



INDUSTRIAL ACCELERATOR™ PROGRAM

**Incentive Schedule for Preliminary or Detailed Engineering Study Funding
(Version 1.0, August 9, 2017)**

issued under the Master Program Agreement

between

[name of Participant]

- and -

INDEPENDENT ELECTRICITY SYSTEM OPERATOR

DATED as of the ♦ day of ♦, ♦

IESO Project Identification No. ♦

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INCENTIVE SCHEDULE - PRELIMINARY OR DETAILED ENGINEERING STUDY

This Incentive Schedule is between ♦, a ♦ [Set forth the name and legal form of the Participant] created under the laws of ♦ (the “**Participant**”) and the Independent Electricity System Operator (the “**IESO**”) and is dated ♦.

BACKGROUND:

A. The Participant and the IESO are the Parties to a Master Program Agreement dated ♦ (the “**Master Agreement**”), pursuant to which the Parties may enter into Incentive Schedules.

B. The Participant has submitted an Application for an Engineering Study Incentive for a Preliminary or Detailed Engineering Study under the Industrial Accelerator Program, which the IESO has accepted.

C. The Participant reasonably expects that the Preliminary or Detailed Engineering Study will identify measures that will generate Electricity Savings.

NOW THEREFORE, in consideration of the mutual agreements set forth herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

ARTICLE I INCENTIVE SCHEDULE

1.1 Master Agreement and Exhibits

This Incentive Schedule forms part of the Agreement. It is subject to the terms and conditions of the Master Agreement. Unless otherwise defined in this Incentive Schedule, defined terms have the meanings given in the Master Agreement. Unless otherwise stated, references to a “Section” or “Article”, are to sections and articles of this Incentive Schedule.

1.2 Exhibits and Eligibility Requirements

(a) The following Exhibits are attached to and will form part of this Incentive Schedule:

Exhibit "A" - Engineering Study Description (including all attachments to Exhibit "A")

Exhibit "B" - Preliminary Engineering Study Requirements

Exhibit "C" - Detailed Engineering Study Requirements

(b) Version ♦ ([insert date]) of the Eligibility Requirements are incorporated by reference and form part of this Incentive Schedule.

1.3 Term

This Incentive Schedule is effective as of the date first written above and will terminate on the earliest of: (a) the date that all Incentive payments have been made; (b) the date it is terminated by a Party in

accordance with the Master Agreement; (c) 8 months from the date first written above if the Participant has not delivered the Draft Report to the IESO unless the IESO otherwise agrees in writing; and (d) 120 days after the IESO has delivered substantive comments on the Draft Report to the Participant, if the Participant has not delivered a Final Report.

1.4 Representations

- (a) By executing this Incentive Schedule, the Participant makes the representations and warranties set out in Sections 6.1 and 6.2 of the Master Agreement as of the date of this Incentive Schedule.
- (b) The Participant also represents and warrants to the IESO that:
 - (i) the description of the Engineering Study set out at Exhibit "A", including the attachments to Exhibit "A", is complete and accurate; and
 - (ii) the Engineering Study will, if the project is carried out, result in an Eligible Project under an Incentive Schedule.

ARTICLE II **INCENTIVE**

2.1 Purpose of Incentive

Subject to the terms of the Master Agreement and this Incentive Schedule, the IESO agrees to pay the Participant the Engineering Study Incentive in consideration for the Participant undertaking its obligations under the Agreement.

2.2 Amount of Incentive

The Engineering Study Incentive to be paid by IESO will equal the lesser of:

- (a) the actual Eligible Costs incurred and paid by the Participant to complete the Engineering Study, as invoiced in accordance with Section 3.3; and
- (b) the Approved Maximum Amount as set out in Exhibit "A"; and
- (c) for a Preliminary Engineering Study, \$20,000.

2.3 Payment of Incentive

The IESO agrees to pay the Engineering Study Incentive to the Participant in two payments as follows:

- (a) the lesser of:
 - (i) 50% of the Approved Maximum Amount set out in Exhibit "A"; and
 - (ii) the actual Eligible Costs incurred and paid by the Participant to that date to complete the Engineering Study;

to be paid in accordance with the Master Agreement after: (x) the receipt by the IESO of an invoice in accordance with the Master Agreement; and (y) acceptance by the IESO of the Draft Report submitted pursuant to Section 3.2(a); and

- (b) the Engineering Study Incentive determined in accordance with Section 2.2, net of amounts already paid under Section 2.3(a), to be paid in accordance with the Master Agreement after: (x) the receipt by the IESO of an updated invoice, if applicable, in accordance with the Master Agreement; (y) acceptance by the IESO of the Final Report submitted pursuant to Section 3.2(c); and (z) in the case of a Detailed Engineering Study only, the receipt by the IESO of the certificate required under Section 3.4.

