptive Incentive will be calculated as specified in the Prescriptive Worksheet.

2.1.2 Engineered Incentive

The Engineered Incentive will be calculated as specified in the Engineered Worksheet.

2.1.3 Custom Incentive

The Custom Incentive will be calculated as the lesser of:

- (a) 30% of the Eligible Costs; and
- (b) the applicable Demand Savings or Energy Savings tier, whichever is greater, (as in the table below) based on the percentage total building energy efficiency above the Applicable Ontario Building Code Supplementary Standard SB-10 (OBC SB-10) as enforced per the date of the building permit application and issued building permit:

Tiers	For building permit applications prior to January 1, 2017	For building permit applications on or after January 1, 2017	Custom Incentive
Tier 1	Above Base Case Energy Savings are \leq 25%	Above Base Case Energy Savings are \leq 10%	\$400/kW of Demand Savings or \$0.05/kWh of Energy Savings
Tier 2	Above Base Case Energy Savings are $>$ 25% and \leq 50%	Above Base Case Energy Savings are $>$ 10% and \leq 25%	\$600/kW of Demand Savings or \$0.075/kWh of Energy Savings
Tier 3	Above Base Case Energy Savings are $>$ 50%	Above Base Case Energy Savings are $>$ 25%	\$800/ kW of Demand Savings or \$0.10/kWh of Energy Savings

“Above Base Case Energy Savings” definition and “Base Case” definition include further details on compliance options dependent on building permit application date.

2.1.4 Design Decision-Maker Incentive

The Design Decision-Maker Incentive, applicable for Custom Projects only, is based upon the greater of the applicable Demand Savings or Energy Savings tier (as in the table below) based on the percentage total building energy efficiency above the Applicable Ontario Building Code

Supplementary Standard SB-10 (OBC SB-10) as enforced per the date of the building permit application and issued building permit:

Tiers	For building permit applications prior to January 1, 2017	For building permit applications on or after January 1, 2017	Design Decision-Maker Incentive
Tier 1	Above Base Case Energy Savings are \leq 25%	Above Base Case Energy Savings are \leq 10%	\$50/kW of Demand Savings or \$0.00625/kWh of Energy Savings
Tier 2	Above Base Case Energy Savings are $>$ 25% and \leq 50%	Above Base Case Energy Savings are $>$ 10% and \leq 25%	\$100/kW of Demand Savings or \$0.0125/kWh of Energy Savings
Tier 3	Above Base Case Energy Savings are $>$ 50%	Above Base Case Energy Savings are $>$ 25%	\$150/kW of Demand Savings or \$0.01875/kWh of Energy Savings

“Above Base Case Energy Savings” definition and “Base Case” definition include further details on compliance options dependent on building permit application date.

2.1.5 Modeling Incentive

The Modeling Incentive, applicable for Custom Projects only, will be calculated as the lesser of:

- (a) \$10,000;
- (b) 100% of third party costs of preparing the Simulation Summary Report; and
- (c) the Custom Incentive.

2.2 Exceptions

None applicable.

3. Program Eligibility Criteria

3.1 Participant Eligibility

To be eligible under the High Performance New Construction Program, a Participant must:

- (a) be either a Non-Residential Distribution Customers or a Recognized Farm Operation;
- (b) have not previously entered into a binding commitment to acquire the Measures or services required to install the Measures. Notwithstanding the foregoing eligibility requirement,
 - (i) For Engineered Projects and Prescriptive Projects, where a Participant has entered into a binding commitment to acquire such Measures or services required to install the Measures prior to applying, the LDC may waive that eligibility requirement where the Participant demonstrates that it intended to apply to the High Performance New Construction Program, as determined by the LDC in its sole discretion.
 - (ii) For Custom Projects, where a Participant has entered into a binding commitment to acquire such Measures or services required to install the Measures prior to applying, the LDC may waive such eligibility requirement where the Participant demonstrates that it intended to apply to the High Performance New Construction Program between January 1, 2017 and up to 90 days following the effective date of these Program Rules, as determined by the LDC in its sole discretion.
- (c) have all required rights and authority to have the eligible Measure(s) installed; and
- (d) be an owner of a new construction or major renovation that represents a Project. Where there is more than one owner, the Participant must mean all owners, and the owners must appoint one owner to represent them.

