

A man and a woman are standing in a kitchen, looking at a clipboard held by the man. The man is wearing a light blue button-down shirt and dark pants, and the woman is wearing a light green top and a white apron. They are both smiling. The background shows a kitchen with a tiled backsplash, a television, and some plants.

SEPTEMBER 15, 2021

Save on Energy Energy Performance Program

Presented by the IESO

Today's Presenters

Rob Edwards Business Advisor, Private Sector, IESO



Cory Cook Supervisor, Program Design, IESO



Jon Feldman Senior Technical Officer, Industrial, IESO



Agenda

- 2021-2024 Save on Energy Programs
- Overview of the Energy Performance Program (EPP)
- Retrofit vs. EPP
- Example of EPP Incentives
- Submitting an Application – timelines, impact of COVID-19
- Frequently Asked Questions
- What's Next?
- Q & A

About the IESO



Reliably operate Ontario's Province-wide system 24/7



Plan for Ontario's future energy needs



Enable competition and create efficient electricity markets



Enable province-wide energy efficiency



Purposefully engage to enable informed decisions



Support innovation



Cybersecurity leadership



Smart Metering Entity

2021-2024 CDM Framework

- \$692M, four-year CDM Framework launched in January 2021
- Centrally delivered by the IESO under the Save on Energy brand
- Programs target commercial, institutional and industrial customers with opportunities for residential electricity consumers
- Renewed programming for income-eligible electricity consumers and on-reserve First Nation communities



Save on Energy Programs

- Ontario businesses, large and small, have access to incentives for retrofits and other energy-efficiency projects to lower energy costs
 - Retrofit Program
 - Small Business Program
 - Energy Manager Program
 - Training and Support
 - Energy Performance Program



Retrofit Program – New for 2021

- Enhanced list of fixed measures, streamlined application process and reduced administrative burden for applicants
- Previous custom track replaced by three streams of prescriptive measures to include those most-commonly applied in former custom measure track
 - Includes Lighting, HVAC and Manufacturing and other Equipment
- Opportunity to keep pace with changing marketplace needs over the four-year framework

Small Business Program

- One-stop-shop approach for direct, no-cost replacement of inefficient lighting up to \$2,000
- Program to expand this fall with more opportunities for small businesses to reduce electricity costs, recover from the impacts of COVID-19
- Expanded measures to include common non-lighting opportunities, such as HVAC and refrigeration



Energy Manager Program

Since 2011, 150+ managers across Ontario have become part of highly skilled network of energy professionals

- Performance payment of \$300/kW of summer peak-demand reduction
- In 2023, program will evolve from embedded energy manager model to a strategic energy management model
- New model will provide enhanced technical support, resources to companies with dedicated energy managers



Training and Support

Professional certification, specialized and foundational training programs

All training programs are eligible for a Save on Energy 50% incentive (capped to a course maximum and subject to eligibility)

Partnership with Enbridge Gas provides a 75% incentive for Certified Energy Managers, Building Operator Certification and Dollars to \$ense training courses

(capped to a course maximum and subject to eligibility)



saveonenergy.ca/For-Contractors-and-Allies/Training-and-Support

Energy Performance Program

- Holistic approach to energy savings: operational + behaviour + capital
- Savings are determined by comparing annual metered consumption to the building's baseline energy model (hourly interval meter data)
- Incentive of \$0.04/kWh of savings paid each year for three years + \$50/kW adder for summer peak demand savings
- Participants are required to save at least 5% energy savings over first two years (20% cap)
- Upfront incentive payment – $\text{annual facility consumption} \times 2.5\% \times \$0.04/\text{kWh}$

Energy Performance Program (cont'd)

- 1,500,000 kWh minimum annual consumption; can aggregate up to five building into a single facility baseline energy model
- Data normalized for weather and significant building operations
- Retrofit applications ineligible; Energy Manager program eligible
- Approval by December 31, 2024 for three-year contract
- Now includes industrial facilities
- COVID-19 Guidance Document – NRE, NRA, baseline development



Retrofit vs. Energy Performance Program

Retrofit vs. Energy Performance Program

Rules	Retrofit Program	Energy Performance Program
Energy Efficiency Measures	Prescriptive, per-unit incentives for certain equipment; measure must fit an existing category and meet all eligibility requirements	Nearly all energy savings measures eligible; on-site generation and fuel-switching excluded (may be addressed thru baseline adjustment)
O&M, Behavioural Savings Eligible?	No	Yes
Funding Available	Per measure incentive from a prescriptive list	• \$0.04/kWh per year (3 years) • Annual summer peak demand adder of \$50/kW (3 years)
Minimum Performance	Incentive must be at least \$500	Must achieve 5% of baseline energy savings in first two years (no peak demand minimum)
Maximum Funding	50% of eligible project costs up to \$1M	• Incentive capped at 20% of baseline energy • Incentive capped at 20% cap of demand