ARTICLE III

PARTICIPANT RESPONSIBILITIES

3.1 Engineering Study

- (a) The Participant agrees to:
 - (i) complete the Engineering Study described in Exhibit "A"; and
 - (ii) prepare a Draft Report and Final Report as set out in Section 3.2 on the results of such Engineering Study in accordance with Exhibit "B" in the case of a Preliminary Engineering Study, or Exhibit "C" in the case of a Detailed Engineering Study.
- (b) Without limiting the generality of the foregoing, in the case of a Detailed Engineering Study, the third party selected by the Participant to complete the Detailed Engineering Study will be required to develop a methodology for determining the preliminary Base Case Baseline including the collection and analysis of the equipment or process data and also including any pre-metering required to implement the Detailed Engineering Study. The Participant may elect to have such methodology reviewed by the Technical Reviewer prior to implementation. Such proposed methodology will be subject to confirmation or amendment in any subsequent M&V Plan.
- (c) The Participant acknowledges that: (i) in the event of any inconsistency between the Participant's proposal and their responses to Information Requests (in all cases as attached to Exhibit "A"), the Participant's responses to Information Requests will govern; (ii) in the event of any inconsistency between the description of the Engineering Study at the beginning of Exhibit "A" and the attachments to Exhibit "A", the description at the beginning of Exhibit "A" will govern; and (iii) in the event of any inconsistency between Exhibit "A" (including any attachments) and the Agreement (including this Incentive Schedule), the Agreement will govern.
- (d) If the equipment or process that is the subject of the Engineering Study is altered after completion of the Engineering Study but prior to the acceptance by the IESO of the Final Report, the Participant will promptly notify the IESO of any necessary or prudent amendments to the Engineering Study, which will be subject to IESO approval.

3.2 Reports

- (a) The Participant will deliver a Draft Report to the IESO within 8 months of the date of this Incentive Schedule.
- (b) The IESO will review the Draft Report and may provide substantive comments that the Participant must address in the Final Report. For the purposes of Section 2.3(a), the IESO may accept a Draft Report that has deficiencies that IESO expects to be rectified in the Final Report.
- (c) The Participant will deliver the Final Report to the IESO within 60 days of receipt by the Participant of the IESO's substantive comments on the Draft Report. The Final Report must be prepared or reviewed by, and signed by, a registered professional engineer licensed to practice in Ontario, unless otherwise agreed to in writing by the IESO.
- (d) The IESO will review the Final Report and will determine if it is acceptable for the purposes of Section 2.3(b), including without limitation by confirming that any substantive comments of the IESO on the Draft Report have been addressed to the satisfaction of the IESO.

3.3 Invoicing

- (a) The Participant will, at the same time that the Participant delivers the Draft Report, submit to the IESO an invoice showing the actual Eligible Costs incurred and paid/payable by the Participant to complete the Engineering Study and attaching all relevant receipts and other documentation of such Eligible Costs as may be required by the IESO.
- (b) The Participant may, at the time that the Participant delivers the Final Report, update its invoice to reflect any additional Eligible Costs incurred and paid/payable since the date of the original invoice.

3.4 Capital Committee

For a Detailed Engineering Study only, the Participant agrees:

- (a) to have each viable Project identified in the Detailed Engineering Study presented to the Participant's capital committee for consideration for inclusion in the Participant's capital budget and plan for its next fiscal period; and
- (b) at the request of the IESO, to cause its Chief Financial Officer (or such other officer of the Participant with direct knowledge of these matters and acceptable to the IESO) to certify to the IESO in writing that such presentation has occurred.

[Signature page to follow]

IN WITNESS WHEREOF the Parties have executed this Incentive Schedule as of the date first above written.

[NAME OF PARTICIPANT]

Per: _____
Name:
Title:

I have authority to bind the Corporation.

**INDEPENDENT ELECTRICITY SYSTEM
OPERATOR**

Per: _____
Name:
Title:

I have authority to bind the Corporation.

EXHIBIT "A"
ENGINEERING STUDY DESCRIPTION

Type: ☐ Preliminary Engineering Study ☐ Detailed Engineering Study

Scope: Refer to the Application comprised of the following documents, all of which are attached to and form part of this Exhibit "A":

1. Application dated ♦;
2. Proposal prepared by ♦ dated ♦, as submitted with the Application; and
3. Responses to Information Requests.

