

Engagement Webinar: Multi-Distributor Customer Pay-for-Performance (P4P) Program Draft Design

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Purpose of Today's Session

- IESO will present a draft program design for a new pay-for performance program for (business) consumers with facilities in multiple electricity distributor service territories, including:
 - Background
 - Rationale
 - Key program concepts
 - Eligibility
 - Proposed incentive structure
 - Terms of participation
- IESO seeks oral and written feedback on all aspects of the proposed program design. IESO will record feedback and provide responses on the Engagement page

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Background - June 10, 2016 Direction to Independent Electricity System Operator (IESO) from Minister of Energy

- Per the direction, the IESO shall, in consultation with distributors, centrally design, fund and deliver...
 - a province-wide pay-for-performance Conservation and Demand Management (CDM) program for Multi-Distributor Consumers (“Multi-Distributor Program”)
- Energy savings achieved through program will count towards Local Distribution Company (LDC) CDM targets with savings from each participant site going to the respective LDC
- IESO shall, where appropriate, deliver program in coordination with natural gas distributors
- Implementation of program shall commence by end of Fall 2016

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Benefits of new multi-distributor program

Feedback from marketplace	Anticipated Impact of New Program
Concerns about challenges with differences in program availability across province	Province-wide centrally administered MDC P4P program will enable businesses to implement savings measures of their choice and deliver low-risk energy savings for ratepayers
Challenges with coordinating program participation with multiple distributors	Province-wide centrally administered program will provide MDCs with consistent experience for projects across the province and a single program point of contact
LDC requests for additional resources to support target achievement	Incremental funding of programs outside of CDM Plan budgets provides additional resources to support LDC target achievement

Pay-for-Performance Program Basics

- Builds on lessons learned from IESO-administered Conservation Fund pay-for-performance pilot implemented with Loblaw (see Appendix A.)
- Participants are rewarded for improving whole building energy performance through the provision of incentives at a set \$/kilowatt-hour (kWh) rate for savings. Incentive based entirely on performance.
- Savings are determined by comparing metered consumption to consumption predicted by a building-specific energy model

Pay-for-Performance Program Basics Cont'd

- Provides customers with choice and flexibility in implementing capital and non-capital energy efficiency measures
- Measuring savings at the whole-building level reduces cost and administrative burden for capturing savings from custom measures, particularly Operational and Maintenance (O&M) measures (such as recommissioning HVAC controls), and where multiple measures are implemented in one facility
- Participating buildings are not eligible for additional incentives (e.g. through Retrofit) for implemented measures

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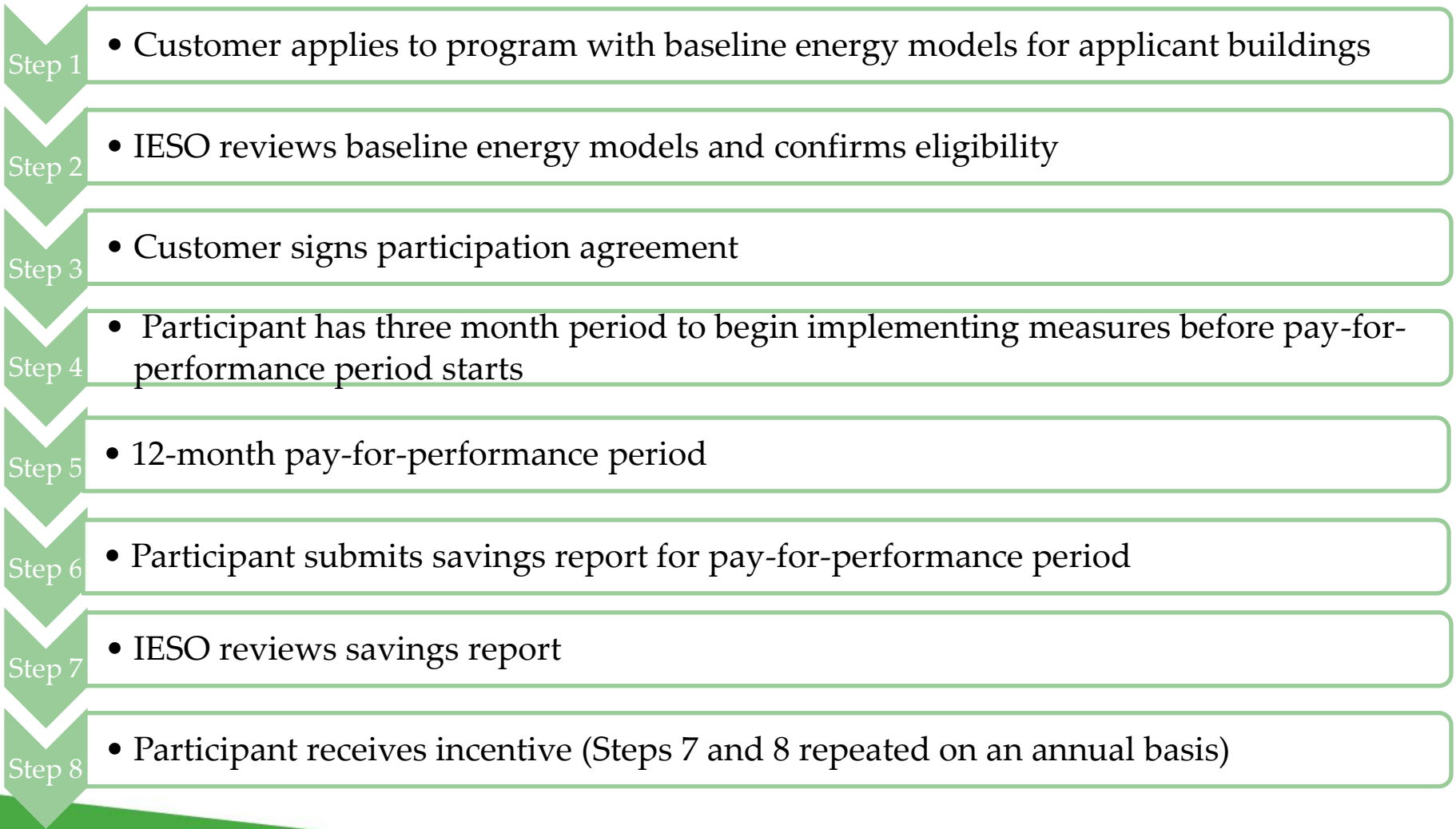
Program Administration - Overview