Retrofit vs. Energy Performance Program (cont'd)

Rules	Retrofit Program	Energy Performance Program
Participation Requirements	• Business customer • Measure must be on the prescriptive list	• Business customer • Minimum 1.5 GWh consumption per year • Baseline model meets minimum standards M&V Procedures • For buildings less than 1.5 GWh, up to 5 similar buildings can be aggregated into one energy model • One year of hourly interval data (from revenue grade/Measurement Canada-certified meter) and 2 years of overlapping electricity monthly bills
Post Measurement	No	• Occurs at the end of each 12-month performance term over the 3 years • Interval data, International Performance Measurement & Verification Protocol (IPMVP) Option C

Retrofit vs. Energy Performance Program (cont'd)

Rules	Retrofit Program	Energy Performance Program
Final Application Approval Deadline	December 31, 2024	December 31, 2024
Final Measure In-Service Date	December 31, 2025	Anytime within the 3-year contract term
Payment	After installation and post-project and incentive invoice have been approved	• Pre-payment for first year annual facility consumption x 2.5% x \$0.04/kWh • Annual performance payment on the energy and peak demand savings
IESO-funded Energy Managers may claim associated program energy and demand savings	Yes	Yes

Example of EPP Incentives

Participant Example		
Annual Energy Consumption	5,000,000 kWh	
Summer Peak Demand	1,000 kW	
Savings Approach	• 10% of savings targeting summer cooling measures • 90% of savings target non-cooling measures (e.g. lighting, VFDs, O&M)	
EPP Performance	5% Savings (Contracted Minimum)	10.5% Savings (Historical EPP Average)
EPP Energy Savings	250,000 kWh	525,000 kWh
Energy Incentive (up to)	\$30,000	\$63,000
EPP Peak Demand Savings	38 kW	80kW
Peak Demand Incentive (up to)	\$5,700	\$12,000
Total Incentive (up to)	\$35,700	\$75,000



Submitting an Application

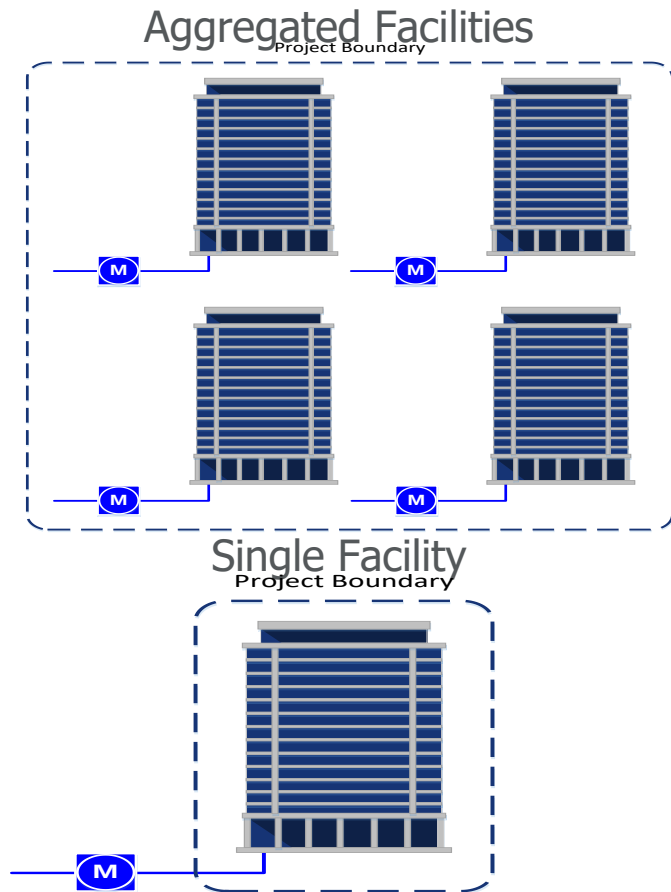
Program Application Form

- ✓ High-level application information
- ✓ Quantity of facilities being applied for
- ✓ Relevant applicant and/or consultant information