3.2 Facility Eligibility

The Facility must:

- (a) be one of the following:
 - (i) a new Facility;
 - (ii) a new addition to an existing Facility;
 - (iii) a major renovation that converts the Facility to an alternative use; or

- (iv) a major renovation that replaces two or more building systems and renders the Facility unfit for occupation for more than 30 days;
- (b) upon completion, comply with Part 3 of the Ontario Building Code;
- (c) when completed, be connected to, or behind the meter of another electricity consumer connected to, the LDC's Distribution System, and be the subject of a Non-Residential Distribution Customer account or if the Facility is classified as a Residential account it must also be a part of a Recognized Farm Operation.

3.3 Project and Measures Eligibility

3.3.1 Projects generally

A Project must:

- (a) be comprised of Measures;
- (b) be in respect of a single Facility;
- (c) be completed by the Participant (that is, be in-service) and delivering Energy Savings on or before December 31, 2020;
- (d) have a projected service life exceeding 48 months after the Project completion date which is the occupancy permit date;
- (e) for a Prescriptive Project:
 - (i) be restricted to agribusiness Prescriptive Measures;
 - (ii) include a Prescriptive Worksheet;
 - (iii) a completed Prescriptive and Engineered Application Workbook; and
 - (iv) have a minimum Estimated Prescriptive Incentive of \$1,000;
- (f) for an Engineered Project:
 - (i) be restricted to Engineered Measures;
 - (ii) include one or more Engineered Worksheets;
 - (iii) a completed Prescriptive and Engineered Application Workbook; and
 - (iv) have a minimum Estimated Engineered Incentive of \$1,000;
- (g) for a combined Engineered and Prescriptive Project:

- (i) include Engineered and Prescriptive Measures;
 - (ii) include one or more Engineered Worksheets;
 - (iii) include a Prescriptive Worksheet;
 - (iv) include a completed Prescriptive and Engineered Application Workbook; and
 - (v) have a minimum combined Estimated Engineered and Prescriptive Incentive of \$1,000;
- (h) for a Custom Project:
- (i) include one or more Custom Worksheets, which have been completed without amendment;
 - (ii) have a minimum Estimated Custom Incentive of \$5,000;
 - (iii) include an energy model compatible with the Approved Modeling Software;
 - (iv) include a complete Custom Workbook; and
 - (v) have positive electrical Energy Savings;
- (i) not comprise the following:
- (i) an Application for a Custom Project that proposes Measures that are: (A) not generally commercially available, (B) a pilot or demonstration project, or (C) otherwise unproven;
 - (ii) an electrical (fuel) substitution;
 - (iii) any project where a Participant receives funding, directly or indirectly from the IESO, other than from this Program or capability building funding amounts;
 - (iv) any project where a Participant has already applied for either Prescriptive Measures or Engineered Measures or Custom Measures for the same project; or
 - (v) a project that qualifies as an “Eligible Project” under the Residential New Construction Program, the Retrofit Program or the Existing Building Commissioning Program.

3.3.2 Design Decision-Maker

The Design Decision-Maker must be at arm's length to the Participant and must:

- (a) be an architect or professional engineer licensed to practice in Ontario;
- (b) not be an employee of the Participant;
- (c) be designated as the Design Decision Maker by the Applicant in the Application;
and
- (d) agree to review and take responsibility for the energy efficiency design of the Project.

3.4 Eligible Costs

The actual costs claimed in respect of a Project must:

- (a) be directly related to the Project and limited to:
 - (i) costs of equipment purchased and installed by a third party;
 - (ii) costs of labour for equipment installation by a third party;
 - (iii) costs of energy assessments not funded by the IESO;
 - (iv) costs of design, engineering and/or architecture;
 - (v) third party project management costs; and
 - (vi) shipping, delivery, duties and other costs applicable to equipment delivery to the Facility, and
- (b) not comprise the following:
 - (i) costs of the Participant's labour, service, administration or overhead that are not incurred by a third party;
 - (ii) financing costs;
 - (iii) insurance costs;
 - (iv) costs of post-installation maintenance and service contracts;
 - (v) costs of spare parts, spare equipment or other inventories;
 - (vi) costs for the purchase or lease of tools to install equipment; or
 - (vii) HST.