- IESO will contract directly with Multi-Distributor Customers (MDCs)
 - IESO will employ a third party Technical Reviewer who will support program administration (overview of proposed roles in table below)

Participant	Technical Reviewer	IESO	LDC
<ul style="list-style-type: none"> • Complete/submit application • Develop energy baseline models for buildings at own cost • Submit annual savings reports 	<ul style="list-style-type: none"> • Confirm eligibility • Review annual savings reports • Calculate incentive payout • Review baseline adjustments 	<ul style="list-style-type: none"> • Fund program • Make incentive payments to Participant • Support for province-wide marketing 	<ul style="list-style-type: none"> • Local marketing • Savings towards CDM Plan target

- Central IESO delivery will provide consistent program offering and single point of contact to MDCs across all of their sites enrolled in the program regardless of where they are located in Ontario

Participating in the Program Overview



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Proposed Participant Eligibility Criteria

- Commercial & Institutional sector
- Must enroll two (2) or more buildings located in two (2) or more LDC service areas
- Must commit buildings to participate for at least two years and plan to realize at least 5% energy savings (averaged across participating buildings)
- Authority to contract with IESO for building enrollment

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Proposed Building Eligibility Criteria

- Distribution system-connected
- Minimum hourly meter data available for building
- Minimum annual consumption proposed at 2,000,000 kWh for preceding two years
 - IESO considering whether aggregated consumption for multiple smaller buildings might be considered; potential impacts for project/program cost-effectiveness associated with lower per building energy consumption eligibility requirements
- Must develop robust energy baseline model(s) for building enabling rigorous measurement of savings using International Performance Measurement and Verification Protocol (IPMVP) Option C Whole Building analysis

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What types of businesses might be interested in MDC P4P?

- Strong organizational commitment to energy management
- Possess, or are willing to implement at own cost, information systems to monitor building energy performance at minimum on a monthly basis and to have processes in place to monitor and respond to changes
- Desire to move beyond simple retrofits
- Interested in improving bottom line by managing energy use and associated costs

What does a good candidate building look like?

- Energy consumption can be reliably predicted with a high degree of accuracy based on weather, hours of operation, occupancy, or other variables
- Data for primary variables affecting energy consumption are easily accessible
- No planned major changes to building or building use
 - Consistent energy use patterns required to establish baseline energy consumption against which savings can be measured
 - E.g. no planned additions or major renovations that would impact baseline

Proposed Incentive Structure

- On an annual basis, for up to four consecutive years (i.e. for the duration of the Conservation First Framework), participants receive \$0.04/kWh for savings achieved that year
- Savings measured as the difference between building consumption predicted by baseline models and actual metered consumption
 - IESO exploring potential for different incentive levels for on- and off-peak savings to reflect value to electricity system
 - Peak-savings offset more costly peak generation resources
- Baseline model(s) to be established upon program enrollment by participant and remain in place for four years of program unless baseline adjustment required *See slide 18*
- Consistent incentive payments over four years to retain participant engagement and ensure persistence of savings