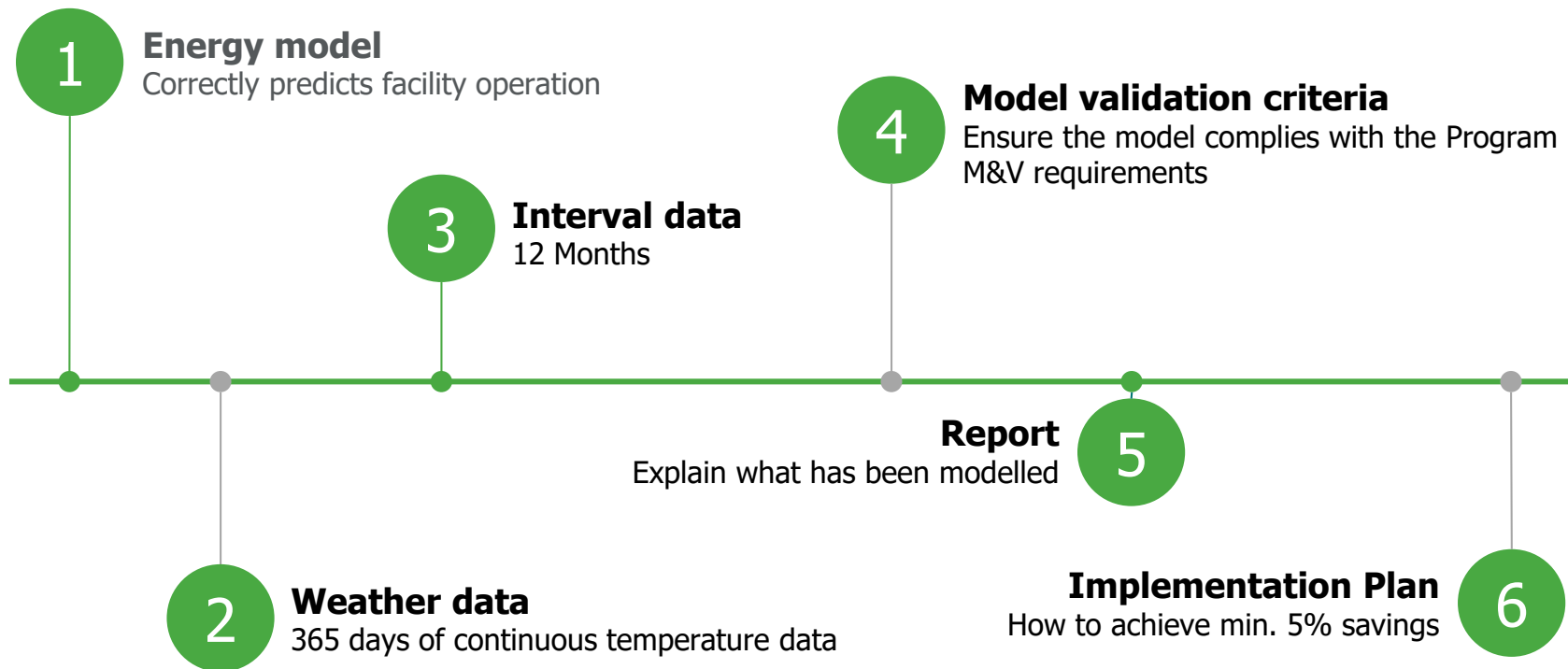
SAVE ON ENERGY POWER WHAT'S NEXT	
ENERGY PERFORMANCE PROGRAM APPLICATION FORM	
CORPORATE INFORMATION	
Name of Applicant:	
APPLICANT INFORMATION	
Applicant Information	Contact Information
Legal Name of Applicant:	Primary Contact Name:
	Title:
	Phone:
	Email:
Corporate Head Office:	Secondary Contact Name:
Address:	Title:
City:	Phone:
Postal Code:	Email:
Number of Facility Applications attached to the Application:	
Are any of the Facility Applications for a Facility composed of multiple buildings aggregated in a single Baseline Energy Model (Yes/No):	