4. Participant Agreement

The Participant Agreement will include the terms and conditions specified in the Energy Conservation Agreement. In addition, it must include the following:

- (a) The Participant must enter into a Design Decision-Maker Agreement with the Design Decision-Maker.
- (b) The Participant must deliver a copy of the building permit application and a copy of the municipal occupancy permit for the Facility.
- (c) The Participant Incentives that will be paid will not exceed the Estimated Participant Incentive by more than 50% subject to Section 2.1
- (d) Incentives are payable upon submission of records as outlined in section 6
- (e) Modeling Incentives will be payable in two stages: 50% on pre-construction approval and 50% on post project approval upon:
 - (i) satisfaction of the Custom Project eligibility criteria set out in Section 3.3.1(h) of these High Performance New Construction Program Rules; and
 - (ii) submission of the Simulation Summary Report (to be evidenced by third party invoices), where no additional Modeling Incentive will be payable if the Simulation Summary Report is resubmitted as specified in Section 5(b)(ii)(B) of these Program Rules.
- (f) The Participant will maintain all of the incented Measures in good working order and will operate and maintain such equipment and improvements without any modification for a continuous period of at least 48 months after the Project completion date (being the occupancy permit date).
- (g) Any other provision required to give effect to these High Performance New Construction Program Rules.

5. QA/QC and Project M&V – Minimum Requirements

The LDC will do the following:

- (a) for Custom Project Applications, confirm the Project Evaluator has approved: (i) the Simulation Summary Report; (ii) the Approved Modeling Software results; and (iii) specification sheets or detailed manufacturer data evidencing Measures; and
- (b) for Participant Incentives:

- (i) for a Prescriptive Project or Engineered Project,
 - A. apply the Sampling Protocol annually to Facilities selected for QA/QC inspections;
 - B. confirm the Measures installed correspond with invoices and supporting documentation;
 - C. adjust the Participant Incentive payable where a Participant is unable or fails to remedy any discrepancies arising out of the requirements in subsections 5(b)(i);
- (ii) for a Custom Project,
 - A. conduct a post-completion site visit to confirm the Measures installed correspond with invoices and supporting documentation,
 - B. where a difference between the Estimated Custom Incentive and Custom Incentive is confirmed by the Project Evaluator, require the Participant to revise: (i) the Energy and Demand Savings Summary, (ii) the Simulation Summary Report, and (iii) the Modeling Results Report; and
 - C. for a Custom Incentive require the Project Evaluator to complete a Final Evaluation and Incentive Report and have the Participant sign and submit to the LDC.

6. Minimum Record-Keeping Requirements

At a minimum, and subject to the Energy Conservation Agreement, the LDC will retain the following records:

- (a) For Prescriptive Projects
 - (i) Prescriptive Worksheets
 - (ii) Invoices, equipment cut sheets and supporting documentation
- (b) For Engineered Projects
 - (i) Engineered Worksheets
 - (ii) Invoices, equipment cut sheets and supporting documentation
- (c) For Custom Projects

- (i) Custom Worksheets
 - (ii) Invoices, equipment cut sheets and supporting documentation
 - (iii) Energy Model
 - (iv) Energy and Demand Savings Summary
 - (v) Simulation Summary Report
 - (vi) Modeling Results Report
 - (vii) architectural, mechanical and electrical drawings
 - (viii) manufacturer equipment specifications
- (d) data related to QA/QC and Project M&V, as specified in Section 5 of these Program Rules;
 - (e) Final Evaluation and Incentive Report;
 - (f) Copy of the application for building permit and a copy of the municipal occupancy permit for the Facility;
 - (g) Copy of signed Participant Agreement; and
 - (h) Copy of Design Decision-Maker Agreement as applicable

7. Other

Not applicable.