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Incentive Example for a Single Building

Year	Predicted Consumption from baseline model (kWh)	Metered Consumption (kWh)	Savings (kWh)	Annual Incentive (\$)
2017	3,456,000	3,110,400	345,600	\$13,824
2018	3,550,000	3,159,500	390,500	\$15,620
2019	3,400,700	3,026,623	374,077	\$14,964
2020	3,560,000	3,168,400	391,600	\$15,664
Total participant incentive:				\$60,072

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Applying to the Program

1. Customer submits program application for all buildings including building energy baseline models to IESO. *Method for application submission (online, paper, etc.) TBD*
2. IESO Technical Reviewer confirms eligibility
3. Participant Agreement executed between IESO and Participant
4. If not already registered, Participant registers with IESO as Market Program Participant for settlement process

Participating in the Program

1. Once Participant Agreement executed, Participant has up to three months to implement measures before starting pay-for-performance period
2. Pay-for-performance period begins. *Participant may continue to implement measures over the lifetime of the agreement*
3. After twelve months, Participant submits Savings Report for participating buildings at end of Year 1
4. Tech. Reviewer reviews and confirms Savings Report and incentive amount
5. IESO issues settlement payment to Participant for portfolio of buildings
6. Steps 2-5 repeat for next year of program
7. Participant can opt out after Year 2

Savings Report

- Document for each participating building metered energy consumption against consumption predicted by baseline model
- Participants may include multiple buildings in single Savings Report submission
- Specific requirements TBD

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Baseline Adjustments

- In the event of a significant change to building occupancy or energy use IESO and Participant will work together to adjust baseline model
 - Examples of significant changes in occupancy/use would be removal/installation of a data centre, loss of major tenant, installation of new energy using equipment, etc.
- Proposed threshold for baseline adjustment is plus or minus 10% of building energy use

Interaction with other Save on Energy programs

- In order to avoid duplicative funding of projects or counting of savings, buildings participating in the MDC P4P program will not be eligible for further incentives through:
 - Retrofit
 - Existing Building Commissioning
 - Process & Systems
 - LDC-specific programs such as Toronto Hydro's PUMPsaver® or OPsaver®
 - Small Business Lighting
- Proposed that participants can still participate in the various Energy Manager program and Audit programs.

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Key Questions for Engagement Participants

- What features of the proposed program do you find appealing?
- What might dissuade businesses from participating in the program?
- Do you foresee any challenges with any of the eligibility criteria?
- What are your thoughts on the proposed minimum annual building energy consumption of 2,000,000 kWh?
- Should IESO permit customers to aggregate a number of smaller buildings to achieve the 2,000,000 kWh threshold energy use?
- NRCan's ENERGY STAR Portfolio Manager has established itself as a popular energy benchmarking tool that provides greater value as the pool of enrolled buildings grows. Should IESO require enrollment in Portfolio Manager as a condition of program participation? *See Appendix B for details*
- Should buildings participating in MDC P4P be eligible for Save on Energy incentives through:
 - Audit Funding?
 - Energy Managers?
 - See www.saveonenergy.ca for more information about these programs

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Next Steps

- Please send written comments to engagement@ieso.ca by August 4, 2016
- IESO will provide responses to comments by September 1, 2016
- Second webinar to solicit feedback on proposed program rules and contract structure planned for September 2016

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Appendix A: Conservation Fund *Results-Based Performance Optimization* Pilot

- Pilot with Loblaw testing pay-for-performance concept with 18 grocery stores over two years
- Year 1 reported savings for portfolio: >10%
- Year 2 reported savings for portfolio > 12%
- Key pilot lessons:
 - P4P effective at incenting O&M measures
 - Baseline adjustments must be rigorously justified and documented
 - Frequent monitoring of buildings is necessary to maintain savings from O&M measures

Appendix B: NRCan Portfolio Manager

- Free online benchmarking tool enabling users to compare energy performance of buildings within their portfolio against each other and against similar buildings across Canada
- Generates weather-normalized Energy Use Intensity, greenhouse gas emission, and percentile energy performance score (for specific sectors)
- Often used as standard reporting tool for energy reporting and conservation challenge initiatives (such as Race to Reduce)
- 2011 analysis of US 35,000 buildings using Portfolio Manager over 3 years revealed average savings of 7%
- See more information and register at <http://www.nrcan.gc.ca/energy/efficiency/buildings/energy-benchmarking/3691>