Facility Application Form

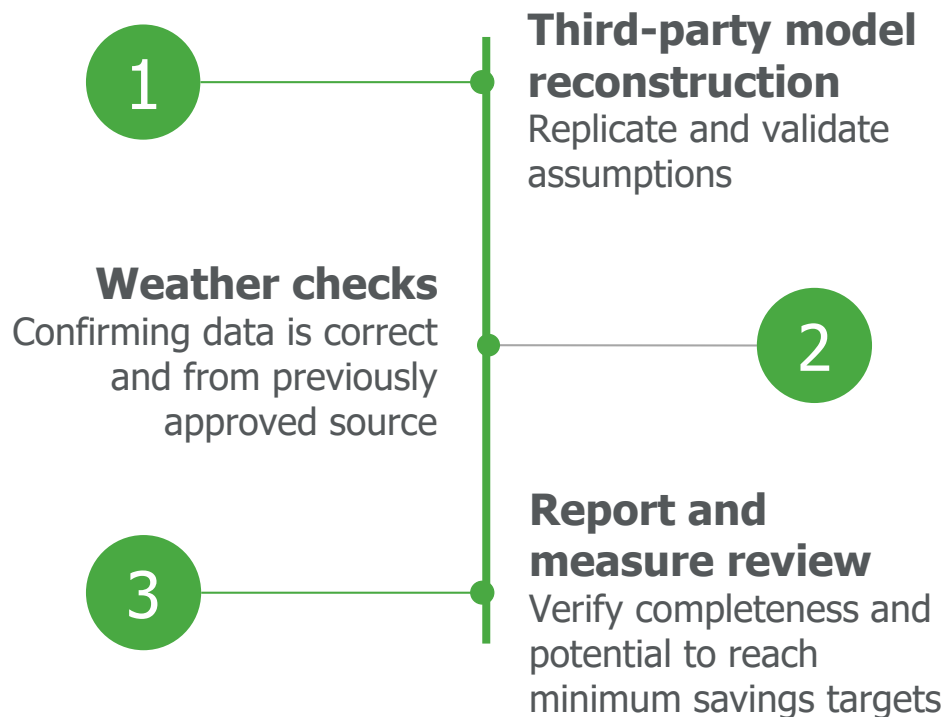
- ✓ Detailed facility data
- ✓ Incentive cap
- ✓ Minimum consumption
- ✓ Building aggregation
- ✓ Supporting document checklist



How to Prepare for your EPP Application



Technical Review Process



COMMON INFORMATION REQUESTS

- ☐ Weather data not provided with source
- ☐ Models have poor R^2 or fail the M&V criteria
- ☐ Measure Implementation Plan not provided
- ☐ Original interval data not provided
- ☐ Base case too old

What Happens when the Technical Review is Complete?

APPROVAL/ CONTRACTING

- Recommendations are submitted to the IESO
- IESO executes Participant Agreement with customer

REPORTING PERIOD STARTS

- Monitor Facility data throughout the year
- If annual savings are low, adjust Project Implementation Plan

REPORTING PERIOD ENDS

- Submit annual report including:
 - Interval data
 - Updated model analysis
 - Updated weather data
 - Submit within 60 days

Baseline Energy Model

Must be transparent and reproducible by the Technical Reviewer

Third party modelling software can be used

Most common software are

- MS Excel with Analysis Toolpak Add-ins
- RETScreen[®]

Must meet minimum statistical indices (R², CVRMSE, NDBE & T-Stat)

Must be approved by the Technical Reviewer

Baseline Energy Model (cont'd)

Acceptable Baseline Model output granularity ranges from:

- hourly (most granular) to
- daily (least granular)

Monthly data (12 points per year) is not acceptable

Must be at least daily for determining energy savings in kWh

Must be hourly data for determining peak demand savings in kW/ for provision of Demand Incentive

Modifications to the Baseline Energy Model

The purpose of modifying the Baseline Energy Model during the Baseline Period is to arrive at a model that represents consumption at 'Day 1' conditions of the Pay-for-Performance Period

All known changes in electricity use that affected electricity consumption in the baseline period should be incorporated into the model

Any projects receiving other electricity saving incentives will trigger a Baseline Adjustment at the discretion of the IESO

Typical Modifications to the Baseline Energy Model

Energy conservation measures (e.g. lighting retrofit)

Removal/addition of sub-metered exceptional loads (e.g. data centre)

Building additions

Major renovations

Traceable/documented operational adjustments

Ineligible Measures

Any Measures that are behind-the-meter generation projects

Any Measures involving fuel-switching with the purpose of reducing load

Activities or measures promoted or funded through a different program or initiative designed to incentivize electricity savings and/or peak demand savings undertaken by the Government of Ontario or the IESO, except for the Energy Manager Program offered by Save On Energy

EPP COVID-19 Guidance

In the case where the baseline period contains an 'abnormal' period such as COVID-19, a Non-Routine Adjustment should be made to the Baseline Period

IPMVP Application Guide on Non-Routine Events & Adjustments October 2020
EVO 10400 – 1:2020 Non-Routine Events Occurring during Baseline Period