8. Program Specific Definitions

The following terms have the meanings stated below when used in these High Performance New Construction Program Rules:

Above Base Case Energy Savings means the aggregate natural gas and electricity savings (expressed as a percentage) for Custom Projects as calculated by the Custom Worksheet (calculated as the aggregate natural gas and electricity consumption in the Base Case, minus natural gas and electricity consumption in the Energy Efficiency Case, divided by the natural gas as electricity consumption in the Base Case, and rounded down to the nearest 0.5%).

Applicable Building Code means (a) the “building code” as defined in the Building Code Act, 1992 (Ontario), as may be amended; and (b) any other applicable building code

imposed by a municipality, if any, to the extent that it supplements the building code referred to in (a) or any part thereof.

Applicant Representative or “Participant Representative” means a vendor or other third party identified by the Participant in the Application to represent their interests for the purposes of assisting in the completion of the Application and/or act as the primary contact for the Project.

Application means an application for a proposed Project submitted by a Participant to the LDC for approval.

Approved Modeling Software means any of the following software:

- (a) DOE 2 version 2.2-48y or higher;
- (b) eQUEST version 3.65 build 7173 or higher;
- (c) CAN-QUEST version 1.1 rev 3268 or higher;
- (d) IES Virtual Environment version VE 2016;
- (e) EnergyPlus version 8.6; or
- (f) any additional modelling software that is ASHRAE 140-compliant, as represented by the software's program developer, subject to LDC approval.

Base Case means the baseline assumption that the new construction or major renovation subject to the Application would be completed without a Participant Incentive and would meet minimum requirements of the Applicable Building Code.

Custom Incentive means the Participant Incentive payable for the installation of Custom Measures, in the amount specified in Section 2.1.3.

Custom Measure means a Measure not comprising a Prescriptive Measure or Engineered Measure and that involves one or more of the following:

- (a) replacement of existing equipment with equipment that is more efficient;
- (b) purchase and installation of new energy efficient equipment for lighting, space heating, water heating, and/or space cooling;
- (c) replacement of oversized existing equipment with more appropriate sized equipment; or

- (d) improvement of thermal performance of a building envelope through increased insulation, installation of new energy efficient windows and frames, low emissive window glazing, or low emissive roof barriers.

Custom Project means a Project comprised of Custom Measures that satisfies the eligibility requirements specified in Section 3.3.1(h).

Custom Workbook means the Excel based workbook that includes Participant and Application related information for Custom Project applications including Initial Application, Pre-Construction Form, Post Construction Form, the Custom Worksheet, Energy and Demand Savings Summary and Simulation Summary Report.

Custom Worksheet means the worksheet describing Custom Measures in the form made available by the IESO, as updated from time to time.

Demand Savings means the estimated, determined or actual kilowatt reduction in electricity demand (as the context may require), attributable to the installation of an Engineered or Custom Measure.

Design Decision-Maker means a person that satisfies the requirements specified in Section 3.3.2.

Design Decision-Maker Agreement means a legal agreement between the Participant and the Design Decision-Maker

Design Decision-Maker Incentive means a Participant Incentive calculated as specified in Section 2.1.4.

Distribution System means a system connected to the IESO-Controlled Grid for distributing electricity at voltages of 50 kV or less and includes any structures, equipment or other things used for that purpose.

Eligible Costs means the costs that are eligible to be included in the determination of the Participant Incentive payable, as specified in Section 3.4.

Energy and Demand Savings Summary means a summary of Energy Savings and Demand Savings in the form made available by the IESO, as updated from time to time.

Energy Efficient Case means the anticipated Energy Savings and Demand Savings resulting from the proposed Project, as specified in the Application.

Energy Savings means the estimated, determined or actual kilowatt hour reduction in electrical energy consumption (as the context may require), attributable to the installation of a Custom Measure during the first year after completion of the Project.

Engineered Incentive means the Participant Incentive payable for the installation of Engineered Measures, in the amount specified in Section 2.1.2.

Engineered Measure means Measures listed on an Engineered Worksheet.