Facility name(s):

Facility address(es):

Expected date of proposed methodology for determining the preliminary Base Case Baseline (for Detailed Engineering Studies only):

Expected date of Draft Report:

Name of the consultant's company:

Company Representative:

Approved Maximum Amount: \$♦

IESO File #:

EXHIBIT "B"

PRELIMINARY ENGINEERING STUDY MINIMUM REQUIREMENTS

Purpose

The Preliminary Engineering Study will identify and recommend for further study potentially cost-effective electricity-saving opportunities for a single process or equipment.

Accuracy

The Preliminary Engineering Study must provide Electricity Savings estimates to an accuracy of +/- 30% and Project cost estimates to an accuracy of +/- 50%.

Report Requirements

The Final Report for a Preliminary Engineering Study will include the following:

1.0 Introduction

- 1.1 Facility name(s) and location(s);
- 1.2 Estimated dates of study start and completion; and
- 1.3 Background of the process or equipment studied and why it was chosen for study.

2.0 Base Case

Description of the process or equipment studied:

- 2.1 Type of process or equipment and areas of plant/process served (include a sketch or block diagram);
- 2.2 Annual hours of operation for the process or equipment and description of process or equipment variability and operating conditions;
- 2.3 Existing equipment nameplate information and estimated annual electrical consumption (based on available historic information, readily available installed instrumentation outputs, manufacturers' performance data and/or engineering calculations - i.e. temporary metering or permanent meter installation not required); and
- 2.4 Age of process or equipment or major system components.

3.0 Opportunity Analysis

Analyze all reasonable electricity conservation measures that could be applicable to the process or equipment studied. Complete the information requirements listed below for each measure analyzed.

- 3.1 Electricity Savings
 - 3.1.1 Technical description of each identified measure;
 - 3.1.2 Methodology and calculations used to arrive at Electricity Savings estimates for each measure;

- 3.1.3 Results of analysis including uncertainty ranges for the Annualized Electricity Savings;
- 3.1.4 Explanation of any other Project Benefits that may result from implementation of each Measure; and
- 3.1.5 Explanation of interactive effects (if any) between systems and the measure - i.e. a reduction in energy in one area may cause an increase in another.
- 3.2 Project Costs
 - 3.2.1 Cost estimates of each identified measure that should include considerations for: detailed design and engineering, project management, equipment, installation labour, demolition, and commissioning; and
 - 3.2.2 Project Payback for each identified measure with and without Incentives or any Third Party Contributions.

4.0 Recommendations

Discussion of measures recommended for further study based on results of technical and economic analysis.

EXHIBIT "C"

DETAILED ENGINEERING STUDY REQUIREMENTS

Purpose

The Detailed Engineering Study will identify and recommend potentially cost-effective electricity-saving opportunities for one or more processes or equipment and describe the implementation of such opportunities.

Accuracy

The Detailed Engineering Study must provide Electricity Savings estimates to an accuracy of +/- 10% and Project cost estimates to an accuracy of +/- 25%.

Report Requirements

The Final Report for a Detailed Engineering Study will include the following:

1.0 Executive Summary

- 1.1 Facility name(s) and location(s).
- 1.2 Dates of study start and completion.
- 1.3 A brief background and description of the process or equipment(s) studied.
- 1.4 A brief description of recommended measures with estimates of:
 - 1.4.1 Annualized Electricity Savings;
 - 1.4.2 Annual average electricity demand reduction;
 - 1.4.3 Project Benefits that contribute to cost-effectiveness of the Project;
 - 1.4.4 Any costs directly related to the Project which are not included in Eligible Costs and for which the Participant is requesting the IESO approve the addition of such cost to Eligible Costs;
 - 1.4.5 Project Payback for each recommended measure and for the aggregate of all recommended measures based on total Eligible Costs excluding Incentives or Third Party Contributions;
 - 1.4.6 Project Payback for each recommended measure and for the aggregate of all recommended measures with Incentives; and
 - 1.4.7 Estimated Incentives.
- 1.5 Author of report with acknowledgement of key personnel involved including titles.
- 1.6 Identification of Facility personnel who contributed to the Detailed Engineering Study, including each individual's name, title and role.