- Method #1 - Omit Data or,
- Method #2 - Use Sub-Metered Energy Use or,
- Method #3 – Redefine Baseline Model Using New Variables

A description of how the baseline was adjusted should be included in the submission to the IESO

EPP COVID-19 Guidance (cont'd)

Where a Non-Routine Adjustment cannot be made for any reason, the EPP Participant may use a continuous 12 months pre-COVID-19 period as the baseline that is representative of a normal business operating cycle, provided no significant operational changes have been made

For example, the participant may use a continuous 12-month pre-COVID-19 period from March 2019 to February 2020 or alternatively January 2019 to December 2019 as the Baseline Period

The Baseline Period should include adjustments for any Non-Routine Event or energy efficiency projects that were implemented within the COVID-19 period, whether a capital improvement or Operation & Maintenance measure, such that the baseline period is truly representative of normal business operation in future

Program Materials and Support

SaveOnEnergy.Ca/EPP provides a variety of materials to support your facility's participation in the EPP, including:

- Program Requirements
- Participant Agreement
- Measurement and Verification (M&V) Procedures
- COVID-19 Guidance document
- Program Application Form
- Facility Application Form
- Savings Report Templates
- FAQs



Frequently Asked Questions

Frequently Asked Questions

I'm planning on submitting an application. When can I start implementing energy saving measures?

The IESO recommends waiting for your application to receive approval before implementing any energy and demand savings measures and activities. This ensures that your baseline energy model meets program requirements prior to the initiation of projects. You can start on your projects once your application is submitted but choosing to do so before receiving approval means you take on the risk of not receiving incentives for initiated measures and activities should your application not be approved.

Frequently Asked Questions (cont'd)

When do I receive payment for the savings I have achieved in my Pay-for-Performance Period?

You will receive an incentive corresponding to the approved savings achieved during each Pay-for-Performance Period, after you have submitted and received approval for the savings report for your Pay-for-Performance Period. Please submit your savings report and any applicable supporting documents to the EnergyPerformanceProgram@ieso.ca for review. Once approved please allow 8-12 weeks to receive your incentive payment.

Frequently Asked Questions (cont'd)

Is replacement of gas fired equipment with electric equipment eligible under the EPP?

We recognize that many organizations are reducing fossil fuels in an effort to meet GHG reduction goals. In order to not penalize participants for the resulting increase in electricity consumption, the IESO is allowing participants to make a non-routine adjustment to their approved baseline energy model in these cases in accordance with the [EPP M&V Procedures](#).

Frequently Asked Questions (cont'd)

I'm planning on installing solar panels at my facility to offset my consumption. Is this eligible under the EPP?

Savings associated with the installation of solar panels are not eligible to receive incentives under the EPP as solar panels (or other electricity-generation equipment) are not considered an energy-efficiency measure; however, use of this equipment would not make the facility ineligible to participate. Please refer to the program requirements and participant agreement for more information.

Frequently Asked Questions (cont'd)

I'm planning on installing battery storage at my facility to reduce my peak demand as I'm a Class A consumer and am participating in the Industrial Conservation Initiative. Is this eligible under the EPP?

Savings associated with the installation of battery storage equipment are not eligible to receive incentives under the EPP, as energy storage equipment is not considered an energy-efficiency measure; however, use of this equipment would not make the facility ineligible to participate. Please refer to the program requirements and participant agreement for more information.



What's Next?

What's Next?

Program enhancements planned for 2022:

- *Expanding participation pathways by introducing an "aggregator" stream*
 - Under the new pathway, IESO may contract directly with "facility aggregators" (instead of individual participants) who would implement energy efficiency projects for a portfolio of customers/facilities

What's Next? (cont'd)

Program enhancements planned for 2022:

- *Introduction of a centralized, "Advanced Measurement & Verification" (AMV) solution*
 - IESO looking to leverage emerging technological solutions to ease the burden of whole-building energy baseline and performance modeling, by providing a centralized, consistent, and largely automated approach to facility and portfolio M&V
 - May also allow for tiered incentive rates (on-peak/off-peak \$/kWh) and more frequent payments (quarterly or semi-annual)

What's Next? (cont'd)

- Presentation, recording of webinar will be sent out and posted to EPP website
- Survey – to help us plan additional events, program support

Questions

Submit questions using the
Question bar at the bottom right

Thank You

SaveOnEnergy.ca

saveonenergy@ieso.ca



@SaveOnEnergyOnt



facebook.com/SaveOnEnergyOntario



linkedin.com/showcase/
SaveOnEnergy-Ontario