Engineered Project means a Project comprised of Engineered Measures that satisfies the eligibility requirements specified in Section 3.3.1(f).

Engineered Worksheet means the worksheets describing Engineered Measures in the form made available by the IESO, as updated from time to time.

Estimated Custom Incentive means an estimation of the anticipated Custom Incentive, as specified in the Application approved by the IESO.

Estimated Engineered Incentive means an estimation of the anticipated Engineered Incentive, as specified in the Application approved by the IESO.

Estimated Participant Incentive means an estimation of the anticipated Participant Incentives, as specified in the Application approved by the IESO.

Estimated Prescriptive Incentive means an estimation of the anticipated Prescriptive Incentive, as specified in the Application approved by the IESO.

Facility means the eligible building, premises or part thereof, as specified in Section 3.2, where Measures are installed.

Final Evaluation and Incentive Report means a report prepared by a Project Evaluator in the form made available by the IESO, as updated from time to time, for the purpose of reporting an update of estimated Energy Savings and Demand Savings after the installation of Measures.

IESO-Controlled Grid has the meaning given to it in the IESO Market Rules.

Initial Application means the initial application that identifies an upcoming project that may be eligible for the High Performance New Construction program. This is to be completed as the starting point to engage the LDC in program participation. The Participant Agreement and Pre-Construction application will need to be completed at permit time.

Modeling Incentive means the Participant Incentive payable for the performance of Project modelling, in the amount specified in Section 2.1.5.

Modeling Results Report means a computer simulation file generated by the Approved Modeling Software and submitted by the Participant to the LDC that models and describes the proposed Custom Project, including specification and quantities of Measures.

Non-Residential Distribution Customer means electricity customers in Ontario that: (a) are not classified as residential in the most recent *Yearbook of Electricity Distributors* published by the Ontario Energy Board, and (b) have a general service <50 kW account, general service >50 kW account, or a large user account.

Prescriptive and Engineered Application Workbook means the Excel based workbook that includes Participant and Application related information for Prescriptive and/or Engineered Project applications including Initial Application, Pre-Construction Form, and Post Construction Form. The Prescriptive and/or Engineered Worksheets are separate from this Workbook.

Prescriptive Incentive means a Prescriptive Incentive payable for a Prescriptive Measure, as specified in Section 2.1.1.

Prescriptive Measure means Measures listed on a Prescriptive Worksheet.

Prescriptive Project means a Project comprised of Prescriptive Measures that satisfies the eligibility requirements specified in Section 3.3.1(e).

Prescriptive Worksheet means the worksheets describing Prescriptive Measures in the form made available by the IESO, as updated from time to time.

Project means one or more Measures that are expected to be undertaken pursuant to this High Performance New Construction Program.

Project Evaluator means a person that is an employee of the LDC or a third party service provider to the LDC who is licensed or certified to practice in Ontario and is: (a) a professional engineer, (b) a certified engineering technologist, (c) a certified energy manager, or (d) an engineer-in-training under the supervision of a professional engineer or certified engineering technologist.

Recognized Farm Operation means a farm property that possesses a farm business registration number, being the six to seven digit number administered by Agricorp, an agency of the Government of Ontario, and housed by Agricorp, the Ontario Ministry of Agriculture, Food and Rural Affairs, the Municipal Assessment Corporation and the municipalities.

Sampling Protocol means the protocol to create a randomly selected sample of Prescriptive and Engineered Projects with Participant Incentives of less than \$25,000, where:

- (a) Projects are geographically spread over LDC's service area; and
- (b) number of Projects sampled in a calendar year, based on an estimate, is sufficient to provide a confidence level that is at least 95% with a margin of error no greater than 5%, assuming a response distribution of 3%.

Simulation Summary Report means a report submitted by the Participant to the LDC summarizing Project assumptions applied to the Approved Modeling Software, in the form made available by the IESO, as updated from time to time.

Worksheet means a Custom Worksheet, Engineered Worksheet, or Prescriptive Worksheet, in each case in the form made available by the IESO, as updated from time to time.

9. Pay for Performance

The pay-for-performance rate for this High Performance New Construction Program is \$0.