2.0 Base Case

- 2.1 Description of each process or equipment studied:
 - 2.1.1 Type of system and areas of plant/process served;
 - 2.1.2 Explanation of why this process or equipment was chosen for study;

- 2.1.3 If applicable, process flow diagrams, indicating measurement boundary, and how the process or equipment interacts with the remaining plant;
- 2.1.4 If applicable, relevant electrical single line diagrams;
- 2.1.5 If applicable, process and instrumentation drawings;
- 2.1.6 If applicable, equipment data sheets or existing equipment efficiency;
- 2.1.7 Preliminary Base Case Baseline, which is subject to review and acceptance by the Technical Reviewer, is compliant with IPMVP, and includes:
 - 2.1.7.1 annual electrical energy consumption;
 - 2.1.7.2 if applicable, daily and seasonal electrical load profile;
 - 2.1.7.3 load duration curve or table indicating annual hours of operation at significant capacity points; and
 - 2.1.7.4 production and throughput as it relates to the energy consumption of the System;
- 2.1.8 Operating and maintenance costs for the process or equipment;
- 2.1.9 If applicable, product quality from the existing process or equipment;
- 2.1.10 Reliability of the existing process or equipment;
- 2.1.11 Age of the process or equipment or major system components and analysis of remaining life; and
- 2.1.12 Standard commercially available replacement equipment cost and energy use (least cost new equipment that meets the System requirements).
- 2.2 Measured electrical, process, and operating data collected during the Detailed Engineering Study provided in MS Excel spreadsheet format.
- 2.3 Written evidence satisfactory to the IESO of the electricity rate used to determine the Electricity Savings, which may include the most recent electric utility bills received for a single billing period for the service entrance of the location of the studied system.

3.0 Measure Analysis

Analyze all reasonable energy conservation measures that could be applicable to each process or equipment studied. Complete the technical, financial, and economic information requirements listed below for each applicable measure analyzed.

- 3.1 Technical
 - 3.1.1 Technical description of each identified measure;
 - 3.1.2 Methodology and calculations used to arrive at energy and demand savings estimates for each measure;
 - 3.1.3 If applicable, identification and specification of any software tools used in the analysis;
 - 3.1.4 Results of analysis including uncertainty ranges and assumptions for operating conditions for the life of the measure:
 - 3.1.4.1 Annualized Electricity Savings;

- 3.1.4.2 if applicable, monthly average electrical demand reduction; and
- 3.1.4.3 if applicable, daily electrical demand reduction profile by season;
- 3.1.5 Analysis of interactive effects between systems and measures - i.e. a reduction in electricity use in one area may cause an increase in electricity use in another;
- 3.1.6 If applicable, quantification of Project Benefits with dollar savings estimates that may result from implementation of each measure. Methodology must be shown; and
- 3.1.7 If applicable, description of measurement techniques that would aid in ongoing evaluation of Electricity Savings for each measure.

3.2 Economic & Financial

- 3.2.1 Itemized implementation costs of each measure including:
 - 3.2.1.1 detailed design and engineering;
 - 3.2.1.2 project management;
 - 3.2.1.3 equipment;
 - 3.2.1.4 installation labour;
 - 3.2.1.5 demolition, if applicable;
 - 3.2.1.6 scrap value recovery, if applicable; and
 - 3.2.1.7 commissioning.
- 3.2.2 Project Payback for each measure without Incentives or any Third Party Contributions; and
- 3.2.3 Project Payback with Incentives.

4.0 Recommendations

- 4.1 Provide recommendations by measure and at the Project level:
 - 4.1.1 Discussion of recommended and non-recommended measures using results of technical and economic analysis;
 - 4.1.2 Project Payback for each recommended measure and for the aggregate of all recommended measures based on total Eligible Costs with no Incentives or Third Party Contributions;
 - 4.1.3 Project Payback for each recommended measure and for the aggregate of all recommended measures;
 - 4.1.4 Discussion of expected lifetime of recommended measures with a description of any special maintenance practices required to realize continued savings; and
 - 4.1.5 Discussion of risks associated with performance of recommended measures.

5.0 Implementation Action Plan

- 5.1 Description of the overall implementation approach and methodology for each recommended measure. If applicable, the following should be explicitly addressed:
 - 5.1.1 List of equipment to be decommissioned; and

- 5.1.2 Proposed operating parameters including mode and sequence of operation and programming of process control systems.
- 5.2 Provide a schedule for implementation:
 - 5.2.1 Overall time to complete Project broken down by major tasks and time required for each; and
 - 5.2.2 Detail any known timeline risks and critical tasks.